

Georgia Power Company
Grumman Road Private Industrial Landfill
Port Wentworth, Georgia
PERMIT #: 025-061D(LI)
Chatham County

SUPPLEMENTAL
2019 FIRST SEMIANNUAL GROUNDWATER
MONITORING REPORT



PROFESSIONAL CERTIFICATION

This *Supplemental 2019 First Semiannual Groundwater Monitoring & Corrective Action Report*, Georgia Power Company – Grumman Road Private Industrial Landfill has been prepared in compliance with the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 and 391-3-4-.14 by a qualified groundwater scientist or engineer with Atlantic Coast Consulting, Inc (ACC).

ACC certifies that all metals required by the existing EPD-approved Groundwater Monitoring Plan were below applicable Georgia primary maximum contaminant levels (MCLs) except for arsenic in the samples from GWC-15, GWC-16, and GWC-20. Concentrations of analytes included in Appendix III of 40 CFR 257 analytes including: total dissolved solids (7 samples), sulfate (3 samples), and chloride (1 sample) exceeded relevant Georgia secondary MCLs (SMCLs).

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1.0 Introduction

In accordance with the Georgia Environmental Protection Division (GA EPD) Rules of Solid Waste Management 391-3-4-.10(6)(a)-(c), Atlantic Coast Consulting, Inc. (ACC) has prepared this Semiannual Groundwater Monitoring Report to document groundwater monitoring activities conducted during the first half of 2019 at Georgia Power Company's (GPC) Grumman Road Private Industrial Landfill (GRL). To specify groundwater monitoring requirements, GA EPD rule 391-3-4-.10(6)(a) incorporates by reference the United States Environmental Protection Agency (US EPA) Coal Combustion Residuals (CCR) Rule 40 Code of Federal Regulations (CFR) § 257 Subpart D.

The Site ceased accepting CCR prior to October 19, 2015 and is therefore not subject to Federal monitoring requirements. To comply with GA EPD's 391-3-4-.10, a permit application package for GRL was submitted to GA EPD in November 2018 and is currently under review. The list of analytes included in the groundwater monitoring program has been modified to meet the requirements of 40 CFR § 257 (i.e. incorporation of Appendix III and IV constituents into the routine monitoring program). This report includes the background data and the initial detection monitoring data for the Site. This is the initial detection monitoring event under the new monitoring program. The facility is continuing an Assessment of Corrective Measures (ACM) established under the existing permit.

1.1 Site Description and Background

GRL is located on Gulfstream Road, in Chatham County, Georgia, approximately 0.8 miles east of Savannah/Hilton Head International Airport and 1.3 miles west of the city of Port Wentworth. GRL occupies approximately 36 acres. Figure 1, Site Location Map, depicts the site location relative to the surrounding area. Figure 2, Well Location Map, depicts the general configuration of the site and the location of the monitoring wells.

1.2 Regional Geology and Hydrogeologic Setting

GRL is underlain by Atlantic Coastal Plain Physiographic Province strata consisting of unconsolidated to consolidated layers of sand, silt and clay and semi-consolidated to dense layers of limestone and dolomite. (Clarke et al, 2010). These sediments constitute three major aquifer systems, which are, from shallow to deep, the surficial aquifer system, the Brunswick aquifer system, and the Floridan aquifer system. In the coastal area, the surficial aquifer system consists of Miocene and younger interlayered sand, silt, clay and thin limestone beds (Clarke et al, 2010). The surficial aquifer system is unconfined and the fine silty sands and clay partings are found generally less than 80 feet below ground surface (bgs).

The surficial aquifer is underlain by a confining unit that separates the surficial aquifer from the Brunswick aquifer. The confining unit consists of silty clay and dense thin, phosphatic Miocene limestone. The Oligocene to Miocene Brunswick aquifer consists of two water-bearing zones. The upper Brunswick and lower Brunswick aquifers are separated by a low permeability, sandy phosphatic clay confining unit. The Brunswick aquifer is separated from the Upper Floridan aquifer with the Upper Confining unit and a non-water bearing limestone (NWBL) layer. The Floridan aquifer is confined by the overlying clay and NWBL layers.

Unit 1 (surficial aquifer) has a thickness ranging from approximately 22 feet to 28 feet across the site. Hydraulic conductivity is defined as the rate at which water can move through a permeable medium. In situ rising head and falling slug tests were performed at multiple locations

on the site. There is a limited range in hydraulic conductivity at these locations, indicating a fairly uniform medium across the upper aquifer or Unit 1 (typically range from 10^{-3} to 10^{-4} cm/sec). The average hydraulic conductivity is estimated at 2.7×10^{-3} cm/sec (7.6 feet/day). The values from the field test fall within the standard range of hydraulic conductivity values associated with a silty sand.

Unit 2 is comprised of fine grain sandy silt and clayey sands and is considered an aquitard. The thickness of Unit 2 in the site area ranges from 5 feet to over 40 feet. Typically, Unit 2 has a lower permeability on the order of 10 times less (10^{-4} cm/sec- 10^{-5} cm/sec) than that of Unit 1.

1.3 Groundwater Monitoring System and CCR Units

GRL received coal combustion fly ash (CCR) from GPC – Plant Kraft. The landfill operated under EPD solid waste handling permit number 025-061D and is comprised of four cells or parcels: Parcel A [originally operated under permit number 025-034D(L)(I)], B1, B2, and B3. CCR is no longer received at the landfill (as of October 15, 2015) and closure of parcels B1, B2, and B3 have been completed. Capping of the last remaining uncapped portion of Parcel A has recently been completed.

A groundwater monitoring plan was submitted and approved January 13, 2000. The initial approved detection groundwater monitoring network included 17 monitoring wells: upgradient wells GWA-7 and GWA-8, downgradient wells GWC-1 through GWC-6, and GWC-9 through GWC-17. As previously documented to EPD, in late 2018 three monitoring wells (GWC-4, GWC-5, and GWC-6) were replaced by locations (GWB-4R, GWB-5R, and GWB-6R) were also re-designated as side-gradient (i.e. “GWB” prefixes) locations. One location (GWC-3) was not replaced due to redundancy with GWC-20. These changes are detailed in the November 2018 permit application. Well installations have either been previously approved or pending permit application. Pursuant to §257.91, the monitoring system is designed to monitor groundwater passing the waste boundary of GRL within the uppermost aquifer. Wells were located to serve as upgradient and downgradient monitoring points based on groundwater flow direction (Table 1A, Monitoring Network Well Summary). Existing locations not included in the monitoring network are presented in Table 1B, Non-Network Well Summary.

An ACM to address SSIs for arsenic concentrations in several monitoring locations in the vicinity of Parcel A is ongoing and will continue to be documented to EPD.

2.0 GROUNDWATER MONITORING ACTIVITIES

The following describes monitoring-related activities performed in March 2019. Because this is the first Semiannual Groundwater Monitoring Report submitted for GRL, it also describes activities performed prior to 2019 to establish the groundwater monitoring program. Samples were collected from each well in the monitoring system shown on Figure 2.

Table 2, Groundwater Sampling Event Summary, presents a summary of groundwater sampling events completed at GRL during background monitoring through the first half of 2019. Locations associated with GRL were monitored for Appendix III constituents during the March 2019 semi-annual monitoring events. Eight rounds of background data were completed for the GRL monitoring locations including sampling for Appendix III and IV constituents; laboratory analytical reports for those results and for the first semi-annual event are presented in Appendix A, Laboratory Analytical and Field Sampling Reports.

2.1 Monitoring Well Installation/Maintenance

In accordance with the Georgia Rules for Solid Waste Management Chapter 391-3-4-.10 a groundwater monitoring system has been installed that (1) consists of a sufficient number of wells, (2) installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer, and (3) meets the performance standards of §257.91(a). In summary, groundwater monitoring includes the following:

- Two upgradient groundwater monitoring network wells (GWA-7 and GWA-8), three sidegradient monitoring network wells (GWB-4R, GWB-5R, and GWB-6R), and thirteen downgradient groundwater monitoring network wells (GWC-1, GWC-2, GWC-9, GWC-11, GWC-12, GWC-13, GWC-14, GWC-15, GWC-16, GWC-17, GWC-20, GWC-21, and GWC-22).

The number, spacing, and depths of the groundwater monitoring wells were selected by a qualified groundwater scientist based on the characterization of site-specific hydrogeologic conditions. Groundwater monitoring wells were designed to monitor the uppermost water-bearing zone. Monitoring well designations were determined based on measured groundwater levels at the site.

2.2 Detection Monitoring Program

To realign future sampling schedules, GPC supplemented an additional sampling event in March 2019. The March 2019 monitoring event is the tenth round of Appendix III data and is the initial detection monitoring event. This report provides data for the March 2019 monitoring event and reports it as the Supplemental 2019 First Groundwater Monitoring Report. Based on this revised schedule, a third sampling event for 2019 will be performed in the second half of 2019 and the data will be reported in the 2019 second semi-annual groundwater monitoring report.

2.2.1 Background Monitoring for CCR Analytes

A minimum of eight (8) independent samples were collected from the network and analyzed for the constituents listed in Appendix III and IV. A table summarizing the results for each well is included in Table 5A, Summary of Background Groundwater Analytical Data – 2016 – 2018. Data reports for each sampling event are included in Appendix A, Laboratory Analytical and Field Sampling Reports.

2.2.2 Initial Detection Monitoring for CCR Analytes

Following completion of the nine independent sampling events for constituents listed in Appendix III or IV, groundwater samples were collected March 25-27, 2019 and analyzed for Appendix III constituents as part of the first semiannual detection monitoring event. Samples could not be collected in March 2019 from GWC-2 due to closure construction activities, which made the well inaccessible at that time. However, the well is again accessible and was sampled on July 30, 2019. A table summarizing the results for the well is included in Appendix A, Analytical Data Summary Tables. Data reports for the March 2019 sampling event are included in Appendix A.

2.2.3 Monitoring for Existing Approved Analytes

Eight inorganic analytes are required per the existing approved EPD-approved Groundwater Monitoring Plan were also collected as part of the March 2019 monitoring event. A table summarizing the results for the wells is included in Table 5C, Summary of Groundwater Analytical Data – March 2019. Pursuant to §257.90(e)(3), data reports for the March 2019 sampling event are included in Appendix A. Future monitoring will be conducted in accordance with the requirements of the Georgia Rules for Solid Waste Management Chapter 391-3-4-.10.

2.2.4 Additional Monitoring Event

Per communication with EPD, an event was completed in January 2019 for the collection of constituents listed in Appendix III as well as the eight historically required inorganic analytes. A table summarizing the results for the wells is included in Table 5B, Summary of Groundwater Analytical Data – January 2019. Data from that event were submitted to EPD under separate cover earlier this year.

3.0 SAMPLE METHODOLOGY AND ANALYSIS

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

3.1 Groundwater Flow Direction, Gradient, and Velocity

Prior to each sampling event, groundwater elevations are recorded from the certified well network and piezometers at GRL. Groundwater elevations recorded during the monitoring events are summarized in Table 3, Summary of Groundwater Elevations. Groundwater elevation data was used to develop Figure 3, March 2019 Potentiometric Surface Map, a potentiometric high exists near wells GWA-7 in the northern portion of the site and groundwater flows semi-radially from this high. In the southern portion of the site groundwater flows to the south and southeast. The groundwater flow patterns observed during the March 2019 monitoring event is consistent with historical patterns.

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

Specifically:

Equation

$$v = \frac{K (dh/dl)}{P_e} \quad \text{where:} \quad \begin{array}{l} v = \text{ground water velocity} \\ K = \text{hydraulic conductivity} \\ dh/dl = \text{hydraulic gradient} \\ P_e = \text{effective porosity} \end{array}$$

Groundwater flow velocities were calculated for the site based on hydraulic gradients, average hydraulic conductivity based on previous slug test data, and an estimated effective porosity of 0.20 (based on a review of several sources, including Driscoll, 1986; US EPA, 1989; Freeze and Cherry, 1979). Groundwater flow velocities have been calculated and are tabulated on Table 4, Groundwater Flow Velocity Calculations. The calculated flow velocity is 0.29 feet per day.

3.2 Groundwater Sampling

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

Monitoring wells were purged and sampled using low-flow sampling procedures. A SmarTroll (In-Situ field instrument) was used to monitor and record field water quality parameters (pH, conductivity, oxidation-reduction potential, dissolved oxygen, and temperature) during well

purging prior to sampling. Turbidity was measured using a Hach 2100Q portable turbidimeter. Groundwater samples were collected when the following stabilization criteria were met:

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

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

3.3 Laboratory Analyses

Groundwater samples were collected for both Appendix III and IV for background monitoring events. Groundwater samples collected in March 2019 for detection monitoring event were analyzed for Appendix III monitoring parameters. Analytical methods used for groundwater monitoring parameters are provided in laboratory reports in Appendix A.

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

3.4 Quality Assurance and Quality Control

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

Groundwater quality data in this report was validated in accordance with US EPA guidance (US EPA, 2011) and the analytical methods. Data validation generally consisted of reviewing sample integrity, holding times, laboratory method blanks, laboratory control samples, matrix spikes/matrix spike duplicate recoveries and relative percent differences, post digestions spikes, laboratory and field duplicate RPDs, field and equipment blanks, and reporting limits. Where appropriate, validation qualifiers and flags are applied to the data using US EPA procedures as guidance (US EPA, 2017).

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

4.0 STATISTICAL ANALYSIS

Statistical analysis of Appendix III groundwater monitoring data following the appropriate method.

4.1 Statistical Methods

The statistical method used at the site was developed by Groundwater Stats Consulting, LLC (GSC) using methodology presented in *Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance*, March 2009, US EPA 530/R-09-007 (US EPA, 2009). To develop the statistical method, analytical data collected during the background period were evaluated and used to develop statistical limits for each Appendix III parameter. Sanitas groundwater statistical software was used to perform the statistical analyses. Sanitas is a decision support software package that incorporates the statistical tests required of Subtitle C and D facilities by US EPA regulations.

4.1.1 Appendix III Constituents

Statistical tests used to evaluate the groundwater monitoring data consist of interwell prediction limits combined with a 1-of-2 verification resample plan for Appendix III parameters calcium, chloride, fluoride, pH, and sulfate. Monitoring results for boron and TDS were evaluated using intrawell prediction limits combined with a 1-of-3 verification resample plan. Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent, and the most recent sample from each downgradient well is compared to the same limit for each parameter. Intrawell prediction limits are constructed from historical data within a given well, and the most recent sample is compared to background. If the most recent sample exceeds its respective background statistical limit, an initial statistically significant increase (SSI) is identified. A summary of the statistical methodology used at the Site for routine groundwater monitoring is provided in Table 6, Summary of Statistical Methods.

4.1.2 EPD Permit-Required Metals

Statistical tests used to evaluate the groundwater monitoring data consist of intrawell prediction limits combined with a 1-of-2 verification resample plan for all required metals, except for arsenic at GWC-15, GWC-16, and GWC-20 and barium at GWC-9. Results for these metals are evaluated by trend tests. The occurrence of arsenic at these locations is being addressed by the ACM; barium is included in the list of Appendix IV analytes and will be appropriately evaluated either by an alternate source demonstration or by a statistical comparison to its groundwater protection standard if assessment monitoring is implanted. Intrawell prediction limits are constructed from historical data within a given well, and the most recent sample is compared to background. If the most recent sample exceeds its respective background statistical limit, an initial statistically significant increase (SSI) is identified. Table 6 includes a summary of the metals included in the EPD permit and the statistical method.

4.2 Statistical Analyses Results

Analytical data from the initial CCR detection monitoring event in March 2019 at GRL was statistically analyzed in accordance with the statistical methods. Resampling to confirm SSIs was not performed; therefore, initial SSIs are treated as verified. Historical data from GWC-4, GWC-5, and GWC-6 were appended to the corresponding replacement wells GWB-4R, GWB-5R, and GWB-6R. Wells and analytes with all data below the reporting limit do not require statistical analysis.

A summary of wells exhibiting 100% non-detects is included in Appendix B, Statistical Analyses. The statistical analysis and comparison to prediction limits are included as Appendix C.

Based on the statistical results presented in Appendix B, the following summarizes parameters exhibiting SSIs as follows:

- Boron: GWB-6R, GWC-13, GWC-16
- Calcium: GWB-4R, GWB-5R, GWC-1, GWC-12, GWC-14, GWC-15, GWC-16, GWC-17, GWC-20, GWC-21
- Chloride: GWC-17
- Fluoride: GWC-17
- pH: GWC-12, GWC-15
- Sulfate: GWB-4R, GWB-5R, GWB-6R, GWC-12, GWC-14, GWC-17
- TDS: GWB-5R and GWB-6R

Within 90 days from determining an SSI, GPC will either (1) prepare a demonstration that a source other than GRL was the cause, or (2) implement assessment monitoring per § 257.95. The site is already in assessment monitoring for the existing state permit, but the assessment monitoring program will be revised to comply with new EPD regulations.

4.3 Appendix IV Background Data

Appendix IV groundwater quality from downgradient wells will be compared to groundwater protection standards if assessment monitoring is implemented. GRL is currently performing detection monitoring and has not implemented assessment monitoring under the new regulations. An ACM for arsenic initiated under the existing permit is ongoing. Therefore, statistical analysis of the Appendix IV data (excluding the analytes required by the existing permit – see section 4.4) has not been performed.

4.4 Statistical Analyses Results for Parameters Required by Existing Permit

Analytes required by the existing state permit were added during this event. Consistent with prior monitoring events, the concentrations of arsenic in GWC-15, GWC-16, and GWC-20 exceeded the MCL. The arsenic MCL exceedances as well as barium in GWC-9 were evaluated using the Sen's Slope/Mann-Kendall trend test in lieu of intrawell prediction limits. Statistically significant increasing trends were identified for arsenic in GWC-15 and GWC-20 and barium in GWC-9. A decreasing trend was identified for arsenic in GWC-16. Wells GWC-15, GWC-16, and GWC-20 will continue to be addressed by the ongoing ACM.

The barium concentration in the sample from GWC-16 and the chromium concentration in the sample from GWB-5R exceeded the respective intrawell prediction limits. The exceedances were further evaluated using the Sen's Slope/Mann-Kendall trend test, and no significant increasing trend was identified in either case. The concentrations of barium at GWC-16 and chromium at GWB-5R are considered unverified SSIs. Barium and chromium are included in the list of Appendix IV analytes and will be appropriately evaluated either by an alternate source demonstration or by a statistical comparison to respective groundwater protection standards if assessment monitoring is implanted.

5.0 MONITORING PROGRAM STATUS

Statistical evaluations of the groundwater monitoring data for GRL identified SSIs of Appendix III groundwater monitoring parameters. In accordance with Chapter 391-3-4-.10(6)(a) GRL will prepare an alternate source demonstration or initiate assessment monitoring program within 90 days.

An ongoing ACM to address arsenic concentrations in three wells was established under the existing permit.

6.0 CONCLUSIONS AND FUTURE ACTIONS

Statistical evaluations of the groundwater monitoring data for GRL identified SSIs of Appendix III groundwater monitoring parameters. In accordance with GA EPD Rule 391-3-4-.10(6)(a), GPC will prepare an alternate source demonstration or initiate assessment monitoring program within 90 days.

An ongoing ACM to address arsenic concentrations in three wells was established under the existing permit and will continue contemporaneously with the adaptation of the new EPD requirements. The next monitoring event is planned for the second half of 2019.

7.0 REFERENCES

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TABLES

Table 1A
Monitoring Network Well Summary

Well ID	Installation Date (mm/dd/yyyy)	Bottom Depth (ft BTOC)	Bottom Elevation (ft MSL)	Depth to Top of Screen (ft BTOC)	Top of Screen Elevation (ft MSL)	Hydraulic Location
GWA-7	07/29/1998	21.2	26.08	16.2	31.08	Upgradient
GWA-8	07/29/1998	20.8	26.91	15.8	31.91	Upgradient
GWB-4R	10/09/2018	23.3	22.43	14.0	32.43	Sidegradient
GWB-5R	10/09/2018	26.5	21.31	14.0	31.31	Sidegradient
GWB-6R	10/09/2018	22.7	24.71	10.0	34.71	Sidegradient
GWC-1	03/10/1997	28.2	22.46	23.2	27.46	Downgradient
GWC-2	03/11/1997	31.4	17.92	26.4	22.92	Downgradient
GWC-9	07/24/1998	27.4	19.78	22.4	24.78	Downgradient
GWC-11	07/23/1998	22.6	26.78	17.6	31.78	Downgradient
GWC-12	07/22/1998	26.7	20.74	21.7	25.74	Downgradient
GWC-13	07/22/1998	23.8	23.98	18.8	28.98	Downgradient
GWC-14	07/22/1998	27.0	23.67	22.0	28.67	Downgradient
GWC-15	07/22/1998	26.8	21.28	21.8	26.28	Downgradient
GWC-16	07/21/1998	28.2	19.58	23.2	24.58	Downgradient
GWC-17	1998	23.2	20.94	18.2	25.94	Downgradient
GWC-20	2010	25.0	24.31	20.0	29.31	Downgradient
GWC-21	2010	23.8	23.29	18.8	28.29	Downgradient
GWC-22	2010	18.9	27.79	13.9	32.79	Downgradient

Notes:

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

Table 1B
Non-Network Well Summary

Well ID	Installation Date (mm/dd/yyyy)	Bottom Depth (ft BTOC)	Bottom Elevation (ft MSL)	Depth to Top of Screen (ft BTOC)	Top of Screen Elevation (ft MSL)	Purpose
GWC-3	07/21/1998	22.9	26.87	17.9	31.87	Piezometer
GWC-4	07/20/1998	26.4	22.64	21.4	27.64	Piezometer
GWC-5	07/20/1998	26.7	21.81	21.7	26.81	Piezometer
GWC-6	07/28/1998	22.7	25.58	17.7	30.58	Piezometer
GWC-10	07/24/1998	20.6	26.79	15.6	31.79	Piezometer

Notes:

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

**Table 2
Groundwater Sampling Event Summary**

Well	Hydraulic Location	Aug. 30 - Sept. 1, 2016	Oct. 24-27, 2016	Jan. 3-6, 2017	Apr. 3-6, 2017	Jul. 10-13, 2017	Oct. 2-4, 2017	Jan. 9-11, 2018	Jul. 9-11, 2018	Jan 16-21, 2019	Mar. 25-27, 2019	Jul. 30, 2019
Purpose of Sampling Event		Background	Background	Background	Background	Background	Background	Background	Background	Detrection	Detection	Detection
GWA-7	Upgradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--
GWA-8	Upgradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--
GWB-4R	Sidegradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--
GWB-5R	Sidegradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--
GWB-6R	Sidegradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--
GWC-1	Downgradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--
GWC-2	Downgradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	--	D-01B
GWC-3	Sidegradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	--	--	--
GWC-9	Downgradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--
GWC-10	Downgradient	BG-01	BG-02	BG-03	--	--	--	--	--	--	--	--
GWC-11	Downgradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--
GWC-12	Downgradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--
GWC-13	Downgradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--
GWC-14	Downgradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--
GWC-15	Downgradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--
GWC-16	Downgradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--
GWC-17	Downgradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--
GWC-19	Downgradient	BG-01	BG-02	BG-03	--	--	--	--	--	--	--	--
GWC-20	Downgradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--
GWC-21	Downgradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--
GWC-22	Downgradient	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	D-01A	D-01B	--

Notes:

1. Events shown represent CCR monitoring only. Ongoing monitoring for previously permitted analytes have occurred at least twice per year historically.
2. -- = Not Sampled.
3. BG-XX = Background Event (Appendix III and Appendix IV).
4. D-XX = Detection Event (Appendix III).
5. GWB-4R, GWB-5R, and GWB-6R replaced GWC-4, GWC-5, and GWC-6, respectively.
6. GWC-3 is no longer sampled per the November 2018 permit application.
7. GWC-10 and GWC-19 are no longer sampled per May 2017 EPD correspondence.

Table 3
Summary of Groundwater Elevations

Well	Hydraulic Location	Aug. 30, 2016	Oct. 24, 2016	Jan. 3, 2017	Apr. 3, 2017	Jul. 10, 2017	Oct. 2, 2017	Jan. 9, 2018	Jul. 9, 2018	Jan. 16, 2019	Mar. 25, 2019
Purpose of Sampling Event		Background	Background	Background	Background	Background	Background	Background	Background	Detection	Detection
GWA-7	Upgradient	40.87	41.64	42.27	41.30	42.01	41.54	40.52	40.17	40.68	40.62
GWA-8	Upgradient	39.12	40.16	40.20	39.64	41.39	40.30	38.78	38.77	38.44	36.94
GWB-4R	Sidegradient	34.29	35.10	34.80	34.69	35.38	35.69	34.30	34.07	34.87	34.63
GWB-5R	Sidegradient	38.04	38.87	38.66	38.44	38.80	37.99	37.88	37.33	38.27	37.85
GWB-6R	Sidegradient	40.29	41.16	41.25	40.69	41.04	40.49	39.90	39.35	39.98	39.65
GWC-1	Downgradient	31.45	32.79	32.18	32.02	32.94	32.66	31.71	31.40	31.75	31.36
GWC-2	Downgradient	32.91	35.19	34.05	33.65	35.02	34.87	32.79	32.60	33.41	--
GWC-3	Downgradient	29.13	30.13	29.90	29.62	30.44	30.14	29.55	29.30	--	--
GWC-9	Downgradient	38.21	39.63	39.12	38.80	40.36	37.37	38.28	37.49	38.38	37.85
GWC-10	Downgradient	38.90	40.09	39.46	39.29	40.38	38.12	38.42	37.62	--	--
GWC-11	Downgradient	37.52	39.37	38.03	37.86	39.65	36.39	35.08	36.20	36.73	39.83
GWC-12	Downgradient	35.25	37.21	35.92	35.71	37.52	37.03	34.74	34.43	35.46	34.60
GWC-13	Downgradient	33.97	36.24	34.77	34.76	35.28	35.79	33.88	33.46	33.48	35.16
GWC-14	Downgradient	31.16	33.69	32.05	31.79	33.01	33.00	31.34	31.11	32.12	31.48
GWC-15	Downgradient	28.57	30.11	29.33	29.18	29.97	29.84	28.83	28.79	29.49	29.15
GWC-16	Downgradient	26.91	28.45	27.65	27.55	24.21	27.88	27.20	27.73	27.87	27.45
GWC-17	Downgradient	36.47	38.40	39.04	38.30	39.27	38.19	38.12	36.85	38.43	37.44
GWC-20	Downgradient	28.12	29.36	28.77	28.54	28.26	29.12	28.31	28.20	29.52	29.19
GWC-21	Downgradient	26.27	27.93	27.08	26.41	27.82	27.40	26.59	26.55	28.09	27.66
GWC-22	Downgradient	38.54	39.72	39.15	38.94	40.35	43.14	38.61	36.88	38.43	37.97

Notes:

1. Groundwater elevations are recorded in feet above mean sea level (ft MSL).
2. -- = No data.

Table 4
Groundwater Flow Velocity Calculations
March 2019

Equation

$$v = \frac{K (i)}{P_e} \quad \text{where: } v = \text{ground water velocity}$$

K = hydraulic conductivity
dh/dl = hydraulic gradient
P_e = effective porosity

Values Used in Calculation

Value	Source
K = 2.7E-03 cm/sec 7.60 ft/day	See note 1.
i ₁ = 0.008 unitless i ₂ = 0.003 unitless	hydraulic gradient from GWC-6R to GWC-16 from GWC-12 to GWC-14
P _e = 0.20 unitless	See note 2.

$$v_{\max} = \frac{(7.60)(0.008)}{0.20} \quad v_{\max} = 0.29 \text{ ft/day}$$

$$v_{\min} = \frac{(7.60)(0.003)}{0.20} \quad v_{\min} = 0.12 \text{ ft/day}$$

Notes

- (1) Grumman Road Monofill Groundwater Monitoring Plan (SCS, 1999)
- (2) Default value for silty sands from Interim Final RCRA Investigation (EPA, 1989)

Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018

Substance	MCL/ (SMCL)	Well ID								
		GWA-7	GWA-7	GWA-7	GWA-7	GWA-7	GWA-7	GWA-7	GWA-7	
		9/1/2016	10/25/2016	1/6/2017	4/6/2017	7/13/2017	10/4/2017	1/9/2018	7/11/2018	
APPENDIX III	Boron	N/R	11.6	21.4	20.1	21.8	16.3	21.5	13.9	11.7
	Calcium	N/R	5.59	6.43	8.13	7.72	4.57	6.41	4.68	3.9
	Chloride	(250)	190	150	180	200	200	260	210	177
	Fluoride	4	ND	ND (0.07 J)	ND (0.20 J)	ND (0.05 J)	0.41	ND (0.04 J)	0.46	ND
	Sulfate	(250)	73	26	23	25	65	13	45	37.7
	TDS	(500)	3660	3560	3490	3170	2280	3350	2640	2200
APPENDIX IV	Antimony	0.006	ND (0.0017 J)	ND	ND (0.0009 J)	ND	ND (0.0013 J)	ND (0.0008 J)	ND	ND
	Arsenic	0.01	0.0287	0.0069	0.0097	0.0104	0.0064	0.0078	ND (0.0091 J)	ND
	Barium	2	0.415	0.173	0.167	0.136	0.0891	0.113	0.0901	0.065
	Beryllium	0.004	ND (0.0017 J)	ND (0.0002 J)	ND (0.0003 J)	ND (0.0004 J)	ND (0.0010 J)	ND (0.0002 J)	ND	ND
	Cadmium	0.005	ND (0.0007 J)	ND	ND (0.0001 J)	ND	ND	ND	ND	ND
	Chromium	0.1	0.119	0.0519	0.0536	ND (0.0447 J)	0.0269	0.0378	ND (0.0283 J)	ND (0.018 J)
	Cobalt	N/R	0.0102	ND (0.0037 J)	ND (0.0039 J)	ND (0.0060 J)	ND (0.0037 J)	ND (0.0058 J)	ND (0.0053 J)	ND
	Lead	0.015	0.0663	ND (0.0003 J)	0.0060	0.0109	0.0070	ND (0.0042 J)	0.0098	ND (0.0028 J)
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND (0.00017 J)	ND	ND	ND (0.00004 J)	ND	ND (0.00010 J)	ND	ND
	Molybdenum	N/R	ND (0.0098 J)	ND	ND	ND	ND (0.0013 J)	ND (0.0013 J)	ND	ND
	Radium	5	11.0	10.5	6.81	8.93	8.51	3.85	4.28	5.99
	Selenium	0.05	0.0438	0.0310	0.0324	ND (0.0188 J)	0.0118	0.0195	ND	ND
Thallium	0.002	ND (0.0005 J)	ND	ND	ND	ND	ND	ND	ND	

Notes:

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

Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018

Substance	MCL/ (SMCL)	Well ID								
		GWA-8	GWA-8	GWA-8	GWA-8	GWA-8	GWA-8	GWA-8	GWA-8	GWA-8
		8/30/2016	10/24/2016	1/3/2017	4/3/2017	7/11/2017	10/2/2017	1/9/2018	7/9/2018	
APPENDIX III	Boron	N/R	0.117	0.126	0.124	0.105	0.136	0.107	0.123	0.11
	Calcium	N/R	23.8	22.5	22.1	ND (24.6 J)	23.5	22.7	23.2	ND (24.6 J)
	Chloride	(250)	15	13	13	14	13	15	13	15.4
	Fluoride	4	ND (0.10 J)	ND (0.18 J)	ND (0.18 J)	ND (0.12 J)	0.39	ND (0.12 J)	ND (0.21 J)	ND (0.040 J)
	Sulfate	(250)	140	160	140	140	130	150	120	123
	TDS	(500)	234	216	333	288	188	210	118	235
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND (0.0006 J)	ND (0.0006 J)	ND (0.0006 J)	ND (0.0009 J)	ND
	Barium	2	0.0687	0.0700	0.0610	0.0612	0.0624	0.0618	0.0574	0.056
	Beryllium	0.004	ND (0.0002 J)	ND	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.00020 J)
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND (0.0004 J)	ND (0.0006 J)	ND	ND	ND
	Cobalt	N/R	ND	ND	ND	ND (0.0005 J)	ND (0.0005 J)	ND (0.0004 J)	ND (0.0004 J)	ND
	Lead	0.015	ND	ND	ND (0.0001 J)	ND (0.0002 J)	ND (0.0001 J)	ND (0.0001 J)	ND (0.0001 J)	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND (0.0010 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	2.72	2.96	2.76	1.36	1.85	1.90	2.39	1.49
	Selenium	0.05	ND	ND (0.0013 J)	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND	ND	ND (0.00005 J)	ND (0.00006 J)	ND	ND	

Notes:

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

Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018

Substance	MCL/ (SMCL)	Well ID								
		GWC-1	GWC-1	GWC-1	GWC-1	GWC-1	GWC-1	GWC-1	GWC-1	
		8/30/2016	10/25/2016	1/4/2017	4/4/2017	7/12/2017	10/3/2017	1/10/2018	7/10/2018	
APPENDIX III	Boron	N/R	0.875	1.22	1.30	1.19	1.37	0.765	0.876	0.94
	Calcium	N/R	29.4	28.3	33.4	34.6	38.0	25.5	36.5	45.5
	Chloride	(250)	5.5	5.1	6.9	6.5	6.5	4.5	6.9	6.2
	Fluoride	4	ND (0.22 J)	ND	ND (0.18 J)	ND	ND (0.04 J)	ND	ND	ND
	Sulfate	(250)	87	83	99	110	100	63	86	77.7
	TDS	(500)	225	230	349	356	357	192	277	349
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.0023 J)	ND (0.0035 J)	ND (0.0018 J)	ND (0.0015 J)	ND (0.0015 J)	ND (0.0013 J)	ND (0.0023 J)	ND (0.0031 J)
	Barium	2	0.0545	0.0504	0.0534	0.0549	0.0614	0.0436	0.0530	0.059
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND (0.0001 J)	ND (0.00007 J)	ND	ND	ND	ND
	Chromium	0.1	ND (0.0015 J)	ND (0.0018 J)	ND (0.0021 J)	ND (0.0020 J)	ND (0.0021 J)	ND (0.0014 J)	ND (0.0017 J)	ND (0.0021 J)
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	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
	Mercury	0.002	ND (0.00004 J)	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	0.175	0.242	0.167	0.172	0.182	0.162	0.117	0.11
	Radium	5	2.36	2.02	2.10	1.39 U	1.63	1.84	2.11	1.29
	Selenium	0.05	ND (0.0020 J)	ND (0.0022 J)	ND (0.0016 J)	ND (0.0052 J)	ND (0.0024 J)	ND	ND (0.0018 J)	ND (0.0026 J)
Thallium	0.002	ND	ND	ND	ND (0.00005 J)	ND	ND	ND	ND	

Notes:

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

Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018

Substance	MCL/ (SMCL)	Well ID								
		GWC-2	GWC-2	GWC-2	GWC-2	GWC-2	GWC-2	GWC-2	GWC-2	GWC-2
		8/31/2016	10/26/2016	1/5/2017	4/4/2017	7/13/2017	10/3/2017	1/10/2018	7/10/2018	
APPENDIX III	Boron	N/R	ND (0.0196 J)	ND (0.0500 J)	ND (0.0162 J)	ND (0.0190 J)	ND (0.0230 J)	ND (0.0266 J)	ND (0.0203 J)	ND (0.026 J)
	Calcium	N/R	ND (0.371 J)	5.84	ND (0.379 J)	0.993	ND (0.388 J)	ND (0.251 J)	ND (0.177 J)	ND (0.17 J)
	Chloride	(250)	7.8	12	7.4	8.7	8.3	9.0	8.2	7.3
	Fluoride	4	ND (0.07 J)	0.62	ND (0.17 J)	ND (0.08 J)	ND (0.06 J)	ND (0.06 J)	ND	ND
	Sulfate	(250)	21	100	22	29	20	20	9.5	8.5
	TDS	(500)	39	135	99	54	50	ND (18 J)	ND	49
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND (0.0006 J)	ND
	Barium	2	0.0429	0.113	0.0526	0.0503	0.0529	0.0570	0.0527	0.054
	Beryllium	0.004	ND	ND (0.0003 J)	ND	ND (0.00009 J)	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND (0.0010 J)	ND	ND (0.0008 J)	ND (0.0006 J)	ND	ND	ND
	Cobalt	N/R	ND	ND (0.0011 J)	ND	ND	ND (0.0003 J)	ND (0.0003 J)	ND	ND
	Lead	0.015	ND	ND	ND	ND (0.0002 J)	ND (0.0003 J)	ND	ND (0.00008 J)	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.01	0.725 U	0.735 U	0.870 U	0.420 U	0.995 U	0.698 U	1.01
	Selenium	0.05	ND	ND (0.0035 J)	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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

Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018

Substance	MCL/ (SMCL)	Well ID								
		GWC-3	GWC-3	GWC-3	GWC-3	GWC-3	GWC-3	GWC-3	GWC-3	GWC-3
		8/31/2016	10/25/2016	1/3/2017	4/4/2017	7/12/2017	10/3/2017	1/10/2018	7/10/2018	
APPENDIX III	Boron	N/R	0.747	0.746	0.684	0.721	0.780	0.784	0.697	0.69
	Calcium	N/R	69.6	63.6	67.6	60.9	61.8	69.6	66.6	84.6
	Chloride	(250)	2.6	2.5	2.0	2.6	2.5	2.3	2.4	2.5
	Fluoride	4	ND	ND	ND	ND	ND	ND	ND	ND
	Sulfate	(250)	19	16	14	21	21	20	15	11.1
	TDS	(500)	406	267	422	305	314	349	299	331
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	0.363	0.328	0.281	0.341	0.315	0.349	0.228	0.31
	Barium	2	0.0465	0.0655	0.0569	0.0603	0.0697	0.0563	0.0461	0.046
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.0065 J)	ND (0.0012 J)	ND (0.0014 J)	ND (0.0025 J)	ND (0.0019 J)	ND (0.0014 J)	ND (0.0014 J)	ND (0.0018 J)
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND (0.0002 J)	ND (0.00008 J)	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND (0.00009 J)	ND	ND	ND	ND
	Molybdenum	N/R	0.0880	0.0765	0.0644	0.110	0.0977	0.0794	0.0385	0.065
	Radium	5	1.04	1.94	1.48	1.60	0.771 U	1.94	1.33	1.04
	Selenium	0.05	ND (0.0018 J)	ND	ND	ND (0.0014 J)	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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

Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018

Substance	MCL/ (SMCL)	Well ID								
		GWC-4	GWC-4	GWC-4	GWC-4	GWC-4	GWC-4	GWC-4	GWC-4	
		9/1/2016	10/26/2016	1/6/2017	4/4/2017	7/12/2017	10/4/2017	1/11/2018	7/11/2018	
APPENDIX III	Boron	N/R	6.48	7.57	8.34	8.18	7.51	8.88	6.95	6.4
	Calcium	N/R	9.91	8.56	8.18	8.12	8.00	12.5	12.9	8.6
	Chloride	(250)	160	110	67	80	120	130	60	75.9
	Fluoride	4	ND	ND (0.05 J)	ND (0.08 J)	ND	0.38	ND	ND	ND
	Sulfate	(250)	210	230	220	230	210	290	210	177
	TDS	(500)	1080	1050	1060	994	1070	1100	838	799
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.0033 J)	ND (0.0016 J)	ND	ND (0.0021 J)	ND (0.0015 J)	ND (0.0018 J)	ND (0.0015 J)	ND (0.00095 J)
	Barium	2	0.123	0.0863	0.0758	0.0910	0.0941	0.0994	0.0880	0.071
	Beryllium	0.004	ND (0.0004 J)	ND (0.0001 J)	ND (0.0001 J)	ND (0.0001 J)	ND	ND (0.0001 J)	ND (0.0001 J)	ND
	Cadmium	0.005	ND (0.0002 J)	ND	ND (0.00009 J)	ND (0.00009 J)	ND	ND	ND (0.0002 J)	ND
	Chromium	0.1	0.0150	0.0106	ND (0.0098 J)	0.0101	ND (0.0096 J)	ND (0.0097 J)	0.0109	ND (0.0055 J)
	Cobalt	N/R	ND (0.0024 J)	ND (0.0011 J)	ND (0.0010 J)	ND (0.0010 J)	ND (0.0008 J)	ND (0.0010 J)	ND (0.0008 J)	ND
	Lead	0.015	0.0166	0.0057	0.0053	0.0092	0.0060	0.0057	0.0085	ND (0.0029 J)
	Lithium	N/R	ND (0.0092 J)	ND (0.0046 J)	ND (0.0042 J)	ND (0.0056 J)	ND (0.0035 J)	ND (0.0041 J)	ND (0.0052 J)	ND (0.0039 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	0.0350	0.0267	0.0278	0.0265	0.0209	0.0181	0.0237	0.024
	Radium	5	5.27	2.32	5.10	5.00	2.69	4.82	4.48	2.69
	Selenium	0.05	ND (0.0067 J)	ND (0.0042 J)	ND (0.0042 J)	ND (0.0043 J)	ND (0.0033 J)	ND (0.0038 J)	ND (0.0029 J)	ND (0.0015 J)
Thallium	0.002	ND	ND	ND	ND (0.00007 J)	ND	ND	ND (0.00007 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.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.

Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018

Substance	MCL/ (SMCL)	Well ID								
		GWC-5	GWC-5	GWC-5	GWC-5	GWC-5	GWC-5	GWC-5	GWC-5	GWC-5
		8/30/2016	10/26/2016	1/3/2017	4/6/2017	7/12/2017	10/3/2017	1/10/2018	7/10/2018	
APPENDIX III	Boron	N/R	1.09	2.50	3.39	2.76	3.55	2.72	3.21	7
	Calcium	N/R	14.3	18.6	18.1	16.2	18.1	15.2	15.5	30.6
	Chloride	(250)	31	24	29	27	31	27	59	172.0
	Fluoride	4	ND (0.04 J)	ND (0.05 J)	ND (0.08 J)	ND (0.006 J)	ND (0.05 J)	ND (0.11 J)	ND	ND (0.20 J)
	Sulfate	(250)	100	130	120	140	140	130	110	48.1
	TDS	(500)	224	297	366	279	308	288	493	1730
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND (0.0006 J)	ND (0.0009 J)	ND (0.0010 J)	ND (0.0012 J)	ND (0.0016 J)
	Barium	2	0.135	0.103	0.118	0.162	0.157	0.127	0.158	0.31
	Beryllium	0.004	ND (0.0002 J)	ND (0.0001 J)	ND (0.0001 J)	ND (0.0003 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.0003 J)	ND (0.00028 J)
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND (0.0010 J)	ND (0.0013 J)	ND (0.0011 J)	ND (0.0012 J)	ND (0.0016 J)	ND (0.0055 J)
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND (0.0004 J)	ND (0.0020 J)
	Lead	0.015	ND	ND (0.0002 J)	ND (0.0001 J)	ND (0.0003 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.0003 J)	ND
	Lithium	N/R	ND (0.0042 J)	ND	ND (0.0024 J)	ND (0.0051 J)	ND (0.0031 J)	ND (0.0027 J)	ND (0.0041 J)	ND (0.0050 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.81	2.03	1.85	2.66	2.10	2.00	2.55	3.14
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND (0.0018 J)
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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

**Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018**

Substance	MCL/ (SMCL)	Well ID								
		GWC-6	GWC-6	GWC-6	GWC-6	GWC-6	GWC-6	GWC-6	GWC-6	GWC-6
		8/30/2016	10/26/2016	1/5/2017	4/6/2017	7/12/2017	10/3/2017	1/9/2018	7/10/2018	
APPENDIX III	Boron	N/R	1.41	1.83	3.07	3.19	3.06	2.69	2.81	2.9
	Calcium	N/R	4.68	5.45	5.35	5.41	4.81	5.17	4.73	4.5
	Chloride	(250)	60	67	70	76	64	73	61	60.2
	Fluoride	4	ND (0.09 J)	ND (0.24 J)	ND (0.11 J)	0.30	ND (0.15 J)	ND (0.11 J)	ND	ND
	Sulfate	(250)	120	120	130	150	140	140	140	128
	TDS	(500)	365	373	543	434	454	389	415	453
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND (0.0021 J)	ND (0.0011 J)	ND (0.0014 J)	ND (0.0014 J)	ND (0.0017 J)	ND (0.00063 J)
	Barium	2	0.106	0.107	0.107	0.111	0.106	0.105	0.0969	0.087
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.0013 J)	ND (0.0014 J)	ND (0.0020 J)	ND (0.0034 J)	ND (0.0024 J)	ND (0.0022 J)	ND (0.0019 J)	ND (0.0023 J)
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND (0.0003 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.0001 J)	ND (0.0003 J)	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	2.19	2.67	3.74	2.36	1.54	3.63	2.07	1.63
	Selenium	0.05	ND	ND	ND (0.0014 J)	ND	ND	ND	ND	ND (0.0016 J)
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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

Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018

Substance	MCL/ (SMCL)	Well ID								
		GWC-9	GWC-9	GWC-9	GWC-9	GWC-9	GWC-9	GWC-9	GWC-9	GWC-9
		8/31/2016	10/27/2016	1/6/2017	4/6/2017	7/12/2017	10/4/2017	1/11/2018	7/11/2018	
APPENDIX III	Boron	N/R	ND (0.0960 J)	ND (0.0281 J)	ND (0.0189 J)	ND (0.0181 J)	ND (0.0211 J)	ND (0.0254 J)	ND (0.0180 J)	ND (0.020 J)
	Calcium	N/R	6.90	8.20	7.97	7.95	8.37	8.57	9.78	9.2
	Chloride	(250)	17	17	16	17	18	18	16	16.2
	Fluoride	4	0.55	ND (0.26 J)	ND (0.25 J)	ND (0.16 J)	ND (0.20 J)	ND (0.22 J)	0.98	ND (0.14 J)
	Sulfate	(250)	84	76	66	79	75	78	110	87.4
	TDS	(500)	173	221	259	169	163	168	190	165
APPENDIX IV	Antimony	0.006	ND	ND (0.0016 J)	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.284	0.244	0.305	0.249	0.256	0.356	0.226	0.29
	Beryllium	0.004	ND (0.0003 J)	ND (0.0003 J)	ND (0.0002 J)	ND (0.0003 J)	ND (0.0003 J)	ND (0.0002 J)	ND (0.0003 J)	ND (0.00030 J)
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.0024 J)	ND	ND	ND (0.0019 J)	ND (0.0011 J)	ND (0.0011 J)	ND (0.0010 J)	ND
	Cobalt	N/R	ND (0.0021 J)	ND (0.0017 J)	ND (0.0017 J)	ND (0.0017 J)	ND (0.0016 J)	ND (0.0015 J)	ND (0.0017 J)	ND (0.0017 J)
	Lead	0.015	ND (0.0007 J)	ND	ND	ND (0.0001 J)	ND	ND (0.00009 J)	ND (0.0002 J)	ND
	Lithium	N/R	ND	ND (0.0023 J)	ND (0.0021 J)	ND (0.0021 J)	ND (0.0017 J)	ND (0.0021 J)	ND (0.0022 J)	ND (0.0019 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND (0.00005 J)	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	3.30	2.70	4.45	3.10	2.73	8.16	2.31	3.31
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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

**Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018**

Substance	MCL/ (SMCL)	Well ID				
		GWC-10	GWC-10	GWC-10	GWC-10	GWC-10
		8/31/2016	10/25/2016	1/4/2017		
APPENDIX III	Boron	N/R	24.1	22.4	24.5	See Note 10
	Calcium	N/R	250	278	260	
	Chloride	(250)	730	560	860	
	Fluoride	4	0.36	ND (0.16 J)	ND (0.21 J)	
	Sulfate	(250)	1500	1000	1700	
	TDS	(500)	3460	2790	3620	
APPENDIX IV	Antimony	0.006	ND (0.0014 J)	0.0045	ND (0.0023 J)	
	Arsenic	0.01	0.0144	0.0159	0.0134	
	Barium	2	0.0627	0.0717	0.0574	
	Beryllium	0.004	ND (0.0004 J)	ND (0.0004 J)	ND (0.0004 J)	
	Cadmium	0.005	ND	ND	ND	
	Chromium	0.1	ND (0.0021 J)	ND (0.0020 J)	ND (0.0020 J)	
	Cobalt	N/R	ND (0.0089 J)	ND (0.0078 J)	ND (0.0072 J)	
	Lead	0.015	0.0113	0.0143	0.0117	
	Lithium	N/R	ND	ND	ND	
	Mercury	0.002	ND	ND	ND	
	Molybdenum	N/R	ND	ND	ND	
	Radium	5	3.02	2.24	3.36	
Selenium	0.05	ND (0.0023 J)	ND (0.0020 J)	ND (0.0026 J)		
Thallium	0.002	ND	ND (0.0003 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.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.

Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018

Substance	MCL/ (SMCL)	Well ID								
		GWC-11	GWC-11	GWC-11	GWC-11	GWC-11	GWC-11	GWC-11	GWC-11	
		8/31/2016	10/26/2016	1/4/2017	4/6/2017	7/11/2017	10/3/2017	1/11/2018	7/11/2018	
APPENDIX III	Boron	N/R	ND (0.0688 J)	ND (0.0830 J)	0.0738	0.0754	0.0614	0.0838	0.169	0.3
	Calcium	N/R	18.8	16.6	17.6	30.9	17.7	39.8	65.6	53
	Chloride	(250)	3.5	2.5	3.8	7.1	3.1	46	100	53.7
	Fluoride	4	ND	ND	ND	ND	ND	ND	ND	ND
	Sulfate	(250)	64	56	65	110	49	140	270	211
	TDS	(500)	119	108	182	248	88	248	681	440
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND (0.0006 J)	ND (0.0009 J)	ND	ND (0.0007 J)	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.0565	0.0591	0.0598	0.0813	0.0302	0.103	0.166	0.12
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND (0.0002 J)	ND (0.0001 J)	ND (0.0001 J)	ND (0.0002 J)	ND	ND (0.0003 J)	ND (0.0006 J)	ND (0.00040 J)
	Chromium	0.1	ND (0.0010 J)	ND	ND	ND (0.0007 J)	ND (0.0006 J)	ND (0.0007 J)	ND (0.0098 J)	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND (0.0003 J)	ND
	Lead	0.015	ND (0.0002 J)	ND (0.0001 J)	ND (0.0002 J)	ND (0.0003 J)	ND (0.0002 J)	ND (0.0003 J)	ND (0.0003 J)	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND (0.0018 J)	ND
	Radium	5	2.20	1.96	1.88	0.893 U	1.89	4.73	7.49	5.88
Selenium	0.05	ND (0.0084 J)	ND (0.0052 J)	ND (0.0062 J)	0.0195	ND	ND (0.0079 J)	ND (0.0054 J)	ND (0.0022 J)	
Thallium	0.002	ND	ND	ND	ND (0.00006 J)	ND	ND (0.00007 J)	ND (0.0001 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.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.

Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018

Substance	MCL/ (SMCL)	Well ID								
		GWC-12	GWC-12	GWC-12	GWC-12	GWC-12	GWC-12	GWC-12	GWC-12	
		8/31/2016	10/26/2016	1/4/2017	4/5/2017	7/10/2017	10/4/2017	1/11/2018	7/11/2018	
APPENDIX III	Boron	N/R	5.10	5.74	6.56	6.49	8.13	5.18	5.16	8.5
	Calcium	N/R	105	101	94.9	92.5	90.3	74.6	78.1	72.2
	Chloride	(250)	210	200	160	140	88	100	78	66.9
	Fluoride	4	0.70	0.91	0.51	0.71	0.88	0.37	1.4	0.62
	Sulfate	(250)	1100	900	880	990	480	760	780	598
	TDS	(500)	1560	1520	1430	1200	1100	986	1020	888
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND (0.0006 J)	ND (0.0008 J)	ND (0.0009 J)	ND	ND
	Barium	2	0.0190	0.0197	0.0174	0.0174	0.0172	0.0162	0.0180	0.014
	Beryllium	0.004	ND (0.0011 J)	ND (0.0011 J)	ND (0.0009 J)	ND (0.0008 J)	ND (0.0008 J)	ND (0.0006 J)	ND (0.0006 J)	ND (0.00061 J)
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.0012 J)	ND (0.0012 J)	ND (0.0012 J)	ND (0.0013 J)	ND (0.0014 J)	ND (0.0011 J)	ND (0.0010 J)	ND
	Cobalt	N/R	ND (0.0018 J)	ND (0.0016 J)	ND (0.0014 J)	ND (0.0013 J)	ND (0.0013 J)	ND (0.0011 J)	ND (0.0011 J)	ND (0.00096 J)
	Lead	0.015	ND (0.0001 J)	ND (0.0001 J)	ND	ND (0.0003 J)	ND (0.0003 J)	ND (0.0001 J)	ND (0.0002 J)	ND
	Lithium	N/R	ND	ND	ND	ND (0.0012 J)	ND	ND	ND	ND (0.00098 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	2.61	3.28	3.77	3.25	1.55	1.68	2.94	2.03
	Selenium	0.05	ND (0.0019 J)	ND (0.0020 J)	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND (0.0003 J)	ND	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 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.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.

**Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018**

Substance	MCL/ (SMCL)	Well ID								
		GWC-13	GWC-13	GWC-13	GWC-13	GWC-13	GWC-13	GWC-13	GWC-13	
		8/31/2016	10/26/2016	1/5/2017	4/6/2017	7/12/2017	10/4/2017	1/10/2018	7/11/2018	
APPENDIX III	Boron	N/R	0.261	0.211	0.179	0.112	0.0882	0.116	0.101	0.098
	Calcium	N/R	2.77	2.25	2.27	2.04	2.25	2.19	2.28	2.3
	Chloride	(250)	4.3	4.9	4.1	3.7	2.6	3.0	3.4	3.2
	Fluoride	4	ND	0.55	ND (0.09 J)	ND	ND	ND	ND	ND
	Sulfate	(250)	43	29	32	49	16	33	22	17.8
	TDS	(500)	77	ND	146	ND (23 J)	39	38	ND	63
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND (0.0006 J)	ND
	Barium	2	0.0273	0.0238	0.0218	0.0204	0.0161	0.0185	0.0166	0.019
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND (0.000058 J)
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.0011 J)	ND	ND	ND (0.0011 J)	ND (0.0007 J)	ND (0.0008 J)	ND (0.0007 J)	ND (0.0019 J)
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND (0.0002 J)	ND (0.0005 J)	ND (0.0005 J)	ND (0.0007 J)	ND (0.0009 J)	ND (0.0015 J)
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND (0.00013 J)	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.23	0.641 U	0.657 U	0.439 U	0.414 U	1.33	1.21	1.40 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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

Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018

Substance	MCL/ (SMCL)	Well ID								
		GWC-14	GWC-14	GWC-14	GWC-14	GWC-14	GWC-14	GWC-14	GWC-14	GWC-14
		9/1/2016	10/25/2016	1/5/2017	4/4/2017	7/11/2017	10/2/2017	1/9/2018	7/9/2018	
APPENDIX III	Boron	N/R	ND (0.0710 J)	ND (0.0819 J)	0.0813	0.0723	0.0734	0.0748	0.0679	0.061
	Calcium	N/R	194	100	107	153	125	126	119	123
	Chloride	(250)	60	36	37	47	34	34	24	25.9
	Fluoride	4	ND (0.25 J)	0.43	ND (0.21 J)	0.45	0.41	ND	ND	ND
	Sulfate	(250)	730	420	430	600	400	470	440	369
	TDS	(500)	1170	633	781	916	675	689	653	659
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.0024 J)	ND	ND (0.0024 J)	ND (0.0030 J)	ND (0.0019 J)	ND (0.0026 J)	ND (0.0021 J)	ND (0.0019 J)
	Barium	2	0.0346	0.0248	0.0245	0.0342	0.0276	0.0274	0.0222	0.0260
	Beryllium	0.004	ND (0.0001 J)	ND	ND	ND (0.00009 J)	ND	ND	ND	ND (0.000062 J)
	Cadmium	0.005	ND (0.0001 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND (0.0002 J)	ND	ND	ND (0.00017 J)
	Chromium	0.1	ND (0.0015 J)	ND	ND (0.0010 J)	ND (0.0010 J)	ND (0.0008 J)	ND (0.0009 J)	ND (0.0006 J)	ND
	Cobalt	N/R	ND	ND	ND	ND	ND (0.0003 J)	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND (0.0001 J)	ND (0.00008 J)	ND (0.0001 J)	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND (0.0027 J)	ND (0.0028 J)	ND (0.0022 J)	ND (0.0022 J)	ND (0.0024 J)	ND (0.0025 J)	ND (0.0038 J)	0.01
	Radium	5	1.28	1.54	0.715 U	0.699 U	1.12	0.855 U	0.861 U	0.693 U
	Selenium	0.05	ND (0.0056 J)	ND (0.0023 J)	ND (0.0038 J)	ND (0.0064 J)	ND (0.0044 J)	ND (0.0040 J)	ND (0.0019 J)	ND (0.0029 J)
Thallium	0.002	ND	ND	ND	ND (0.00007 J)	ND (0.00006 J)	ND	ND	ND	

Notes:

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

**Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018**

Substance	MCL/ (SMCL)	Well ID								
		GWC-15	GWC-15	GWC-15	GWC-15	GWC-15	GWC-15	GWC-15	GWC-15	
		9/1/2016	10/25/2016	1/5/2017	4/3/2017	7/11/2017	10/2/2017	1/9/2018	7/10/2018	
APPENDIX III	Boron	N/R	9.01	1.66	1.10	1.21	1.44	1.59	1.35	1.2
	Calcium	N/R	119	106	115	131	155	137	135	129
	Chloride	(250)	10	6.5	10	7.3	5.7	4.4	5.7	3.1
	Fluoride	4	ND	0.50	ND (0.22 J)	ND	ND (0.06 J)	ND	ND	ND (0.15 J)
	Sulfate	(250)	120	100	140	150	110	56	84	43
	TDS	(500)	539	449	565	632	569	559	520	524
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	0.0533	0.0551	0.0437	0.0713	0.0745	0.0723	0.0731	0.09
	Barium	2	0.0403	0.0329	0.0392	0.0439	0.0510	0.0470	0.0431	0.0470
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.0011 J)	ND	ND	ND (0.0015 J)	ND (0.0013 J)	ND (0.0013 J)	ND (0.0012 J)	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND (0.0003 J)	ND (0.0001 J)	ND (0.0002 J)	ND (0.0002 J)	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	0.132	0.117	0.109	0.0994	0.0938	0.103	0.106	0.088
	Radium	5	2.45	1.04 U	1.36	0.697 U	0.754 U	1.52	1.17	1.26
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND (0.0019 J)	ND (0.0086 J)
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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

**Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018**

Substance	MCL/ (SMCL)	Well ID								
		GWC-16	GWC-16	GWC-16	GWC-16	GWC-16	GWC-16	GWC-16	GWC-16	
		9/1/2016	10/25/2016	1/4/2017	4/5/2017	7/12/2017	10/3/2017	1/10/2018	7/10/2018	
APPENDIX III	Boron	N/R	1.82	1.26	1.46	2.00	2.95	4.15	3.68	5.2
	Calcium	N/R	93.8	94.1	88.2	106	149	217	161	205
	Chloride	(250)	43	34	29	36	44	58	36	57
	Fluoride	4	0.55	0.36	ND (0.10 J)	ND (0.20 J)	ND (0.04 J)	0.86	ND	ND
	Sulfate	(250)	430	360	360	440	490	780	470	787
	TDS	(500)	878	585	783	722	962	1240	935	1040
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	0.0551	0.0466	0.0444	0.0591	0.0776	0.0813	0.0850	0.067
	Barium	2	0.0445	0.0464	0.0379	0.0534	0.0944	0.135	0.0603	0.16
	Beryllium	0.004	ND (0.0001 J)	ND	ND (0.00009 J)	ND (0.00009 J)	ND	ND	ND (0.0001 J)	ND (0.000060 J)
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.0011 J)	ND	ND	ND (0.0010 J)	ND (0.0011 J)	ND (0.0009 J)	ND (0.0007 J)	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND (0.0002 J)	ND (0.0001 J)	ND (0.0002 J)	ND (0.0001 J)	ND (0.0001 J)	ND (0.0002 J)	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	0.0800	0.0800	0.0786	0.113	0.178	0.201	0.161	0.14
	Radium	5	1.99	1.98	1.72	1.72	1.11	2.13	1.74	1.97
	Selenium	0.05	ND (0.0052 J)	ND (0.0085 J)	ND (0.0048 J)	ND (0.0068 J)	ND (0.0048 J)	ND (0.0051 J)	ND (0.0018 J)	ND (0.0045 J)
Thallium	0.002	ND	ND	ND	ND (0.00006 J)	ND	ND	ND (0.00005 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.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.

**Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018**

Substance	MCL/ (SMCL)	Well ID								
		GWC-17	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17
		9/1/2016	10/26/2016	1/5/2017	4/5/2017	7/13/2017	10/4/2017	1/11/2018	7/11/2018	
APPENDIX III	Boron	N/R	0.408	0.500	0.676	0.690	0.888	1.02	1.28	1.6
	Calcium	N/R	71.9	80.3	94.4	104	124	136	139	122
	Chloride	(250)	610	570	710	860	860	1000	940	864
	Fluoride	4	0.68	0.68	0.73	1.6	1.7	1.8	1.5	1.8
	Sulfate	(250)	310	280	310	460	490	1100	810	902
	TDS	(500)	1270	1320	1770	1600	1940	2370	2350	2260
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND (0.0011 J)	ND (0.0016 J)	ND (0.0019 J)	ND (0.0015 J)	ND (0.00082 J)
	Barium	2	0.203	0.177	0.142	0.106	0.0686	0.0589	0.0412	0.049
	Beryllium	0.004	ND (0.0014 J)	ND (0.0016 J)	ND (0.0019 J)	ND (0.0024 J)	0.0034	0.0037	0.0033	0.0038
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.0011 J)	ND	ND (0.0012 J)	ND (0.0015 J)	ND (0.0012 J)	ND (0.0055 J)	ND (0.0009 J)	ND
	Cobalt	N/R	ND (0.0046 J)	ND (0.0046 J)	ND (0.0062 J)	ND (0.0070 J)	ND (0.0077 J)	ND (0.0073 J)	ND (0.0061 J)	ND (0.0064 J)
	Lead	0.015	ND	ND	ND	ND (0.0009 J)	ND	ND (0.0001 J)	ND (0.0001 J)	ND
	Lithium	N/R	ND (0.0066 J)	ND (0.0065 J)	ND (0.0062 J)	ND (0.0070 J)	ND (0.0069 J)	ND (0.0082 J)	ND (0.0061 J)	ND (0.0075 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	5.19	4.25	3.55	4.39	2.44	4.95	3.53	3.13
	Selenium	0.05	ND (0.0012 J)	ND (0.0013 J)	ND (0.0012 J)	ND	ND (0.0018 J)	ND (0.0042 J)	ND	ND (0.0016 J)
Thallium	0.002	ND	ND	ND	ND (0.0001 J)	ND	ND (0.0001 J)	ND (0.0001 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 ND ((value J) is qualified by the laboratory as an estimated number.)
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.

**Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018**

Substance	MCL/ (SMCL)	Well ID				
		GWC-19	GWC-19	GWC-19	GWC-19	GWC-19
		8/30/2016	10/25/2016	1/5/2017		
APPENDIX III	Boron	N/R	2.87	3.39	4.34	See Note 10
	Calcium	N/R	25.8	24.7	30	
	Chloride	(250)	23	22	25	
	Fluoride	4	ND (0.14 J)	ND (0.29 J)	ND (0.14 J)	
	Sulfate	(250)	200	230	240	
	TDS	(500)	339	14300	475	
APPENDIX IV	Antimony	0.006	ND	ND	ND	
	Arsenic	0.01	ND	ND	ND	
	Barium	2	0.0901	0.0876	0.102	
	Beryllium	0.004	ND (0.0002 J)	ND (0.0001 J)	ND (0.0001 J)	
	Cadmium	0.005	ND	ND	ND	
	Chromium	0.1	ND (0.0010 J)	ND	ND (0.0009 J)	
	Cobalt	N/R	ND (0.0006 J)	ND	ND	
	Lead	0.015	ND	ND	ND	
	Lithium	N/R	ND	ND	ND	
	Mercury	0.002	ND (0.00005 J)	ND	ND	
	Molybdenum	N/R	ND	ND	ND	
	Radium	5	4.77	3.49	4.89	
Selenium	0.05	ND	ND	ND		
Thallium	0.002	ND	ND	ND		

Notes:

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

**Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018**

Substance	MCL/ (SMCL)	Well ID								
		GWC-20	GWC-20	GWC-20	GWC-20	GWC-20	GWC-20	GWC-20	GWC-20	
		9/1/2016	10/25/2016	1/4/2017	4/4/2017	7/11/2017	10/2/2017	1/10/2018	7/9/2018	
APPENDIX III	Boron	N/R	3.34	2.54	1.91	2.77	4.14	4.65	1.79	1.7
	Calcium	N/R	67.2	50.1	80.4	108	136	105	60.1	75.9
	Chloride	(250)	16	8.1	13	23	31	30	9.7	10.8
	Fluoride	4	ND	ND	ND (0.04 J)	ND (0.02 J)	ND (0.14 J)	ND	ND	ND
	Sulfate	(250)	180	79	170	300	400	390	99	99.2
	TDS	(500)	470	289	639	660	836	698	322	461
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	0.215	0.307	0.311	0.317	0.299	0.216	0.347	0.37
	Barium	2	0.0976	0.0702	0.0999	0.136	0.145	0.148	0.0788	0.087
	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 (0.0011 J)	ND (0.0009 J)	ND (0.0009 J)	ND (0.0008 J)	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND (0.0001 J)	ND	ND (0.00007 J)	ND	ND	ND (0.0002 J)	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	0.296	0.395	0.229	0.147	0.136	0.130	0.229	0.13
	Radium	5	2.21	1.51 U	2.56	1.77	2.76	4.15	1.96	1.11
	Selenium	0.05	ND	ND (0.0014 J)	ND (0.0014 J)	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.
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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
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5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.

Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018

Substance	MCL/ (SMCL)	Well ID								
		GWC-21	GWC-21	GWC-21	GWC-21	GWC-21	GWC-21	GWC-21	GWC-21	GWC-21
		9/1/2016	10/25/2016	1/4/2017	4/4/2017	7/13/2017	10/3/2017	1/9/2018	7/10/2018	
APPENDIX III	Boron	N/R	0.620	ND (0.0658 J)	0.360	0.509	0.126	0.100	0.783	0.5
	Calcium	N/R	40.5	3.91	15.2	32.3	8.92	7.88	40.5	29.8
	Chloride	(250)	5.9	4.4	7.7	8.0	5.4	4.4	4.4	6.3
	Fluoride	4	ND	ND	ND	ND	ND	ND	ND	ND
	Sulfate	(250)	36	16	45	46	33	34	29	33.2
	TDS	(500)	184	ND	242	187	86	66	167	180
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.0039 J)	ND	ND	ND (0.0031 J)	ND	ND	ND (0.0033 J)	ND (0.0027 J)
	Barium	2	0.0770	0.0217	0.0617	0.0761	0.0428	0.0376	0.0704	0.061
	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 (0.0008 J)	ND (0.0006 J)	ND (0.0005 J)	ND (0.0007 J)	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND (0.00009 J)	ND (0.00007 J)	ND (0.0001 J)	ND (0.00009 J)	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	0.0686	ND (0.0018 J)	0.0222	0.0476	0.0105	ND (0.0031 J)	0.0900	0.047
	Radium	5	1.05	1.20	2.11	2.02	0.576 U	0.860 U	1.43	1.63
	Selenium	0.05	0.0297	ND (0.0095 J)	0.0220	0.0236	0.0130	ND (0.0100 J)	0.0162	0.016
Thallium	0.002	ND	ND	ND	ND (0.00005 J)	ND	ND	ND	ND	

Notes:

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

Table 5A
Grumman Road Landfill Summary of Background Groundwater Analytical Data - 2016 - 2018

Substance	MCL/ (SMCL)	Well ID								
		GWC-22	GWC-22	GWC-22	GWC-22	GWC-22	GWC-22	GWC-22	GWC-22	
		8/31/2016	10/26/2016	1/4/2017	4/6/2017	7/11/2017	10/4/2017	1/11/2018	7/11/2018	
APPENDIX III	Boron	N/R	12.8	9.81	8.94	0.733	0.852	6.05	0.838	3.2
	Calcium	N/R	127	127	113	42.7	46.0	115	47.6	73.7
	Chloride	(250)	320	450	330	50	70	360	74	164
	Fluoride	4	ND (0.04 J)	ND (0.12 J)	ND (0.06 J)	ND	ND (0.03 J)	ND (0.12 J)	ND	ND
	Sulfate	(250)	700	850	680	220	210	730	180	381
	TDS	(500)	1570	1840	1560	368	383	1500	438	876
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.0017 J)	ND	ND	ND (0.0006 J)	ND (0.0012 J)	ND (0.0025 J)	ND (0.0006 J)	ND (0.0011 J)
	Barium	2	0.0693	0.0966	0.0975	0.0640	0.0778	0.156	0.0702	0.12
	Beryllium	0.004	ND (0.0002 J)	ND (0.0002 J)	ND (0.0001 J)	ND	ND	ND (0.0001 J)	ND	ND (0.000070 J)
	Cadmium	0.005	ND (0.00008 J)	ND	ND (0.0001 J)	ND (0.0001 J)	ND	ND (0.0002 J)	ND (0.0002 J)	ND (0.00023 J)
	Chromium	0.1	ND	ND	ND	ND (0.0006 J)	ND (0.0005 J)	ND (0.0006 J)	ND	ND
	Cobalt	N/R	ND (0.0010 J)	ND (0.0009 J)	ND (0.0007 J)	ND	ND	ND (0.0007 J)	ND	ND
	Lead	0.015	ND (0.0003 J)	ND (0.0003 J)	ND (0.0003 J)	ND (0.0003 J)	ND (0.0002 J)	ND (0.0008 J)	ND (0.0009 J)	ND (0.0010 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	5.96	7.42	6.07	3.00	4.20	7.16	3.57	7.57
Selenium	0.05	ND (0.0014 J)	ND (0.0010 J)	ND	ND	ND	ND (0.0023 J)	ND	ND	
Thallium	0.002	ND	ND	ND	ND	ND	ND (0.0001 J)	ND (0.00006 J)	ND	

Notes:

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

Table 5B
Grumman Road Landfill Summary of Groundwater Analytical Data - January 2019

Substance	MCL/ (SMCL)	Well ID								
		GWA-7	GWA-8	GWB-4R	GWB-5R	GWB-6R	GWC-1	GWC-2	GWC-9	
		1/16/2019	1/16/2019	1/16/2019	1/16/2019	1/16/2019	1/16/2019	1/21/2019	1/18/2019	
APPENDIX III	Boron	N/R	9.3	0.13	5.3	5.0	7.7	0.91	ND (0.018 J)	ND (0.018 J)
	Calcium	N/R	4.3	27.7	68.8	33.3	10.1	46.5	ND (0.19 J)	8.1
	Chloride	(250)	165	16	20.2	49.7	54.1	6.6	6.9	17.5
	Fluoride	4	0.49	ND	1.2	ND	ND (0.053 J)	ND	ND	ND (0.24 J)
	Sulfate	(250)	24.5	129	244	184	402	71.2	10.2	56.9
	TDS	(500)	2100	219	530	382	1320	341	39.0	118
Required by GWMP	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND (0.0024 J)	ND (0.0011 J)	ND	ND (0.0023 J)	ND	ND
	Barium	2	0.062	0.062	0.083	0.054	ND (0.013 J)	0.054	0.050	0.21
	Chromium	0.1	ND (0.018 J)	ND	ND (0.0024 J)	ND	ND (0.018 J)	ND (0.0021 J)	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Selenium	0.05	ND (0.0071 J)	ND	ND	ND	ND	ND (0.0018 J)	ND	ND
	Vanadium	N/A	0.16	ND	ND (0.0022 J)	ND (0.0033 J)	0.077	ND (0.0043 J)	ND (0.0024 J)	ND
Zinc	(5)	ND (0.014 J)	ND (0.0037 J)	ND (0.0052 J)	ND	ND	ND	ND	ND (0.0025 J)	

Notes:

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6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.

**Table 5B
Grumman Road Landfill Summary of Groundwater Analytical Data - January 2019**

Substance	MCL/ (SMCL)	Well ID								
		GWC-11	GWC-12	GWC-13	GWC-14	GWC-15	GWC-16	GWC-17	GWC-20	
		1/17/2019	1/17/2019	1/16/2019	1/16/2019	1/17/2019	1/17/2019	1/16/2019	1/21/2019	
APPENDIX III	Boron	N/R	0.065	7.0	0.11	0.046	1.1	8.6	1.5	1.1
	Calcium	N/R	ND (19.8 J)	64.7	2.3	120.0	137	187	80.5	60.0
	Chloride	(250)	6.6	52.0	3.8	29.2	3.2	48.9	469	5.1
	Fluoride	4	ND	1.2	ND	ND	ND	ND	1.4	ND
	Sulfate	(250)	50.3	454	20.2	291	45.2	780	422	35.5
	TDS	(500)	118	765	44.0	656	518	1320	1540	307
Required by GWMP	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND (0.0016 J)	0.13	0.079	ND	0.44
	Barium	2	0.039	0.017	0.019	0.028	0.042	0.13	0.063	0.069
	Chromium	0.1	ND	ND (0.0028 J)	ND	ND	ND	ND (0.010 J)	ND	ND
	Lead	0.015	ND (0.00028 J)	ND	ND (0.00061 J)	ND	ND	ND	ND	ND
	Selenium	0.05	ND	ND	ND	ND (0.0016 J)	ND (0.0029 J)	ND (0.0031 J)	ND	ND (0.0014 J)
	Vanadium	N/A	ND (0.0021 J)	ND	ND	ND (0.0043 J)	ND	ND (0.0021 J)	ND	ND (0.0031 J)
Zinc	(5)	ND	ND (0.0032 J)	0.047	ND	ND	ND	ND (0.0094 J)	ND	

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4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
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7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement, proximity to closure activities, or modifications to the proposed well network.

**Table 5B
Grumman Road Landfill Summary of Groundwater Analytical Data - January 2019**

Substance	MCL/ (SMCL)	Well ID							
		GWC-21	GWC-22						
		1/17/2019	1/18/2019						
APPENDIX III	Boron	N/R	0.43	0.37					
	Calcium	N/R	27.6	30.6					
	Chloride	(250)	5.4	11.0					
	Fluoride	4	ND	ND					
	Sulfate	(250)	24.1	107					
	TDS	(500)	178	154					
Required by GWMP	Antimony	0.006	ND	ND					
	Arsenic	0.01	ND (0.0022 J)	ND					
	Barium	2	0.061	0.052					
	Chromium	0.1	0.010	ND					
	Lead	0.015	ND	ND (0.0012 J)					
	Selenium	0.05	0.011	ND					
	Vanadium	N/A	ND (0.0022 J)	ND					
Zinc	(5)	ND	ND (0.0024 J)						

Notes:

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2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
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Table 5C
Grumman Road Landfill Summary of Groundwater Analytical Data - March 2019

Substance	MCL/ (SMCL)	Well ID								
		GWA-7	GWA-8	GWB-4R	GWB-5R	GWB-6R	GWC-1	GWC-9	GWC-11	
		3/25/2019	3/25/2019	3/25/2019	3/26/2019	3/26/2019	3/26/2019	3/27/2019	3/27/2019	
APPENDIX III	Boron	N/R	8.5	0.098	4.4	4.0	7.4	0.77	ND (0.016 J)	0.089
	Calcium	N/R	3.9	31.7	55.6	36.1	9.0	46.3	7.7	25.1
	Chloride	(250)	147	17.7	19.7	47.9	51.8	7.0	18.9	11.9
	Fluoride	4	ND (0.21 J)	ND (0.082 J)	ND (0.064 J)	ND	ND (0.046 J)	ND (0.051 J)	ND (0.13 J)	ND
	Sulfate	(250)	14.7	152	245	222	319	73.8	76.2	76.8
	TDS	(500)	2100	240	479	1040	1250	317	104	138
Required by GWMP	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.0029 J)	ND	ND (0.0029 J)	ND (0.0014 J)	ND (0.0029 J)	ND (0.0032 J)	ND	ND
	Barium	2	0.054	0.064	0.077	0.057	ND (0.012 J)	0.055	0.19	0.053
	Chromium	0.1	ND (0.017 J)	ND	ND (0.0020 J)	0.072	ND (0.017 J)	ND (0.0018 J)	ND	ND
	Lead	0.015	ND (0.0019 J)	ND	ND	ND	ND	ND	ND	ND (0.00029 J)
	Selenium	0.05	ND	ND	ND	ND	ND (0.0068 J)	ND (0.0023 J)	ND	ND (0.0014 J)
	Vanadium	N/A	0.18	ND	ND (0.0040 J)	ND (0.0058 J)	0.086	ND (0.0051 J)	ND	ND (0.0023 J)
Zinc	(5)	ND	ND	ND (0.0078 J)	ND	ND	ND	ND (0.0026 J)	ND	

Notes:

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7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
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Table 5C
Grumman Road Landfill Summary of Groundwater Analytical Data - March 2019

Substance	MCL/ (SMCL)	Well ID								
		GWC-12	GWC-13	GWC-14	GWC-15	GWC-16	GWC-17	GWC-20	GWC-21	
		3/27/2019	3/26/2019	3/26/2019	3/26/2019	3/26/2019	3/26/2019	3/25/2019	3/26/2019	
APPENDIX III	Boron	N/R	6.1	0.35	ND (0.037 J)	0.95	7.4	1.2	1.0	0.61
	Calcium	N/R	63.1	2.4	84.2	124	204	68.8	74.8	60.1
	Chloride	(250)	45.6	3.2	21.1	3.0	5.1	439	9.4	11.9
	Fluoride	4	ND (0.036 J)	ND (0.052 J)	ND (0.13 J)	ND (0.13 J)	ND (0.11 J)	0.89	ND (0.043 J)	ND (0.071 J)
	Sulfate	(250)	579	33.6	192	54	87.9	439	95.6	83.9
	TDS	(500)	673	72.0	496	541	1380	1220	449	292
Required by GWMP	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.00058 J)	ND (0.0023 J)	0.10	0.089	ND (0.0015 J)	0.41	ND (0.0045 J)
	Barium	2	0.017	0.026	0.034	0.047	0.14	0.025	0.085	0.084
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Selenium	0.05	ND	ND	ND (0.0022 J)	ND (0.0074 J)	ND (0.0033 J)	ND	ND	0.022
	Vanadium	N/A	ND (0.0049 J)	ND (0.0029 J)	ND (0.0063 J)	ND (0.0026 J)	ND (0.0038 J)	ND (0.0024 J)	ND (0.0024 J)	ND (0.0041 J)
Zinc	(5)	ND (0.0031 J)	0.030	ND	ND	ND	ND (0.0057 J)	ND	ND	

Notes:

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

**Table 5C
Grumman Road Landfill Summary of Groundwater Analytical Data - March 2019**

Substance	MCL/ (SMCL)	Well ID							
		GWC-22							
		3/27/2019							
APPENDIX III	Boron	N/R	0.37						
	Calcium	N/R	28.8						
	Chloride	(250)	11.5						
	Fluoride	4	ND						
	Sulfate	(250)	103						
	TDS	(500)	158						
Required by GWMP	Antimony	0.006	ND						
	Arsenic	0.01	ND						
	Barium	2	0.057						
	Chromium	0.1	ND						
	Lead	0.015	ND (0.00047 J)						
	Selenium	0.05	ND						
	Vanadium	N/A	ND (0.0020 J)						
	Zinc	(5)	ND						

Notes:

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

Table 6
Statistical Method Summary

Statistical Method Summary		
Monitoring Well Network	Upgradient Wells	GWA-7 and GWA-8
	Downgradient Wells	GWC-1, GWC-2, GWB-4R, GWB-5R, GWB-6R, GWC-9, GWC-11, GWC-12, GWC-13, GWC-14, GWC-15, GWC-16, GWC-17, GWC-20, GWC-21, and GWC-22
CCR Monitoring Parameters	Appendix III (Detection Monitoring)	Boron, Calcium, Chloride, Fluoride, pH, Sulfate, and TDS
	Appendix IV (Assessment Monitoring)	Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, combined Radium 226 + 228, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium, and Thallium
EPD Permit Metals	Detection Monitoring	Antimony, Arsenic, Barium, Chromium, Lead, Selenium, Vanadium, and Zinc
Statistical Methodology	Data Screening Proposed Background	Evaluate outliers, trends, and seasonality when sufficient data are available
	Statistical Limits	Interwell (calcium, chloride, fluoride, pH, and sulfate) or intrawell (boron and TDS) statistical limits are on constituent specific basis, depending on the appropriateness of the method as determined by the Analysis of Variance

FIGURES

P:\Industrial\054 - Southern Company\110 - Groundwater Consulting Services 2018 - 2021\Grumman Road\2 - GWM Reports\2019\DWG\Plant Kraft\Grumman Road LF - March 2019 Map Rev1.dwg 2019-07-23 MATT MALONE



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PROJECT:
 GRUMMAN ROAD
 PRIVATE
 INDUSTRIAL
 LANDFILL

120 GULFSTREAM ROAD
 FORT WENTWORTH, GEORGIA

REVISIONS

Drawn by: MM Checked by: EP

PROJECT NUMBER:
 IO54-110
 August 2019

SITE LOCATION
 MAP

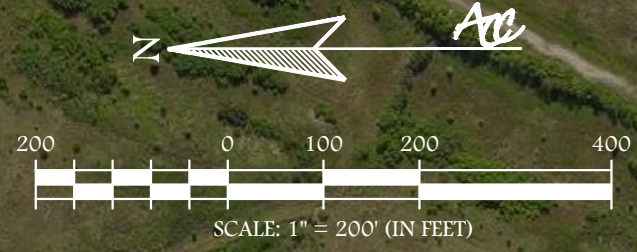
FIGURE 1

P:\Industrial\054 - Southern Company\110 - Groundwater Consulting Services 2018 - 2021\Grumman Road\2 - GWM Reports\2019\DWG\Plant Kraft\Grumman Road LF - March 2019 Map Rev1.dwg 23 MATT MALONE

NOTES:
1. PROPERTY BOUNDARY SURVEYED BY GUNNIN LAND SURVEYING ON AUGUST 30, 2018.

LEGEND

EXISTING	DESCRIPTION
	PROPERTY BOUNDARY
	GROUNDWATER MONITORING NETWORK WELL
	NON-NETWORK WELL (NOT MONITORED)



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**GRUMMAN ROAD
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INDUSTRIAL
LANDFILL**

120 GULFSTREAM ROAD
FORT WENTWORTH, GEORGIA

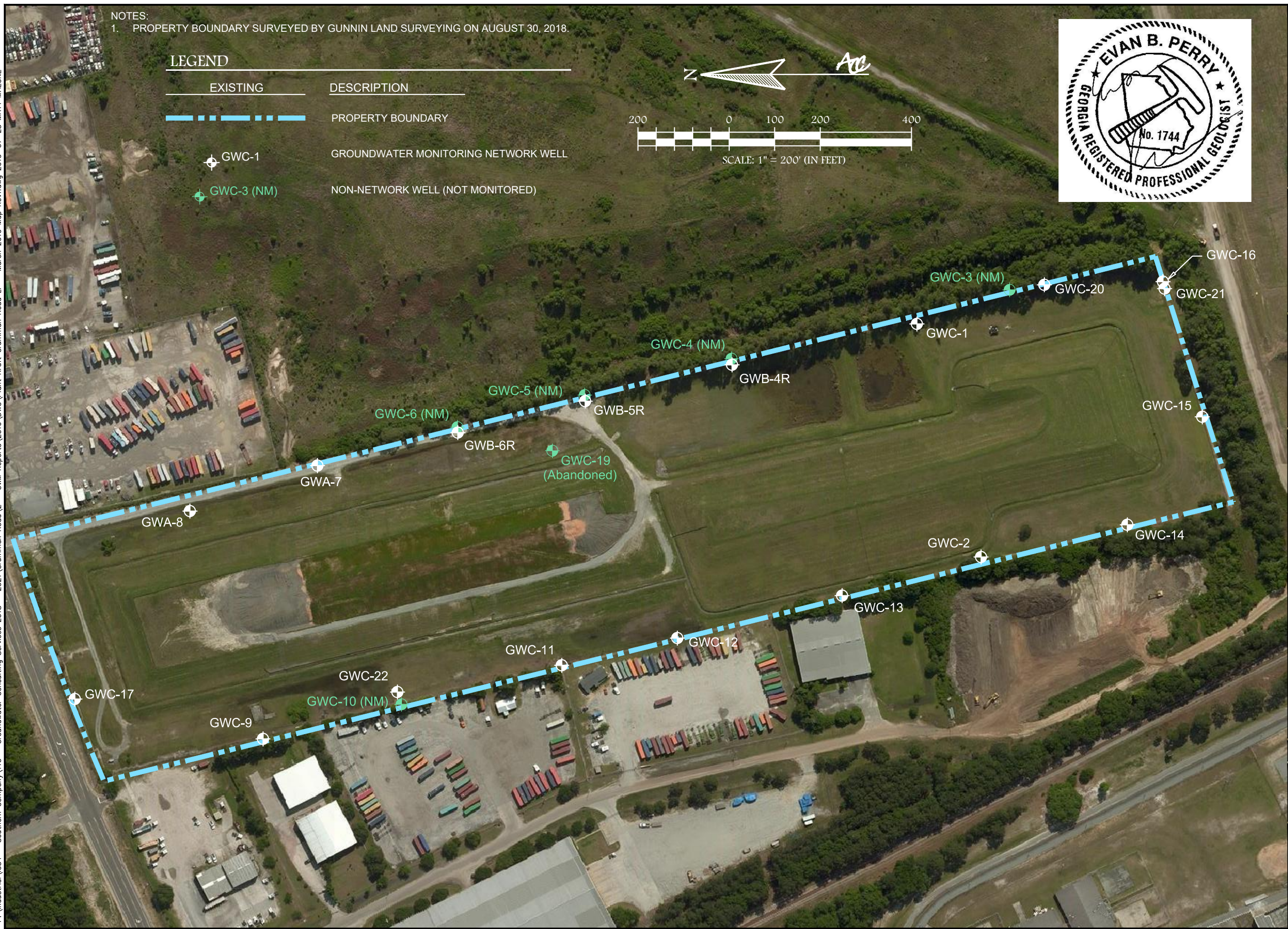
REVISIONS

Drawn by: MM Checked by: EP

PROJECT NUMBER:
I054-110
August 2019

WELL LOCATION
MAP

FIGURE 2



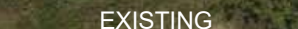


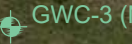


P:\Industrial\054 - Southern Company\110 - Groundwater Consulting Services 2018 - 2021\Grumman Road\2 - 2021\Grumman Road\2 - GMM Reports\2019\DWG\Plant Kraft\Grumman Road LF - March 2019 Map Rev1.dwg 2019-07-24 EVAN PERRY

**Groundwater Elevations and Well Depths
Grumman Road Landfill March 2019**

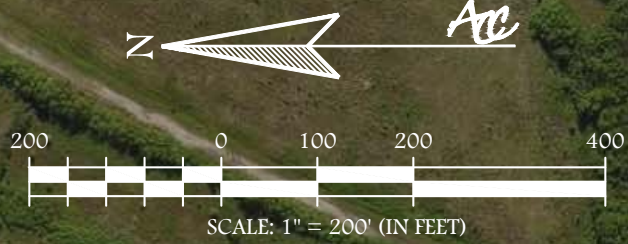
Monitoring Well ID	Well Depth (ft btoc)	Top of Casing (MSL)	Depth to Water (feet)	Groundwater Elevation (MSL)
GWA-7	21.2	47.10	6.48	40.62
GWA-8	20.8	46.84	9.90	36.94
GWB-4R	23.3	45.86	11.23	34.63
GWB-5R	26.5	47.82	9.97	37.85
GWB-6R	22.7	47.40	7.75	39.65
GWC-1	28.2	50.30	18.94	31.36
GWC-2	31.4	49.15	NA	NA
GWC-9	27.4	47.11	9.26	37.85
GWC-11	22.6	49.38	9.55	39.83
GWC-12	26.7	47.48	12.88	34.60
GWC-13	23.8	47.82	12.66	35.16
GWC-14	27.0	50.67	19.19	31.48
GWC-15	26.8	48.12	18.97	29.15
GWC-16	28.2	47.79	20.34	27.45
GWC-17	23.2	44.09	6.65	37.44
GWC-20	25.0	50.03	20.84	29.19
GWC-21	23.8	47.94	20.28	27.66
GWC-22	18.6	46.72	8.75	37.97

- Notes:
1. ft btoc - feet below top of casing.
 2. MSL = Mean Sea Level (NGVD 1929).
 3. Depths to water measured on January 15, 2019.

LEGEND

- | | | |
|--|----------------|--|
|  | EXISTING | DESCRIPTION |
|  | | PROPERTY BOUNDARY |
|  | GWC-1
31.36 | GROUNDWATER MONITORING NETWORK WELL
(GROUNDWATER ELEVATION) |
|  | GWC-3 (NM) | NON-NETWORK WELL (NOT MONITORED) |
|  | 36 — 36 | GROUNDWATER ELEVATION CONTOUR |
|  | | GROUNDWATER FLOW DIRECTION |

- NOTES:
1. PROPERTY BOUNDARY SURVEYED BY GUNNIN LAND SURVEYING ON AUGUST 30, 2018.
 2. NA = WATER LEVEL WAS UNABLE TO BE MEASURED.
 - * WATER ELEVATION NOT USED TO CALCULATE POTENTIOMETRIC SURFACE.



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PROJECT:
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120 GULFSTREAM ROAD
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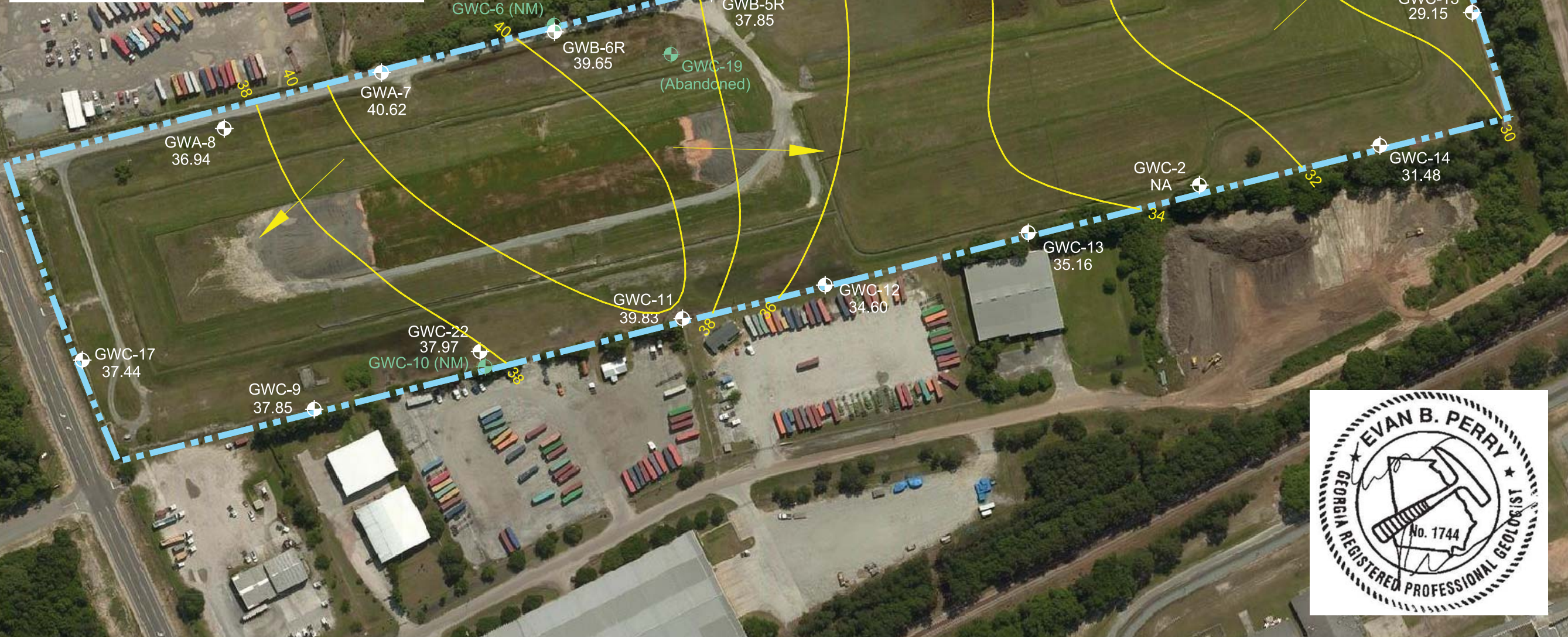
REVISIONS

Drawn by: MM Checked by: EP

PROJECT NUMBER:
 IO54-110
 August 2019

MARCH 2019
 POTENTIOMETRIC SURFACE MAP

FIGURE 3



APPENDICES

APPENDIX A

Laboratory Analytical and Field Sampling Reports

Product Name: Low-Flow System

Date: 2016-09-01 15:30:04

Project Information:

Operator Name Brandon Reynolds
Company Name ACC
Project Name Plant Kraft
Site Name Grumman Rd
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369135
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type Idpe
Tubing Diameter .17 in
Tubing Length 26 ft

Pump placement from TOC 10 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 21.2 ft
Screen Length 5 ft
Depth to Water 6.45 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.206049 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	15:04:52	3603.01	25.65	5.94	2497.17	1000.00	6.77	0.03	-61.02
Last 5	15:10:02	3912.97	25.02	5.93	2531.10	1000.00	6.77	0.01	-62.44
Last 5	15:15:03	4213.97	25.08	5.93	2523.86	1000.00	6.77	0.01	-70.24
Last 5	15:20:07	4517.97	25.14	5.93	2503.82	1000.00	6.77	0.02	-63.32
Last 5	15:25:08	4818.94	25.21	5.93	2492.61	1000.00	6.77	0.01	-64.39
Variance 0			0.06	0.00	-7.24			-0.01	-7.80
Variance 1			0.06	-0.00	-20.04			0.01	6.92
Variance 2			0.07	0.00	-11.21			-0.01	-1.08

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-30 09:19:35

Project Information:

Operator Name Brandon Reynolds
Company Name Acc
Project Name Grumman
Site Name GWA-8
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369135
Turbidity Make/Model Hach 2100q

Pump Information:

Pump Model/Type geopump easy-load II
Tubing Type ldpe
Tubing Diameter .17 in
Tubing Length 20 ft

Pump placement from TOC 10 ft

Well Information:

Well ID gwa-8
Well diameter 2 in
Well Total Depth 20.9 ft
Screen Length 10 ft
Depth to Water 8.59 ft

Pumping Information:

Final Pumping Rate 160 mL/min
Total System Volume 0.1792685 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 5.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 3		+/- 0.3	+/- 1000
Last 5	08:54:02	1501.02	24.44	4.41	376.40	1.32	9.94	0.13	73.96
Last 5	08:59:03	1802.02	24.36	4.41	376.97	2.29	9.94	0.12	72.62
Last 5	09:04:06	2105.03	24.35	4.41	376.43	1.05	9.94	0.09	71.73
Last 5	09:09:06	2405.02	24.34	4.41	376.41	--	--	0.12	70.80
Last 5	09:14:06	2705.02	24.35	4.42	380.37	--	--	0.22	70.21
Variance 0			-0.01	-0.00	-0.54			-0.02	-0.90
Variance 1			-0.01	-0.00	-0.02			0.03	-0.93
Variance 2			0.02	0.01	3.95			0.09	-0.59

Notes

WL stable at 9.95 after finding ideal purge rate

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-30 15:11:02

Project Information:

Operator Name O Fuquea
Company Name ACC
Project Name Grumman Rd.
Site Name GWC-1
Latitude 32° 8' 22.57"
Longitude -81° -10' -55.83"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.1 ft
Screen Length 10 ft
Depth to Water 19.21 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.1 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 3		+/- 10%	+/- 100
Last 5	14:49:33	900.00	25.28	5.34	291.51	2.43	19.20	0.08	189.27
Last 5	14:54:33	1199.98	25.37	5.36	286.86	1.63	19.20	0.08	184.63
Last 5	14:59:34	1500.98	25.35	5.36	286.52	1.08	19.20	0.09	179.09
Last 5	15:04:35	1801.98	25.47	5.37	292.17	1.34	19.20	0.06	174.26
Last 5	15:09:35	2101.98	25.22	5.38	284.32	1.04	19.20	0.09	168.92
Variance 0			-0.02	0.01	-0.34			0.01	-5.54
Variance 1			0.11	0.01	5.65			-0.04	-4.83
Variance 2			-0.25	0.00	-7.85			0.04	-5.34

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-31 16:25:15

Project Information:

Operator Name O Fuquea
Company Name ACC
Project Name Grumman
Site Name Grumman Rd.
Latitude 32° 8' 21.23"
Longitude -81° -11' -2.24"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 31.4 ft
Screen Length 5 ft
Depth to Water 16.41 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 5.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 10	pH +/- 0.1	SpCond µS/cm +/- 5%	Turb NTU +/- 10	DTW ft	RDO mg/L +/- 0.3	ORP mV +/- 10
Stabilization									
Last 5	16:04:29	1200.02	22.36	4.86	72.59	9.35	16.50	0.10	45.32
Last 5	16:09:29	1500.02	22.37	4.86	72.12	4.79	16.50	0.09	42.95
Last 5	16:14:29	1800.02	22.27	4.84	74.81	4.09	16.50	0.09	42.57
Last 5	16:19:29	2100.02	22.37	4.86	72.47	4.04	16.50	0.08	40.31
Last 5	16:24:29	2400.02	22.20	4.85	72.53	2.94	16.40	0.08	39.61
Variance 0			-0.11	-0.02	2.69			-0.00	-0.38
Variance 1			0.10	0.02	-2.33			-0.01	-2.26
Variance 2			-0.17	-0.01	0.06			-0.01	-0.70

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-31 16:35:37

Project Information:

Operator Name Brandon Reynolds
Company Name ACC
Project Name Grumman
Site Name GWC-3
Latitude 32° 8' 42.5"
Longitude -81° -10' -59.77"
Sonde SN 369135
Turbidity Make/Model Hach 2100q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type Idpe
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 22 ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 22.8 ft
Screen Length 5 ft
Depth to Water 20.52 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 100	pH +/- 0.1	SpCond µS/cm +/- 5%	Turb NTU +/- 10	DTW ft	RDO mg/L +/- 10%	ORP mV +/- 100
Stabilization									
Last 5	16:14:27	300.02	24.03	6.20	491.15	1.88	20.55	0.22	-41.71
Last 5	16:19:27	600.01	23.99	6.26	517.22	1.37	20.55	0.21	-37.50
Last 5	16:24:27	900.01	23.93	6.30	537.39	1.04	20.55	0.21	-40.93
Last 5	16:29:27	1200.01	23.87	6.33	552.69	0.99	20.55	0.20	-43.68
Last 5	16:34:28	1501.00	23.89	6.35	560.41	--	--	0.19	-46.19
Variance 0			-0.06	0.04	20.18			-0.00	-3.44
Variance 1			-0.07	0.03	15.30			-0.01	-2.75
Variance 2			0.02	0.02	7.71			-0.00	-2.50

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-01 12:54:20

Project Information:

Operator Name Brandon Reynolds
Company Name ACC
Project Name Plant Kraft
Site Name Grumman Rd
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369135
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type Idpe
Tubing Diameter .17 in
Tubing Length 31 ft

Pump placement from TOC 18 ft

Well Information:

Well ID GWC-4
Well diameter 2 in
Well Total Depth 26.4 ft
Screen Length 5 ft
Depth to Water 14.68 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2283661 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	12:31:55	600.03	24.22	5.86	1422.49	835.00	16.05	0.09	-65.59
Last 5	12:36:55	900.03	24.31	5.83	1438.47	794.00	16.05	0.07	-63.03
Last 5	12:41:56	1201.03	24.17	5.81	1463.37	812.00	16.05	0.07	-60.49
Last 5	12:46:59	1504.02	24.13	5.77	1422.96	915.00	16.05	0.06	-57.16
Last 5	12:51:59	1804.02	24.47	5.72	1455.67	878.00	16.05	0.06	-54.49
Variance 0			-0.13	-0.02	24.90			-0.01	2.53
Variance 1			-0.05	-0.04	-40.41			-0.00	3.34
Variance 2			0.34	-0.04	32.71			0.00	2.67

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-30 15:09:05

Project Information:

Operator Name Brandon Reynolds
Company Name ACC
Project Name Grumman
Site Name GWC-5
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369135
Turbidity Make/Model Hach 2100q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type Idpe
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 12 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 10 ft
Depth to Water 10.5 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 100
Last 5	14:46:55	3302.94	27.65	5.55	394.08	4.53	11.03	5.33	-5.40
Last 5	14:51:56	3603.93	26.14	5.17	368.79	6.17	11.03	0.17	2.93
Last 5	14:56:56	3903.93	25.49	5.17	367.02	4.06	11.02	0.10	-2.61
Last 5	15:01:56	4204.25	25.40	5.16	370.06	2.91	11.00	0.08	-1.78
Last 5	15:06:56	4504.26	25.31	5.16	368.83	3.22	11.00	0.08	-4.37
Variance 0			-0.66	0.00	-1.77			-0.07	-5.54
Variance 1			-0.09	-0.01	3.04			-0.02	0.83
Variance 2			-0.09	-0.00	-1.23			0.01	-2.59

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-30 11:32:55

Project Information:

Operator Name Brandon Reynolds
Company Name ACC
Project Name Grumman Rd
Site Name GWC-6
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369135
Turbidity Make/Model Hach 2100q

Pump Information:

Pump Model/Type geopump easy load ii
Tubing Type ldpe
Tubing Diameter 0.17 in
Tubing Length 25 ft

Pump placement from TOC 10 ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 22.8 ft
Screen Length 10 ft
Depth to Water 8.02 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 6.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 3%	+/- 3		+/- 0.3	+/- 100
Last 5	11:11:49	300.10	23.50	5.30	519.10	6.34	8.33	0.20	-10.55
Last 5	11:16:49	600.00	23.51	5.26	559.01	3.12	8.33	0.17	-5.97
Last 5	11:21:49	900.00	23.54	5.25	564.70	3.73	8.33	0.17	-5.70
Last 5	11:26:49	1200.00	23.59	5.25	571.25	2.50	8.33	0.20	-6.03
Last 5	11:31:49	1500.00	23.63	5.25	572.76	2.25	8.33	0.18	-6.36
Variance 0			0.03	-0.01	5.69			-0.00	0.27
Variance 1			0.05	0.00	6.55			0.03	-0.33
Variance 2			0.04	0.00	1.51			-0.02	-0.33

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-31 11:13:22

Project Information:

Operator Name Brandon Reynolds
Company Name ACC
Project Name Grumman
Site Name GWC-9
Latitude 32° 8' 38.57"
Longitude -81° -11' -12.15"
Sonde SN 369135
Turbidity Make/Model Hach 2100q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type Idpe
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 13 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 25.7 ft
Screen Length 5 ft
Depth to Water 9.00 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 13.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	10:46:18	4519.70	25.78	4.63	220.89	7.66	19.93	0.17	50.24
Last 5	10:51:18	4819.70	26.49	4.64	216.45	8.47	20.60	0.23	86.61
Last 5	10:56:18	5119.70	26.54	4.63	217.04	7.75	21.14	0.26	94.15
Last 5	11:01:22	5423.68	27.43	4.63	216.67	8.83	21.88	0.30	112.35
Last 5	11:06:22	5723.68	27.00	4.70	218.80	6.12	22.43	2.86	100.84
Variance 0			0.05	-0.01	0.59			0.03	7.54
Variance 1			0.90	-0.01	-0.37			0.04	18.20
Variance 2			-0.43	0.07	2.13			2.56	-11.50

Notes

Purged dry

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-31 10:34:12

Project Information:

Operator Name O Fuquea
Company Name ACC
Project Name Grumman Rd.
Site Name GWC-10
Latitude 32° 8' 33.71"
Longitude -81° -11' -5.66"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-10
Well diameter 2 in
Well Total Depth 20.6 ft
Screen Length 5 ft
Depth to Water 8.99 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 36 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 3		+/- 10%	+/- 100
Last 5	10:09:43	3020.98	24.23	4.75	4781.36	30.10	12.00	0.19	37.38
Last 5	10:14:43	3320.98	24.56	4.78	4579.79	16.30	12.00	0.11	34.45
Last 5	10:19:44	3621.94	24.73	4.77	4580.36	6.90	12.00	0.09	33.32
Last 5	10:24:44	3921.94	24.53	4.81	4460.92	4.32	12.00	0.08	34.24
Last 5	10:29:45	4222.93	24.50	4.80	4465.85	4.46	12.00	0.08	34.77
Variance 0			0.18	-0.01	0.57			-0.01	-1.13
Variance 1			-0.20	0.04	-119.44			-0.01	0.92
Variance 2			-0.03	-0.02	4.93			-0.00	0.53

Notes

Lowered purge from 200 mL to 100 mL. WL stabilized.

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-31 12:23:05

Project Information:

Operator Name O Fuquea
Company Name ACC
Project Name Grumman Rd
Site Name GWC-11
Latitude 32° 8' 30.33"
Longitude -81° -11' -4.69"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 22.5 ft
Screen Length 5 ft
Depth to Water 11.86 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 48.4 in
Total Volume Pumped 5.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	11:59:59	1800.02	26.14	5.11	183.51	3.57	16.10	0.17	94.94
Last 5	12:05:09	2110.02	26.88	5.11	185.30	7.07	16.10	0.15	79.90
Last 5	12:10:09	2410.02	26.01	5.11	185.61	3.09	16.10	0.15	69.26
Last 5	12:15:09	2710.02	25.64	5.11	187.28	3.64	16.20	0.15	57.78
Last 5	12:20:09	3009.97	25.50	5.11	188.56	--	--	0.14	48.82
Variance 0			-0.86	0.00	0.31			-0.00	-10.64
Variance 1			-0.37	-0.00	1.67			-0.01	-11.49
Variance 2			-0.14	0.00	1.28			-0.00	-8.96

Notes

Lowered purge rate from 175 mL to 100 mL.

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-31 15:19:31

Project Information:

Operator Name Brandon Reynolds
Company Name ACC
Project Name Grumman
Site Name GWC-12
Latitude 32° 8' 28.94"
Longitude -81° -11' -5.64"
Sonde SN 369135
Turbidity Make/Model Hach 2100q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type Idpe
Tubing Diameter .17 in
Tubing Length 31 ft

Pump placement from TOC 12 ft

Well Information:

Well ID GWC-13
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 5 ft
Depth to Water 12.34 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.2283661 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	14:57:32	600.03	25.17	3.98	2175.34	1.43	12.58	0.12	108.22
Last 5	15:02:32	900.03	25.14	3.98	2163.45	3.96	12.58	0.10	107.59
Last 5	15:07:32	1200.01	25.35	3.98	2161.81	2.53	12.58	0.10	105.33
Last 5	15:12:32	1500.01	25.35	3.98	2161.35	1.10	12.58	0.09	100.46
Last 5	15:17:32	1800.00	25.30	3.98	2159.25	0.96	12.58	0.09	101.93
Variance 0			0.21	-0.00	-1.65			-0.01	-2.26
Variance 1			0.00	-0.00	-0.46			-0.00	-4.87
Variance 2			-0.05	-0.00	-2.10			-0.01	1.46

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-31 15:01:02

Project Information:

Operator Name O Fuquea
Company Name ACC
Project Name Grumman Rd
Site Name Grumman Rd.
Latitude 32° 8' 24.02"
Longitude -81° -11' -2.81"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-13
Well diameter 2 in
Well Total Depth 24.1 ft
Screen Length 5 ft
Depth to Water 13.81 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7 in
Total Volume Pumped 8.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.5	+/- 10
Last 5	14:40:09	2100.01	23.14	4.90	129.04	5.13	14.50	0.09	50.19
Last 5	14:45:09	2400.01	23.14	4.91	127.28	4.57	14.50	0.08	48.11
Last 5	14:50:09	2699.97	23.14	4.91	123.79	3.86	14.50	0.08	45.86
Last 5	14:55:09	2999.97	23.20	4.91	121.36	3.96	14.50	0.08	44.25
Last 5	15:00:09	3299.97	23.19	4.92	119.33	4.13	14.50	0.08	42.91
Variance 0			0.00	0.00	-3.50			-0.00	-2.25
Variance 1			0.06	0.00	-2.42			-0.00	-1.61
Variance 2			-0.01	0.00	-2.03			-0.00	-1.34

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-01 10:30:40

Project Information:

Operator Name O Fuquea
Company Name ACC
Project Name Grumman Rd
Site Name Grumman Rd.
Latitude 32° 8' 18.04"
Longitude -81° -11' -1.08"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-14
Well diameter 2 in
Well Total Depth 27 ft
Screen Length 5 ft
Depth to Water 19.51 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5 in
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		+/- 0.5	+/- 10
Last 5	10:09:34	2400.02	22.89	4.72	1292.10	4.01	20.00	0.13	109.28
Last 5	10:14:34	2699.97	23.88	4.72	1256.61	3.70	20.00	0.11	114.37
Last 5	10:19:42	3007.97	24.24	4.72	1255.19	3.02	20.00	0.11	116.53
Last 5	10:24:42	3307.97	24.67	4.72	1285.08	3.69	20.00	0.12	122.35
Last 5	10:29:42	3607.97	24.78	4.71	1300.69	--	--	0.12	125.62
Variance 0			0.36	-0.00	-1.42			-0.00	2.16
Variance 1			0.43	-0.00	29.89			0.00	5.82
Variance 2			0.11	-0.01	15.61			-0.00	3.27

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-01 17:36:25

Project Information:

Operator Name O Fuquea
Company Name ACC
Project Name Grumman
Site Name Grumman Rd.
Latitude 32° 8' 16.26"
Longitude -81° -10' -58.47"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-15
Well diameter 2 in
Well Total Depth 26.8 ft
Screen Length 5 ft
Depth to Water 19.51 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 4.375 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	17:13:42	900.01	24.29	6.72	1049.53	0.82	19.90	0.16	72.62
Last 5	17:18:42	1200.01	24.06	6.67	1011.89	1.28	19.90	0.13	73.15
Last 5	17:23:42	1500.01	24.01	6.60	973.30	1.73	19.90	0.12	74.01
Last 5	17:28:42	1800.01	24.02	6.58	958.09	0.82	19.90	0.12	74.28
Last 5	17:33:42	2100.01	23.97	6.56	938.42	1.08	19.90	0.11	74.54
Variance 0			-0.05	-0.07	-38.60			-0.01	0.86
Variance 1			0.01	-0.02	-15.20			0.00	0.27
Variance 2			-0.04	-0.02	-19.68			-0.02	0.26

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-01 16:06:18

Project Information:

Operator Name O Fuquea
Company Name ACC
Project Name Grumman Rd
Site Name Grumman Rd.
Latitude 32° 8' 17.03"
Longitude -81° -10' -55.03"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-16
Well diameter 2 in
Well Total Depth 28.4 ft
Screen Length 5 ft
Depth to Water 20.87 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5 in
Total Volume Pumped 8.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 100
Last 5	15:44:56	2999.97	24.42	5.25	919.55	10.40	21.40	0.78	67.84
Last 5	15:49:56	3299.97	24.33	5.28	953.50	12.30	21.40	0.69	66.42
Last 5	15:54:56	3599.97	24.25	5.28	944.48	8.78	21.40	0.65	66.64
Last 5	15:59:56	3899.97	24.25	5.29	949.13	5.70	21.40	0.65	66.59
Last 5	16:04:56	4199.97	24.26	5.31	944.06	4.93	21.40	0.66	66.08
Variance 0			-0.08	-0.00	-9.02			-0.03	0.22
Variance 1			0.00	0.01	4.65			-0.00	-0.06
Variance 2			0.01	0.02	-5.07			0.01	-0.50

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-01 09:39:51

Project Information:

Operator Name Brandon Reynolds
Company Name ACC
Project Name Plant Kraft
Site Name Grumman Rd
Latitude 32° 8' 41.36"
Longitude -81° -11' -3.53"
Sonde SN 369135
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type Idpe
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 10 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 23.2 ft
Screen Length 5 ft
Depth to Water 7.71 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	09:18:10	1199.94	24.41	4.97	1688.79	4.41	8.92	0.17	-12.20
Last 5	09:23:10	1499.95	24.62	4.26	2362.98	2.86	8.99	0.13	37.52
Last 5	09:28:10	1799.94	25.12	4.25	2377.77	2.99	9.07	0.19	43.42
Last 5	09:33:12	2101.94	24.78	4.23	2408.21	2.57	9.16	0.18	48.43
Last 5	09:38:31	2420.95	25.03	4.22	2401.96	1.86	9.22	0.14	51.84
Variance 0			0.50	-0.02	14.79			0.06	5.90
Variance 1			-0.34	-0.02	30.44			-0.01	5.01
Variance 2			0.25	-0.01	-6.25			-0.04	3.42

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-30 13:04:28

Project Information:

Operator Name Brandon Reynolds
Company Name ACC
Project Name Grumman
Site Name GWC-19
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369135
Turbidity Make/Model Hach 2100q

Pump Information:

Pump Model/Type
Tubing Type Idpe
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 12 ft

Well Information:

Well ID GWC-19
Well diameter 2 in
Well Total Depth 25.9 ft
Screen Length 10 ft
Depth to Water 8.64 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 100
Last 5	12:37:31	1200.38	24.60	4.72	561.99	1.14	9.99	0.12	29.69
Last 5	12:47:35	1804.34	24.89	4.70	552.75	0.94	10.00	0.08	33.64
Last 5	12:52:36	2105.34	25.11	4.70	551.62	1.24	10.02	0.08	36.33
Last 5	12:57:36	2405.34	25.39	4.70	547.63	0.78	10.02	0.07	36.87
Last 5	13:02:38	2707.31	25.44	4.69	544.49	2.12	10.01	0.06	38.84
Variance 0			0.21	-0.01	-1.13			-0.01	2.69
Variance 1			0.28	-0.00	-3.99			-0.01	0.53
Variance 2			0.04	-0.01	-3.15			-0.01	1.98

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-01 12:01:31

Project Information:

Operator Name O Fuquea
Company Name ACC
Project Name Grumman Rd.
Site Name Grumman Rd.
Latitude 32° 8' 19.71"
Longitude -81° -10' -55.26"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 24.91 ft
Screen Length 5 ft
Depth to Water 21.19 ft

Pumping Information:

Final Pumping Rate 110 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 4.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.3	+/- 10
Last 5	11:40:44	1200.01	24.99	5.88	606.21	2.16	21.50	0.27	43.14
Last 5	11:45:44	1500.01	24.81	5.88	633.62	1.55	21.50	0.25	44.96
Last 5	11:50:44	1799.99	25.22	5.88	619.53	1.19	21.50	0.23	47.34
Last 5	11:55:44	2099.99	25.16	5.88	615.14	1.66	21.50	0.22	47.38
Last 5	12:00:44	2399.99	25.10	5.88	613.07	1.19	21.50	0.13	48.49
Variance 0			0.41	0.00	-14.09			-0.02	2.38
Variance 1			-0.05	-0.00	-4.38			-0.01	0.05
Variance 2			-0.06	0.00	-2.08			-0.09	1.10

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-01 14:25:23

Project Information:

Operator Name O Fuquea
Company Name ACC
Project Name Grumman Rd
Site Name Grumman Rd.
Latitude 32° 8' 16.98"
Longitude -81° -10' -55.26"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 23.8 ft
Screen Length 5 ft
Depth to Water 20.82 ft

Pumping Information:

Final Pumping Rate 110 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 9.35 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 10	pH +/- 0.1	SpCond µS/cm +/- 5%	Turb NTU +/- 10	DTW ft	RDO mg/L +/- 0.3	ORP mV +/- 10
Stabilization									
Last 5	14:04:31	3900.97	24.91	5.89	265.14	1.20	21.00	2.49	90.71
Last 5	14:09:31	4200.97	24.56	5.91	275.85	1.03	21.00	2.44	85.44
Last 5	14:14:31	4500.97	24.38	5.93	286.90	0.69	21.00	2.38	79.93
Last 5	14:19:31	4800.97	24.15	5.94	291.26	0.68	21.00	2.33	75.03
Last 5	14:24:31	5100.96	24.11	5.96	296.88	0.70	21.00	2.29	69.92
Variance 0			-0.18	0.02	11.04			-0.05	-5.51
Variance 1			-0.23	0.01	4.36			-0.05	-4.90
Variance 2			-0.04	0.01	5.63			-0.04	-5.11

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-31 12:48:02

Project Information:

Operator Name Brandon Reynolds
Company Name ACC
Project Name Grumman
Site Name GWC-9
Latitude 32° 8' 40.55"
Longitude -81° -11' -3.72"
Sonde SN 369135
Turbidity Make/Model Hach 2100q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type Idpe
Tubing Diameter .17 in
Tubing Length 23 ft

Pump placement from TOC 12 ft

Well Information:

Well ID GWC-22
Well diameter 2 in
Well Total Depth 18.6 ft
Screen Length 5 ft
Depth to Water 7.92 ft

Pumping Information:

Final Pumping Rate 180 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	12:25:37	1799.98	25.46	4.57	1876.89	2.54	8.22	0.11	76.82
Last 5	12:30:37	2099.95	25.71	4.55	2091.56	2.26	8.22	0.09	94.42
Last 5	12:35:38	2401.03	26.40	4.54	2266.19	1.84	8.22	0.09	93.25
Last 5	12:40:38	2700.97	26.35	4.53	2331.44	1.05	8.22	0.09	82.76
Last 5	12:45:38	3000.92	26.02	4.54	2297.69	0.84	8.22	0.09	76.10
Variance 0			0.69	-0.01	174.63			-0.01	-1.18
Variance 1			-0.05	-0.00	65.25			0.00	-10.48
Variance 2			-0.33	0.01	-33.75			0.00	-6.66

Notes

Grab Samples



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: AZH0961

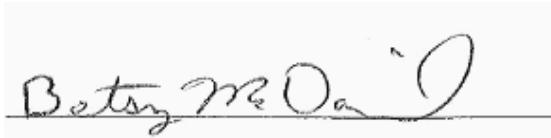
September 08, 2016

Project: CCR Event

Project #: Plant Kraft Grumman Road

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

Approved:



Project Manager

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All test results relate only to the samples analyzed.



PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 08, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWA-8	AZH0961-01	Ground Water	08/30/16 09:15	08/31/16 09:25
GWC-6	AZH0961-02	Ground Water	08/30/16 11:35	08/31/16 09:25
GWC-19	AZH0961-03	Ground Water	08/30/16 13:05	08/31/16 09:25
GWC-1	AZH0961-04	Ground Water	08/30/16 15:11	08/31/16 09:25
EB-1	AZH0961-05	DI Water	08/30/16 15:40	08/31/16 09:25
GWC-5	AZH0961-06	Ground Water	08/30/16 15:10	08/31/16 09:25
Duplicate-1	AZH0961-07	Ground Water	08/30/16 00:00	08/31/16 09:25



PACE ANALYTICAL SERVICES, INC.

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

Attention: Mr. Joju Abraham

September 08, 2016

Report No.: AZH0961

Project: CCR Event

Client ID: GWA-8

Lab Number ID: AZH0961-01

Date/Time Sampled: 8/30/2016 9:15:00AM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	234	25	10	mg/L	SM 2540 C		1	08/31/16 15:15	08/31/16 15:15	6080844	JPT
Inorganic Anions											
Chloride	15	0.25	0.01	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 05:19	6090013	RLC
Fluoride	0.10	0.30	0.02	mg/L	EPA 300.0	J	1	09/01/16 10:00	09/02/16 05:19	6090013	RLC
Sulfate	140	10	0.51	mg/L	EPA 300.0		10	09/01/16 10:00	09/02/16 18:03	6090013	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:31	6080862	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:31	6080862	CSW
Barium	0.0687	0.0100	0.0004	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:31	6080862	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 16:31	6080862	CSW
Boron	0.117	0.100	0.0064	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:31	6080862	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:31	6080862	CSW
Calcium	23.8	2.50	0.155	mg/L	EPA 6020B		5	09/01/16 09:25	09/03/16 14:06	6080862	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:31	6080862	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:31	6080862	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:31	6080862	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:31	6080862	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:31	6080862	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:31	6080862	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:31	6080862	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/02/16 08:45	09/02/16 12:42	6090041	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 08, 2016

Report No.: AZH0961

Project: CCR Event

Client ID: GWC-6

Lab Number ID: AZH0961-02

Date/Time Sampled: 8/30/2016 11:35:00AM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	365	25	10	mg/L	SM 2540 C		1	08/31/16 15:15	08/31/16 15:15	6080844	JPT
Inorganic Anions											
Chloride	60	1.2	0.07	mg/L	EPA 300.0		5	09/01/16 10:00	09/02/16 18:24	6090013	RLC
Fluoride	0.09	0.30	0.02	mg/L	EPA 300.0	J	1	09/01/16 10:00	09/02/16 05:40	6090013	RLC
Sulfate	120	5.0	0.26	mg/L	EPA 300.0		5	09/01/16 10:00	09/02/16 18:24	6090013	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:36	6080862	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:36	6080862	CSW
Barium	0.106	0.0100	0.0004	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:36	6080862	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:36	6080862	CSW
Boron	1.41	0.100	0.0064	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:36	6080862	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:36	6080862	CSW
Calcium	4.68	0.500	0.0311	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:36	6080862	CSW
Chromium	0.0013	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 16:36	6080862	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:36	6080862	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:36	6080862	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:36	6080862	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:36	6080862	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:36	6080862	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:36	6080862	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/02/16 08:45	09/02/16 12:45	6090041	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 08, 2016

Report No.: AZH0961

Project: CCR Event

Client ID: GWC-19

Lab Number ID: AZH0961-03

Date/Time Sampled: 8/30/2016 1:05:00PM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	339	25	10	mg/L	SM 2540 C		1	08/31/16 15:15	08/31/16 15:15	6080844	JPT
Inorganic Anions											
Chloride	23	0.25	0.01	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 06:02	6090013	RLC
Fluoride	0.14	0.30	0.02	mg/L	EPA 300.0	J	1	09/01/16 10:00	09/02/16 06:02	6090013	RLC
Sulfate	200	5.0	0.26	mg/L	EPA 300.0		5	09/01/16 10:00	09/02/16 18:45	6090013	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:42	6080862	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:42	6080862	CSW
Barium	0.0901	0.0100	0.0004	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:42	6080862	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 16:42	6080862	CSW
Boron	2.87	0.100	0.0064	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:42	6080862	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:42	6080862	CSW
Calcium	25.8	2.50	0.155	mg/L	EPA 6020B		5	09/01/16 09:25	09/03/16 14:12	6080862	CSW
Chromium	0.0010	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 16:42	6080862	CSW
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 16:42	6080862	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:42	6080862	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:42	6080862	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:42	6080862	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:42	6080862	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:42	6080862	CSW
Mercury	0.00005	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	09/02/16 08:45	09/02/16 12:47	6090041	MTC



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

Attention: Mr. Joju Abraham

September 08, 2016

Report No.: AZH0961

Project: CCR Event

Client ID: GWC-1

Lab Number ID: AZH0961-04

Date/Time Sampled: 8/30/2016 3:11:00PM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	225	25	10	mg/L	SM 2540 C		1	09/02/16 10:45	09/02/16 10:45	6090046	JPT
Inorganic Anions											
Chloride	5.5	0.25	0.01	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 07:05	6090013	RLC
Fluoride	0.22	0.30	0.02	mg/L	EPA 300.0	J	1	09/01/16 10:00	09/02/16 07:05	6090013	RLC
Sulfate	87	5.0	0.26	mg/L	EPA 300.0		5	09/01/16 10:00	09/02/16 19:49	6090013	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:48	6080862	CSW
Arsenic	0.0023	0.0050	0.0016	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 16:48	6080862	CSW
Barium	0.0545	0.0100	0.0004	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:48	6080862	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:48	6080862	CSW
Boron	0.875	0.100	0.0064	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:48	6080862	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:48	6080862	CSW
Calcium	29.4	2.50	0.155	mg/L	EPA 6020B		5	09/01/16 09:25	09/03/16 14:18	6080862	CSW
Chromium	0.0015	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 16:48	6080862	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:48	6080862	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:48	6080862	CSW
Molybdenum	0.175	0.0100	0.0017	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:48	6080862	CSW
Selenium	0.0020	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 16:48	6080862	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:48	6080862	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:48	6080862	CSW
Mercury	0.00004	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	09/02/16 08:45	09/02/16 12:49	6090041	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 08, 2016

Report No.: AZH0961

Project: CCR Event

Client ID: EB-1

Lab Number ID: AZH0961-05

Date/Time Sampled: 8/30/2016 3:40:00PM

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

Matrix: DI Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/02/16 10:45	09/02/16 10:45	6090046	JPT
Inorganic Anions											
Chloride	0.11	0.25	0.01	mg/L	EPA 300.0	J	1	09/01/16 10:00	09/02/16 07:26	6090013	RLC
Fluoride	0.02	0.30	0.02	mg/L	EPA 300.0	J	1	09/01/16 10:00	09/02/16 07:26	6090013	RLC
Sulfate	0.21	1.0	0.05	mg/L	EPA 300.0	J	1	09/01/16 10:00	09/02/16 07:26	6090013	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:54	6080862	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:54	6080862	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:54	6080862	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:54	6080862	CSW
Boron	0.0157	0.100	0.0064	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 16:54	6080862	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:54	6080862	CSW
Calcium	0.0777	0.500	0.0311	mg/L	EPA 6020B	J	1	09/01/16 09:25	09/01/16 16:54	6080862	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:54	6080862	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:54	6080862	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:54	6080862	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:54	6080862	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:54	6080862	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:54	6080862	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/01/16 09:25	09/01/16 16:54	6080862	CSW
Mercury	0.00004	0.00050	0.000041	mg/L	EPA 7470A	B-01, J	1	09/02/16 08:45	09/02/16 12:52	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.: AZH0961

Project: CCR Event

Client ID: GWC-5

Lab Number ID: AZH0961-06

Date/Time Sampled: 8/30/2016 3:10:00PM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	224	25	10	mg/L	SM 2540 C		1	09/02/16 10:45	09/02/16 10:45	6090046	JPT
Inorganic Anions											
Chloride	31	0.25	0.01	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 07:48	6090013	RLC
Fluoride	0.04	0.30	0.02	mg/L	EPA 300.0	J	1	09/01/16 10:00	09/02/16 07:48	6090013	RLC
Sulfate	100	5.0	0.26	mg/L	EPA 300.0		5	09/01/16 10:00	09/02/16 21:57	6090013	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 12:40	6090039	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:10	6090039	CSW
Barium	0.135	0.0100	0.0004	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:10	6090039	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 18:10	6090039	CSW
Boron	1.09	0.100	0.0064	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:10	6090039	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 12:40	6090039	CSW
Calcium	14.3	2.50	0.155	mg/L	EPA 6020B		5	09/02/16 10:10	09/03/16 15:07	6090039	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:10	6090039	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:10	6090039	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:10	6090039	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:10	6090039	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:10	6090039	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:10	6090039	CSW
Lithium	0.0042	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 18:10	6090039	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/02/16 08:45	09/02/16 12:59	6090041	MTC



PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 08, 2016

Report No.: AZH0961

Project: CCR Event

Client ID: Duplicate-1

Lab Number ID: AZH0961-07

Date/Time Sampled: 8/30/2016 12:00:00AM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	236	25	10	mg/L	SM 2540 C		1	08/31/16 15:15	08/31/16 15:15	6080844	JPT
Inorganic Anions											
Chloride	31	0.25	0.01	mg/L	EPA 300.0		1	09/01/16 10:00	09/02/16 08:09	6090013	RLC
Fluoride	0.04	0.30	0.02	mg/L	EPA 300.0	J	1	09/01/16 10:00	09/02/16 08:09	6090013	RLC
Sulfate	94	5.0	0.26	mg/L	EPA 300.0		5	09/01/16 10:00	09/02/16 19:06	6090013	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 12:44	6090039	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:15	6090039	CSW
Barium	0.130	0.0100	0.0004	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:15	6090039	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 18:15	6090039	CSW
Boron	1.14	0.100	0.0064	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:15	6090039	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/02/16 10:10	09/03/16 12:44	6090039	CSW
Calcium	14.5	2.50	0.155	mg/L	EPA 6020B		5	09/02/16 10:10	09/03/16 15:13	6090039	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:15	6090039	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:15	6090039	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:15	6090039	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:15	6090039	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:15	6090039	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/02/16 10:10	09/02/16 18:15	6090039	CSW
Lithium	0.0043	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/02/16 10:10	09/02/16 18:15	6090039	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/02/16 08:45	09/02/16 13:01	6090041	MTC



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Report No.: AZH0961

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6080844 - SM 2540 C											
Blank (6080844-BLK1)						Prepared & Analyzed: 08/31/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6080844-BS1)						Prepared & Analyzed: 08/31/16					
Total Dissolved Solids	387	25	10	mg/L	400.00		97	84-108			
Duplicate (6080844-DUP1)						Source: AZH0946-03 Prepared & Analyzed: 08/31/16					
Total Dissolved Solids	131	25	10	mg/L		136			4	10	
Duplicate (6080844-DUP2)						Source: AZH0961-02 Prepared & Analyzed: 08/31/16					
Total Dissolved Solids	360	25	10	mg/L		365			1	10	
Batch 6090046 - SM 2540 C											
Blank (6090046-BLK1)						Prepared & Analyzed: 09/02/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6090046-BS1)						Prepared & Analyzed: 09/02/16					
Total Dissolved Solids	390	25	10	mg/L	400.00		98	84-108			
Duplicate (6090046-DUP1)						Source: AZH0947-02 Prepared & Analyzed: 09/02/16					
Total Dissolved Solids	1930	25	10	mg/L		1910			1	10	



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Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 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



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Metals, Total - Quality Control

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



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Metals, Total - Quality Control

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



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Metals, Total - Quality Control

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

Batch 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							



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090039 - EPA 3005A											
Blank (6090039-BLK1)						Prepared & Analyzed: 09/02/16					
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			
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			



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.: AZH0961

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					
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	
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			



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 08, 2016

Report No.: AZH0961

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					
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			
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			



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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

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

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

CHAIN OF CUSTODY RECORD



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

CLIENT NAME:		ANALYSIS REQUESTED		CONTAINER TYPE		PRESERVATION			
Georgia Power		P P P		P - PLASTIC		1 - HCL, -6°C			
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:		P P 3		A - AMBER GLASS		2 - H ₂ SO ₄ , -6°C			
241 Ralph McGill Blvd SE B10185		(EPA 300.0 & SM 2540C)		G - CLEAR GLASS		3 - HNO ₃			
Atlanta, GA 30308		Cl, F, SO ₄ & TDS		V - VOA VIAL		4 - NaOH, -6°C			
404-505-7239		(EPA 6020/470)		S - STERILE		5 - NaOH/2NaAc, -6°C			
REPORT TO:		Metals App, III & IV		O - OTHER		6 - Na ₂ S ₂ O ₈ , -6°C			
Johu Abraham						7 - -6°C not frozen			
CC: Maria Padilla									
Heath McCorkle									
PO #: laburchi@southernco.com									
REQUESTED COMPLETION DATE:									
PROJECT NAME/STATE:									
Plant Kraft Grumman Road									
PROJECT #:									
Phase II CCR									
Collection DATE	Collection TIME	MATRIX CODE	GRAB	SAMPLE IDENTIFICATION	CONTAINER TYPE	ANALYSIS REQUESTED	CONTAINER TYPE	PRESERVATION	
8/30/16	0915	GW	✓	GWA-8	3				
8/30/16	1135	GW	✓	GWC-6	3				
8/30/16	1305	GW	✓	GWC-19	3				
8/30/16	1511	GW	✓	GWC-1	3				
8/30/16	1540	W	✓	EB-1	3				
8/30/16	1510	GW	✓	GWC-5	3				
8/30/16	---	GW	✓	Duplicate-1	3				
SAMPLED BY AND TITLE:		RELINQUISHED BY:		DATE/TIME:		LAB #:		FOR LAB USE ONLY	
O. Fildes		Gyp J		8/30/16 2000		AZH0961			
RECEIVED BY:		RELINQUISHED BY:		DATE/TIME:		Entered into LIMS:			
Felix		Gyp J		8/30/16 2000		CRH			
RECEIVED BY (LAB):		SAMPLE SHIPPED VIA:		CLIENT:		Tracking #:			
O. Fildes		USPS		FedEx		783962773264			
No. NA		No. NA		No. NA		Master #:			
No. NA		No. NA		No. NA		783962773264			

Plant Kraft -Grumman Rd COC CCRrev1



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 9:32:25AM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 08/31/16 09:25

Work Order: AZH0961

Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 7

#Containers: 21

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

September 30, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Kraft Grumman Road
Pace Project No.: 30194834

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on September 01, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft Grumman Road
Pace Project No.: 30194834

Pennsylvania Certification IDs

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

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft Grumman Road
Pace Project No.: 30194834

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30194834001	GWA-8	Water	08/30/16 09:15	09/01/16 10:00
30194834002	GWC-6	Water	08/30/16 11:35	09/01/16 10:00
30194834003	GWC-19	Water	08/30/16 13:05	09/01/16 10:00
30194834004	GWC-1	Water	08/30/16 15:11	09/01/16 10:00
30194834005	EB-1	Water	08/30/16 15:40	09/01/16 10:00
30194834006	GWC-5	Water	08/30/16 15:10	09/01/16 10:00
30194834007	Duplicate-1	Water	08/30/16 00:01	09/01/16 10:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft Grumman Road
 Pace Project No.: 30194834

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30194834001	GWA-8	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194834002	GWC-6	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194834003	GWC-19	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194834004	GWC-1	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194834005	EB-1	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194834006	GWC-5	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194834007	Duplicate-1	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
 Pace Project No.: 30194834

Sample: GWA-8 Lab ID: 30194834001 Collected: 08/30/16 09:15 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	1.37 ± 0.444 (0.408) C:88% T:NA	pCi/L	09/10/16 11:08	13982-63-3	
Radium-228	EPA 9320	1.35 ± 0.551 (0.872) C:78% T:60%	pCi/L	09/16/16 10:56	15262-20-1	
Total Radium	Total Radium Calculation	2.72 ± 0.995 (1.28)	pCi/L	09/20/16 10:15	7440-14-4	

Sample: GWC-6 Lab ID: 30194834002 Collected: 08/30/16 11:35 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	1.26 ± 0.311 (0.206) C:76% T:NA	pCi/L	09/14/16 08:08	13982-63-3	
Radium-228	EPA 9320	0.925 ± 0.503 (0.894) C:80% T:62%	pCi/L	09/27/16 12:17	15262-20-1	
Total Radium	Total Radium Calculation	2.19 ± 0.814 (1.10)	pCi/L	09/29/16 14:55	7440-14-4	

Sample: GWC-19 Lab ID: 30194834003 Collected: 08/30/16 13:05 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	2.38 ± 0.499 (0.297) C:72% T:NA	pCi/L	09/14/16 08:08	13982-63-3	
Radium-228	EPA 9320	2.39 ± 0.709 (0.853) C:81% T:66%	pCi/L	09/27/16 12:10	15262-20-1	
Total Radium	Total Radium Calculation	4.77 ± 1.21 (1.15)	pCi/L	09/29/16 14:55	7440-14-4	

Sample: GWC-1 Lab ID: 30194834004 Collected: 08/30/16 15:11 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	1.000 ± 0.296 (0.265) C:63% T:NA	pCi/L	09/14/16 08:08	13982-63-3	
Radium-228	EPA 9320	1.36 ± 0.561 (0.893) C:80% T:68%	pCi/L	09/27/16 12:17	15262-20-1	
Total Radium	Total Radium Calculation	2.36 ± 0.857 (1.16)	pCi/L	09/29/16 14:55	7440-14-4	

Sample: EB-1 Lab ID: 30194834005 Collected: 08/30/16 15:40 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	0.0749 ± 0.105 (0.221) C:82% T:NA	pCi/L	09/14/16 08:09	13982-63-3	
Radium-228	EPA 9320	1.10 ± 0.522 (0.893) C:81% T:66%	pCi/L	09/27/16 12:10	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
 Pace Project No.: 30194834

Sample: EB-1 Lab ID: **30194834005** Collected: 08/30/16 15:40 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
Total Radium	Total Radium Calculation	1.17 ± 0.627 (1.11)	pCi/L	09/29/16 14:55	7440-14-4	

Sample: GWC-5 Lab ID: **30194834006** Collected: 08/30/16 15:10 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	0.798 ± 0.238 (0.202) C:80% T:NA	pCi/L	09/14/16 08:09	13982-63-3	
Radium-228	EPA 9320	1.01 ± 0.552 (1.01) C:78% T:65%	pCi/L	09/27/16 12:10	15262-20-1	
Total Radium	Total Radium Calculation	1.81 ± 0.790 (1.21)	pCi/L	09/29/16 14:55	7440-14-4	

Sample: Duplicate-1 Lab ID: **30194834007** Collected: 08/30/16 00:01 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	0.720 ± 0.230 (0.242) C:81% T:NA	pCi/L	09/14/16 08:10	13982-63-3	
Radium-228	EPA 9320	1.08 ± 0.578 (1.05) C:73% T:68%	pCi/L	09/27/16 12:10	15262-20-1	
Total Radium	Total Radium Calculation	1.80 ± 0.808 (1.29)	pCi/L	09/29/16 14:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
 Pace Project No.: 30194834

QC Batch: 232400 Analysis Method: EPA 9320
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
 Associated Lab Samples: 30194834002, 30194834003, 30194834004, 30194834005, 30194834006, 30194834007

METHOD BLANK: 1138984 Matrix: Water
 Associated Lab Samples: 30194834002, 30194834003, 30194834004, 30194834005, 30194834006, 30194834007

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
 Pace Project No.: 30194834

QC Batch: 232325 Analysis Method: EPA 9315
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
 Associated Lab Samples: 30194834001

METHOD BLANK: 1138696 Matrix: Water
 Associated Lab Samples: 30194834001

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.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
 Pace Project No.: 30194834

QC Batch: 232397 Analysis Method: EPA 9320
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
 Associated Lab Samples: 30194834001

METHOD BLANK: 1138978 Matrix: Water
 Associated Lab Samples: 30194834001

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.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
 Pace Project No.: 30194834

QC Batch: 232404 Analysis Method: EPA 9315
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
 Associated Lab Samples: 30194834002, 30194834003, 30194834004, 30194834005, 30194834006, 30194834007

METHOD BLANK: 1138989 Matrix: Water
 Associated Lab Samples: 30194834002, 30194834003, 30194834004, 30194834005, 30194834006, 30194834007

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

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

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QUALIFIERS

Project: Plant Kraft Grumman Road
Pace Project No.: 30194834

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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CHAIN OF CUSTODY RECORD


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

PAGE: 1 OF 1

CLIENT NAME:
 Georgia Power
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
 241 Ralph McGill Blvd SE B10185
 Atlanta, GA 30308
 404-506-7239
REPORT TO: Joju Abraham
CC: Maria Padilla
 Heath McCorkle
REQUESTED COMPLETION DATE: laburcht@southernco.com
PROJECT NAME/STATE: Plant Kraft Grumman Road
PROJECT #: Phase II CCR

Collection DATE	Collection TIME	MATRIX CODE*	C O M P	SAMPLE IDENTIFICATION	ANALYSIS REQUESTED				CONTAINER TYPE	PRESERVATION	CONTAINER TYPE	PRESERVATION
					P	P	P	P				
8/30/16	0915	GW	✓	GWA-8	1	1	1	1	(EPA 6020/7470) Metals App. III & IV	P	PLASTIC	1 - HCl, ≤6°C
8/30/16	1135	GW	✓	GWL-6	1	1	1	1	(EPA 300.0 & SM 2540C) Cl, F, SO ₄ & TDS	A	AMBER GLASS	2 - H ₂ SO ₄ , ≤6°C
8/30/16	1305	GW	✓	GWC-19	1	1	1	1	(GW-846 9315/9320) Radium 226 & 228	G	CLEAR GLASS	3 - HNO ₃
8/30/16	1511	GW	✓	GWC-1	1	1	1	1		V	VOA VIAL	4 - NaOH, ≤6°C
8/30/16	1540	W	✓	EB-1	1	1	1	1		S	STERILE	5 - NaOH/IZnAc, ≤6°C
8/30/16	1510	GW	✓	GWL-5	1	1	1	1		O	OTHER	6 - Na ₂ S ₂ O ₃ , ≤6°C
8/30/16	—	GW	✓	Duplicate-1	1	1	1	1				7 - ≤6°C not frozen

WO#: 30194834

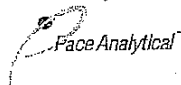


30194834

SAMPLED BY AND TITLE: O. FURBER - B. REYNOLDS
RECEIVED BY: Fedex
DATE/TIME: 8/30/16 2000
RELINQUISHED BY: J. Padilla
DATE/TIME: 8/30/16 2000
LAB #:
ENTERED INTO LIMS:
TRACKING #:

Plant Kraft - Grumman Rd COC CCRrev1

Sample Condition Upon Receipt Pittsburgh



Client Name: Georgia Power Project # 30194834

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

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

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

Quality Control Sample Performance Assessment



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

Method Blank Assessment	
MB Sample ID	1138978
MB Concentration:	0.619
MB 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	
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):	9.548
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

Duplicate Sample Assessment	
Sample I.D.:	30194831002
Duplicate Sample I.D.:	30194831002DUP
Sample Result (pCi/L, g, F):	1.058
Sample Duplicate Result (pCi/L, g, F):	0.535
Sample Duplicate Result Counting Uncertainty (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
Duplicate RPD:	10.46%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

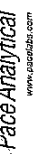
Comments:

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

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

Quality Control Sample Performance Assessment



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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1136984
MB concentration:	0.973
MB Counting Uncertainty:	0.438
MB MDC:	0.817
MB Numerical Performance Indicator:	4.35
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	
Count Date:	9/27/2016
Spike I.D.:	16-025
Spike Concentration (pCi/mL):	25.565
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.814
Target Conc. (pCi/L, g, F):	6.284
Uncertainty (Calculated):	0.452
Result (pCi/L, g, F):	5.336
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.693
Numerical Performance Indicator:	-2.25
Percent Recovery:	84.92%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS31284
Duplicate Sample I.D.:	LCS31284
Sample Result (pCi/L, g, F):	5.336
Sample Duplicate Result (pCi/L, g, F):	0.693
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	6.148
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.789
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	-1.515
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	13.49%
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 Spiker/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

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



Test: Ra-228
Analyst: JLW
Date: 9/12/2016
Worklist: 31284
Matrix: DW

Method Blank Assessment	
MB Sample ID	1138984
MB concentration:	2.671
MB Counting Uncertainty:	0.528
MB MDC:	0.724
MB Numerical Performance Indicator:	9.92
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Fail*

Laboratory Control Sample Assessment	
Count Date:	9/22/2016
Spike I.D.:	16-025
Spike Concentration (pCi/mL):	25.611
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.814
Target Conc. (pCi/L, g, F):	6.296
Uncertainty (Calculated):	0.453
Result (pCi/L, g, F):	6.515
Numerical Performance Indicator:	0.643
Percent Recovery:	0.55
Status vs Numerical Indicator:	103.48%
Status vs Recovery:	N/A
	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS31284
Duplicate Sample I.D.:	LCS31284
Sample Result (pCi/L, g, F):	6.515
Sample Duplicate Result (pCi/L, g, F):	0.643
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	6.795
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.743
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	-0.560
Duplicate (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	3.57%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

*If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable; otherwise this batch must be re-prepped.

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

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Quality Control Sample Performance Assessment



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: 1138896
MB concentration: 0.257
MB 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

LCSID (Y or N)? N
LCSID# 31262
LCSID# 31262

Count Date: 9/10/2016
Spike ID.: 16-028

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

Duplicate Sample Assessment

Sample ID.: 30194831002
Duplicate Sample ID.: 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
Duplicate RPD: 166.19%
Duplicate Status vs Numerical Indicator: N/A
Duplicate Status vs RPD: Fail***

Enter Duplicate sample IDs if other than LCS/LCSD in the spaces below.
30194831002
30194831002DUP

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

Comments:
Handwritten signature

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

Sample Matrix Spike Control Assessment

Sample Collection Date:
Sample ID:
Sample MS ID:
Sample MSD ID:
Spike ID.:

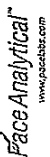
MS/MSD Decay Corrected Spike Concentration (pCi/mL):
Spike Volume Used in MS (mL):
Spike Volume Used in MSD (mL):
MS Aliquot (L, g, F):
MS Target Conc. (pCi/L, g, F):
MSD Aliquot (L, g, F):
MSD Target Conc. (pCi/L, g, F):
Spike uncertainty (calculated):

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

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

Laboratory Control Sample Assessment	
Count Date:	9/21/2016
Spike I.D.:	16-026
Spike Concentration (pCi/mL):	44.677
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.514
Target Conc. (pCi/L, g, F):	8.694
Uncertainty (Calculated):	0.409
Result (pCi/L, g, F):	8.626
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.651
Numerical Performance Indicator:	-0.17
Percent Recovery:	99.21%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

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

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

Comments:

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

WRR

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

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



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: AZI0022

September 16, 2016

Project: CCR Event

Project #: Plant Kraft Grumman Road

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

Approved:

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

Project Manager

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All test results relate only to the samples analyzed.



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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-10	AZI0022-01	Ground Water	08/31/16 10:34	09/01/16 09:20
Field Blank 1	AZI0022-02	DI Water	08/31/16 11:30	09/01/16 09:20
GWC-11	AZI0022-03	Ground Water	08/31/16 12:23	09/01/16 09:20
GWC-13	AZI0022-04	Ground Water	08/31/16 15:01	09/01/16 09:20
GWC-2	AZI0022-05	Ground Water	08/31/16 16:25	09/01/16 09:20
GWC-22	AZI0022-06	Ground Water	08/31/16 12:50	09/01/16 09:20
GWC-9	AZI0022-07	Ground Water	08/31/16 14:05	09/01/16 09:20
GWC-12	AZI0022-08	Ground Water	08/31/16 15:20	09/01/16 09:20
GWC-3	AZI0022-09	Ground Water	08/31/16 16:35	09/01/16 09:20



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Attention: Mr. Joju Abraham

September 16, 2016

Case Narrative

TDS Analysis by Method SM 2540C (H-02 Qualifier):

Sample AZI0022 -02 (Field Blank) was originally ran in hold, but because the sample ID is a field blank the sample was re-extracted to confirm the results. The re-extract and its duplicate were reported (as ND) out of hold and flagged accordingly.



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0022

Project: CCR Event

Client ID: GWC-10

Lab Number ID: AZI0022-01

Date/Time Sampled: 8/31/2016 10:34:00AM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	3460	25	10	mg/L	SM 2540 C		1	09/06/16 19:00	09/06/16 19:00	6090102	JPT
Inorganic Anions											
Chloride	730	25	1.4	mg/L	EPA 300.0		100	09/04/16 10:35	09/06/16 20:24	6090086	RLC
Fluoride	0.36	0.30	0.02	mg/L	EPA 300.0		1	09/04/16 10:35	09/04/16 12:53	6090086	RLC
Sulfate	1500	100	5.1	mg/L	EPA 300.0		100	09/04/16 10:35	09/06/16 20:24	6090086	RLC
Metals, Total											
Antimony	0.0014	0.0030	0.0008	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:18	6090081	CSW
Arsenic	0.0144	0.0050	0.0016	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:18	6090081	CSW
Barium	0.0627	0.0100	0.0004	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:18	6090081	CSW
Beryllium	0.0004	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:18	6090081	CSW
Boron	24.1	5.00	0.321	mg/L	EPA 6020B		50	09/06/16 09:45	09/08/16 16:06	6090081	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:18	6090081	CSW
Calcium	250	25.0	1.55	mg/L	EPA 6020B		50	09/06/16 09:45	09/08/16 16:06	6090081	CSW
Chromium	0.0021	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:18	6090081	CSW
Cobalt	0.0089	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:18	6090081	CSW
Lead	0.0113	0.0050	0.0001	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:18	6090081	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:18	6090081	CSW
Selenium	0.0023	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:18	6090081	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:18	6090081	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:18	6090081	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 09:10	09/06/16 14:56	6090077	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0022

Project: CCR Event

Client ID: Field Blank 1

Lab Number ID: AZI0022-02

Date/Time Sampled: 8/31/2016 11:30:00AM

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

Matrix: DI Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C	H-02	1	09/14/16 15:35	09/14/16 15:35	6090343	JPT
Inorganic Anions											
Chloride	0.35	0.25	0.01	mg/L	EPA 300.0		1	09/04/16 10:35	09/04/16 13:14	6090086	RLC
Fluoride	0.02	0.30	0.02	mg/L	EPA 300.0	J	1	09/04/16 10:35	09/04/16 13:14	6090086	RLC
Sulfate	2.7	1.0	0.05	mg/L	EPA 300.0		1	09/04/16 10:35	09/04/16 13:14	6090086	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:24	6090081	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:24	6090081	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:24	6090081	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:24	6090081	CSW
Boron	0.0624	0.100	0.0064	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:24	6090081	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:24	6090081	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:24	6090081	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:24	6090081	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:24	6090081	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:24	6090081	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:24	6090081	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:24	6090081	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:24	6090081	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:24	6090081	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 09:10	09/06/16 15:03	6090077	MTC



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Georgia Power
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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0022

Project: CCR Event

Client ID: GWC-11

Lab Number ID: AZI0022-03

Date/Time Sampled: 8/31/2016 12:23:00PM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	119	25	10	mg/L	SM 2540 C		1	09/07/16 14:20	09/07/16 14:20	6090156	JPT
Inorganic Anions											
Chloride	3.5	0.25	0.01	mg/L	EPA 300.0		1	09/04/16 10:35	09/04/16 13:35	6090086	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/04/16 10:35	09/04/16 13:35	6090086	RLC
Sulfate	64	5.0	0.26	mg/L	EPA 300.0		5	09/04/16 10:35	09/06/16 20:44	6090086	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:30	6090081	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:30	6090081	CSW
Barium	0.0565	0.0100	0.0004	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:30	6090081	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/06/16 09:45	09/07/16 18:09	6090081	CSW
Boron	0.0688	0.100	0.0064	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/07/16 18:09	6090081	CSW
Cadmium	0.0002	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:30	6090081	CSW
Calcium	18.8	0.500	0.0311	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:30	6090081	CSW
Chromium	0.0010	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:30	6090081	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:30	6090081	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:30	6090081	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:30	6090081	CSW
Selenium	0.0084	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:30	6090081	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:30	6090081	CSW
Lithium	ND	0.0500	0.0103	mg/L	EPA 6020B	R-01	5	09/06/16 09:45	09/08/16 13:50	6090081	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 09:10	09/06/16 15:05	6090077	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0022

Project: CCR Event

Client ID: GWC-13

Lab Number ID: AZI0022-04

Date/Time Sampled: 8/31/2016 3:01:00PM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	77	25	10	mg/L	SM 2540 C		1	09/06/16 19:55	09/06/16 19:55	6090125	JPT
Inorganic Anions											
Chloride	4.3	0.25	0.01	mg/L	EPA 300.0		1	09/04/16 10:35	09/04/16 13:56	6090086	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/04/16 10:35	09/04/16 13:56	6090086	RLC
Sulfate	43	1.0	0.05	mg/L	EPA 300.0		1	09/04/16 10:35	09/04/16 13:56	6090086	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:36	6090081	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:36	6090081	CSW
Barium	0.0273	0.0100	0.0004	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:36	6090081	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:36	6090081	CSW
Boron	0.261	0.100	0.0064	mg/L	EPA 6020B		1	09/06/16 09:45	09/07/16 18:14	6090081	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:36	6090081	CSW
Calcium	2.77	0.500	0.0311	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:36	6090081	CSW
Chromium	0.0011	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:36	6090081	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:36	6090081	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:36	6090081	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:36	6090081	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:36	6090081	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:36	6090081	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:36	6090081	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 09:10	09/06/16 15:08	6090077	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0022

Project: CCR Event

Client ID: GWC-2

Lab Number ID: AZI0022-05

Date/Time Sampled: 8/31/2016 4:25:00PM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	39	25	10	mg/L	SM 2540 C		1	09/06/16 19:55	09/06/16 19:55	6090125	JPT
Inorganic Anions											
Chloride	7.8	0.25	0.01	mg/L	EPA 300.0		1	09/04/16 10:35	09/04/16 14:18	6090086	RLC
Fluoride	0.07	0.30	0.02	mg/L	EPA 300.0	J	1	09/04/16 10:35	09/04/16 14:18	6090086	RLC
Sulfate	21	1.0	0.05	mg/L	EPA 300.0		1	09/04/16 10:35	09/04/16 14:18	6090086	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:41	6090081	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:41	6090081	CSW
Barium	0.0429	0.0100	0.0004	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:41	6090081	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/06/16 09:45	09/07/16 18:20	6090081	CSW
Boron	0.0196	0.100	0.0064	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/07/16 18:20	6090081	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:41	6090081	CSW
Calcium	0.371	0.500	0.0311	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/07/16 18:20	6090081	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:41	6090081	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:41	6090081	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:41	6090081	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:41	6090081	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:41	6090081	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:41	6090081	CSW
Lithium	ND	0.0500	0.0103	mg/L	EPA 6020B	R-01	5	09/06/16 09:45	09/08/16 14:01	6090081	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 09:10	09/06/16 15:10	6090077	MTC



PACE ANALYTICAL SERVICES, INC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0022

Project: CCR Event

Client ID: GWC-22

Lab Number ID: AZI0022-06

Date/Time Sampled: 8/31/2016 12:50:00PM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1570	25	10	mg/L	SM 2540 C		1	09/06/16 19:55	09/06/16 19:55	6090125	JPT
Inorganic Anions											
Chloride	320	12	0.70	mg/L	EPA 300.0		50	09/04/16 10:35	09/06/16 21:05	6090086	RLC
Fluoride	0.04	0.30	0.02	mg/L	EPA 300.0	J	1	09/04/16 10:35	09/04/16 14:39	6090086	RLC
Sulfate	700	50	2.6	mg/L	EPA 300.0		50	09/04/16 10:35	09/06/16 21:05	6090086	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:47	6090081	CSW
Arsenic	0.0017	0.0050	0.0016	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:47	6090081	CSW
Barium	0.0693	0.0100	0.0004	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:47	6090081	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:47	6090081	CSW
Boron	12.8	5.00	0.321	mg/L	EPA 6020B		50	09/06/16 09:45	09/08/16 16:47	6090081	CSW
Cadmium	0.00008	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:47	6090081	CSW
Calcium	127	25.0	1.55	mg/L	EPA 6020B		50	09/06/16 09:45	09/08/16 16:11	6090081	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:47	6090081	CSW
Cobalt	0.0010	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:47	6090081	CSW
Lead	0.0003	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:47	6090081	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:47	6090081	CSW
Selenium	0.0014	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 19:47	6090081	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:47	6090081	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 19:47	6090081	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 09:10	09/06/16 15:12	6090077	MTC



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Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0022

Project: CCR Event

Client ID: GWC-9

Lab Number ID: AZI0022-07

Date/Time Sampled: 8/31/2016 2:05:00PM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	173	25	10	mg/L	SM 2540 C		1	09/06/16 19:55	09/06/16 19:55	6090125	JPT
Inorganic Anions											
Chloride	17	0.25	0.01	mg/L	EPA 300.0		1	09/04/16 10:35	09/04/16 15:42	6090086	RLC
Fluoride	0.55	0.30	0.02	mg/L	EPA 300.0		1	09/04/16 10:35	09/04/16 15:42	6090086	RLC
Sulfate	84	5.0	0.26	mg/L	EPA 300.0		5	09/04/16 10:35	09/06/16 21:26	6090086	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:10	6090081	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:10	6090081	CSW
Barium	0.284	0.0100	0.0004	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:10	6090081	CSW
Beryllium	0.0003	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/07/16 18:30	6090081	CSW
Boron	0.0960	0.100	0.0064	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/07/16 18:30	6090081	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:10	6090081	CSW
Calcium	6.90	2.50	0.155	mg/L	EPA 6020B		5	09/06/16 09:45	09/08/16 14:25	6090081	CSW
Chromium	0.0024	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 20:10	6090081	CSW
Cobalt	0.0021	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 20:10	6090081	CSW
Lead	0.0007	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 20:10	6090081	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:10	6090081	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:10	6090081	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:10	6090081	CSW
Lithium	ND	0.0500	0.0103	mg/L	EPA 6020B	R-01	5	09/06/16 09:45	09/08/16 14:25	6090081	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 15:34	6090078	MTC



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Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0022

Project: CCR Event

Client ID: GWC-12

Lab Number ID: AZI0022-08

Date/Time Sampled: 8/31/2016 3:20:00PM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1560	25	10	mg/L	SM 2540 C		1	09/06/16 19:55	09/06/16 19:55	6090125	JPT
Inorganic Anions											
Chloride	210	12	0.70	mg/L	EPA 300.0		50	09/04/16 10:35	09/06/16 21:46	6090086	RLC
Fluoride	0.70	0.30	0.02	mg/L	EPA 300.0		1	09/04/16 10:35	09/04/16 16:04	6090086	RLC
Sulfate	1100	50	2.6	mg/L	EPA 300.0		50	09/04/16 10:35	09/06/16 21:46	6090086	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:16	6090081	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:16	6090081	CSW
Barium	0.0190	0.0100	0.0004	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:16	6090081	CSW
Beryllium	0.0011	0.0030	0.0004	mg/L	EPA 6020B	J	5	09/06/16 09:45	09/08/16 14:31	6090081	CSW
Boron	5.10	0.500	0.0321	mg/L	EPA 6020B		5	09/06/16 09:45	09/08/16 14:31	6090081	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:16	6090081	CSW
Calcium	105	25.0	1.55	mg/L	EPA 6020B		50	09/06/16 09:45	09/08/16 16:17	6090081	CSW
Chromium	0.0012	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 20:16	6090081	CSW
Cobalt	0.0018	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 20:16	6090081	CSW
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 20:16	6090081	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:16	6090081	CSW
Selenium	0.0019	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 20:16	6090081	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:16	6090081	CSW
Lithium	ND	0.0500	0.0103	mg/L	EPA 6020B	R-01	5	09/06/16 09:45	09/08/16 14:31	6090081	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 15:36	6090078	MTC



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Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0022

Project: CCR Event

Client ID: GWC-3

Lab Number ID: AZI0022-09

Date/Time Sampled: 8/31/2016 4:35:00PM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	406	25	10	mg/L	SM 2540 C		1	09/06/16 19:55	09/06/16 19:55	6090125	JPT
Inorganic Anions											
Chloride	2.6	0.25	0.01	mg/L	EPA 300.0		1	09/04/16 10:35	09/04/16 18:12	6090086	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/04/16 10:35	09/04/16 18:12	6090086	RLC
Sulfate	19	1.0	0.05	mg/L	EPA 300.0		1	09/04/16 10:35	09/04/16 18:12	6090086	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:21	6090081	CSW
Arsenic	0.363	0.0050	0.0016	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:21	6090081	CSW
Barium	0.0465	0.0100	0.0004	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:21	6090081	CSW
Beryllium	ND	0.0030	0.0004	mg/L	EPA 6020B	R-01	5	09/06/16 09:45	09/08/16 14:36	6090081	CSW
Boron	0.747	0.500	0.0321	mg/L	EPA 6020B		5	09/06/16 09:45	09/08/16 14:36	6090081	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:21	6090081	CSW
Calcium	69.6	5.00	0.311	mg/L	EPA 6020B		10	09/06/16 09:45	09/08/16 16:34	6090081	CSW
Chromium	0.0065	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 20:21	6090081	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:21	6090081	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:21	6090081	CSW
Molybdenum	0.0880	0.0100	0.0017	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:21	6090081	CSW
Selenium	0.0018	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/06/16 09:45	09/06/16 20:21	6090081	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/06/16 09:45	09/06/16 20:21	6090081	CSW
Lithium	ND	0.0500	0.0103	mg/L	EPA 6020B	R-01	5	09/06/16 09:45	09/08/16 14:36	6090081	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/06/16 11:30	09/06/16 15:38	6090078	MTC



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Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0022

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090102 - SM 2540 C											
Blank (6090102-BLK1)						Prepared & Analyzed: 09/06/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6090102-BS1)						Prepared & Analyzed: 09/06/16					
Total Dissolved Solids	398	25	10	mg/L	400.00		100	84-108			
Duplicate (6090102-DUP1)						Source: AZI0019-08			Prepared & Analyzed: 09/06/16		
Total Dissolved Solids	366	25	10	mg/L		389			6	10	
Duplicate (6090102-DUP2)						Source: AZI0022-01			Prepared & Analyzed: 09/06/16		
Total Dissolved Solids	3490	25	10	mg/L		3460			0.9	10	
Batch 6090125 - SM 2540 C											
Blank (6090125-BLK1)						Prepared & Analyzed: 09/06/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6090125-BS1)						Prepared & Analyzed: 09/06/16					
Total Dissolved Solids	402	25	10	mg/L	400.00		100	84-108			
Duplicate (6090125-DUP1)						Source: AZI0022-04			Prepared & Analyzed: 09/06/16		
Total Dissolved Solids	190	25	10	mg/L		77			85	10	QR-03
Duplicate (6090125-DUP2)						Source: AZI0022-09			Prepared & Analyzed: 09/06/16		
Total Dissolved Solids	429	25	10	mg/L		406			6	10	
Batch 6090156 - SM 2540 C											
Blank (6090156-BLK1)						Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	ND	25	10	mg/L							



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September 16, 2016

Report No.: AZI0022

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090156 - SM 2540 C											
LCS (6090156-BS1)						Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	398	25	10	mg/L	400.00		100	84-108			
Duplicate (6090156-DUP1)						Source: AZI0050-01 Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	4530	25	10	mg/L		4540			0.3	10	
Batch 6090220 - SM 2540 C											
Blank (6090220-BLK1)						Prepared & Analyzed: 09/09/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6090220-BS1)						Prepared & Analyzed: 09/09/16					
Total Dissolved Solids	388	25	10	mg/L	400.00		97	84-108			
Duplicate (6090220-DUP1)						Source: AZI0022-04RE1 Prepared & Analyzed: 09/09/16					
Total Dissolved Solids	43	25	10	mg/L		58			30	10	QR-03
Duplicate (6090220-DUP2)						Source: AZI0174-01 Prepared & Analyzed: 09/09/16					
Total Dissolved Solids	150	25	10	mg/L		146			3	10	
Batch 6090343 - SM 2540 C											
Blank (6090343-BLK1)						Prepared & Analyzed: 09/14/16					
Total Dissolved Solids	ND	10	10	mg/L							
LCS (6090343-BS1)						Prepared & Analyzed: 09/14/16					
Total Dissolved Solids	413	10	10	mg/L	400.00		103	84-108			



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September 16, 2016

Report No.: AZI0022

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090343 - SM 2540 C											
Duplicate (6090343-DUP1)			Source: AZI0022-02RE1			Prepared & Analyzed: 09/14/16					
Total Dissolved Solids	ND	10	10	mg/L		ND				10	



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Report No.: AZI0022

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090086 - EPA 300.0											
Blank (6090086-BLK1)						Prepared & Analyzed: 09/04/16					
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 (6090086-BS1)						Prepared & Analyzed: 09/04/16					
Chloride	10.2	0.25	0.01	mg/L	10.010		102	90-110			
Fluoride	10.3	0.30	0.02	mg/L	10.010		103	90-110			
Sulfate	10.2	1.0	0.05	mg/L	10.010		102	90-110			
Matrix Spike (6090086-MS1)						Source: AZI0022-06			Prepared & Analyzed: 09/04/16		
Chloride	207	0.25	0.01	mg/L	10.010	217	NR	90-110			QM-02
Fluoride	12.0	0.30	0.02	mg/L	10.010	0.04	119	90-110			QM-05
Sulfate	376	1.0	0.05	mg/L	10.010	400	NR	90-110			QM-02
Matrix Spike (6090086-MS2)						Source: AZI0048-01			Prepared & Analyzed: 09/04/16		
Chloride	133	0.25	0.01	mg/L	10.010	137	NR	90-110			QM-02
Fluoride	11.7	0.30	0.02	mg/L	10.010	0.15	115	90-110			QM-05
Sulfate	126	1.0	0.05	mg/L	10.010	130	NR	90-110			QM-02
Matrix Spike Dup (6090086-MSD1)						Source: AZI0022-06			Prepared & Analyzed: 09/04/16		
Chloride	207	0.25	0.01	mg/L	10.010	217	NR	90-110	0.02	15	QM-02
Fluoride	12.3	0.30	0.02	mg/L	10.010	0.04	123	90-110	3	15	QM-05
Sulfate	376	1.0	0.05	mg/L	10.010	400	NR	90-110	0.08	15	QM-02



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Report No.: AZI0022

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090077 - EPA 7470A											
Blank (6090077-BLK1)						Prepared & Analyzed: 09/06/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6090077-BS1)						Prepared & Analyzed: 09/06/16					
Mercury	0.00240	0.00050	0.000041	mg/L	2.5000E-3		96	80-120			
Matrix Spike (6090077-MS1)						Source: AZI0021-02 Prepared & Analyzed: 09/06/16					
Mercury	0.00235	0.00050	0.000041	mg/L	2.5000E-3	ND	94	75-125			
Matrix Spike Dup (6090077-MSD1)						Source: AZI0021-02 Prepared & Analyzed: 09/06/16					
Mercury	0.00234	0.00050	0.000041	mg/L	2.5000E-3	ND	93	75-125	0.5	20	
Post Spike (6090077-PS1)						Source: AZI0021-02 Prepared & Analyzed: 09/06/16					
Mercury	1.67			ug/L	1.6667	0.00498	100	80-120			
Batch 6090078 - EPA 7470A											
Blank (6090078-BLK1)						Prepared & Analyzed: 09/06/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6090078-BS1)						Prepared & Analyzed: 09/06/16					
Mercury	0.00241	0.00050	0.000041	mg/L	2.5000E-3		96	80-120			
Matrix Spike (6090078-MS1)						Source: AZI0038-05 Prepared & Analyzed: 09/06/16					
Mercury	0.00241	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125			
Matrix Spike Dup (6090078-MSD1)						Source: AZI0038-05 Prepared & Analyzed: 09/06/16					
Mercury	0.00234	0.00050	0.000041	mg/L	2.5000E-3	ND	93	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

September 16, 2016

Report No.: AZI0022

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 6090078 - EPA 7470A

Post Spike (6090078-PS1)		Source: AZI0038-05			Prepared & Analyzed: 09/06/16						
Mercury	1.69			ug/L	1.6667	0.00587	101	80-120			

Batch 6090081 - EPA 3005A

Blank (6090081-BLK1)					Prepared & Analyzed: 09/06/16						
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.100	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0050	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0050	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0050	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							

LCS (6090081-BS1)

					Prepared & Analyzed: 09/06/16						
Antimony	0.0970	0.0030	0.0008	mg/L	0.10000		97	80-120			
Arsenic	0.0990	0.0050	0.0016	mg/L	0.10000		99	80-120			
Barium	0.0955	0.0100	0.0004	mg/L	0.10000		96	80-120			
Beryllium	0.0976	0.0030	0.00008	mg/L	0.10000		98	80-120			
Boron	1.02	0.100	0.0064	mg/L	1.0000		102	80-120			
Cadmium	0.0949	0.0010	0.00007	mg/L	0.10000		95	80-120			
Calcium	0.972	0.500	0.0311	mg/L	1.0000		97	80-120			
Chromium	0.104	0.0100	0.0009	mg/L	0.10000		104	80-120			
Cobalt	0.0993	0.0100	0.0005	mg/L	0.10000		99	80-120			
Copper	0.100	0.0050	0.0005	mg/L	0.10000		100	80-120			
Lead	0.0967	0.0050	0.0001	mg/L	0.10000		97	80-120			
Molybdenum	0.0997	0.0100	0.0017	mg/L	0.10000		100	80-120			
Nickel	0.0986	0.0050	0.0006	mg/L	0.10000		99	80-120			
Selenium	0.0997	0.0100	0.0010	mg/L	0.10000		100	80-120			
Silver	0.0965	0.0050	0.0005	mg/L	0.10000		96	80-120			



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0022

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090081 - EPA 3005A											
LCS (6090081-BS1)						Prepared & Analyzed: 09/06/16					
Thallium	0.0975	0.0010	0.0002	mg/L	0.10000		97	80-120			
Vanadium	0.112	0.0100	0.0071	mg/L	0.10000		112	80-120			
Zinc	0.112	0.0100	0.0021	mg/L	0.10000		112	80-120			
Lithium	0.0988	0.0500	0.0021	mg/L	0.10000		99	80-120			
Matrix Spike (6090081-MS1)						Source: AZI0022-01 Prepared & Analyzed: 09/06/16					
Antimony	0.0998	0.0030	0.0008	mg/L	0.10000	0.0014	98	75-125			
Arsenic	0.116	0.0050	0.0016	mg/L	0.10000	0.0144	102	75-125			
Barium	0.161	0.0100	0.0004	mg/L	0.10000	0.0627	98	75-125			
Beryllium	0.0842	0.0030	0.00008	mg/L	0.10000	0.0004	84	75-125			
Boron	25.9	5.00	0.321	mg/L	1.0000	24.1	179	75-125			QM-02
Cadmium	0.0937	0.0010	0.00007	mg/L	0.10000	ND	94	75-125			
Calcium	261	25.0	1.55	mg/L	1.0000	250	NR	75-125			QM-02
Chromium	0.110	0.0100	0.0009	mg/L	0.10000	0.0021	108	75-125			
Cobalt	0.109	0.0100	0.0005	mg/L	0.10000	0.0089	100	75-125			
Copper	0.0954	0.0050	0.0005	mg/L	0.10000	0.0006	95	75-125			
Lead	0.0996	0.0050	0.0001	mg/L	0.10000	0.0113	88	75-125			
Molybdenum	0.108	0.0100	0.0017	mg/L	0.10000	ND	108	75-125			
Nickel	0.0995	0.0050	0.0006	mg/L	0.10000	0.0037	96	75-125			
Selenium	0.109	0.0100	0.0010	mg/L	0.10000	0.0023	106	75-125			
Silver	0.0892	0.0050	0.0005	mg/L	0.10000	ND	89	75-125			
Thallium	0.0921	0.0010	0.0002	mg/L	0.10000	ND	92	75-125			
Vanadium	0.121	0.0100	0.0071	mg/L	0.10000	ND	121	75-125			
Zinc	5.05	0.0100	0.0021	mg/L	0.10000	4.92	131	75-125			
Lithium	0.0898	0.0500	0.0021	mg/L	0.10000	ND	90	75-125			
Matrix Spike Dup (6090081-MSD1)						Source: AZI0022-01 Prepared & Analyzed: 09/06/16					
Antimony	0.0987	0.0030	0.0008	mg/L	0.10000	0.0014	97	75-125	1	20	
Arsenic	0.118	0.0050	0.0016	mg/L	0.10000	0.0144	104	75-125	2	20	
Barium	0.159	0.0100	0.0004	mg/L	0.10000	0.0627	96	75-125	1	20	
Beryllium	0.0882	0.0030	0.00008	mg/L	0.10000	0.0004	88	75-125	5	20	
Boron	24.3	5.00	0.321	mg/L	1.0000	24.1	13	75-125	7	20	QM-02
Cadmium	0.0909	0.0010	0.00007	mg/L	0.10000	ND	91	75-125	3	20	
Calcium	249	25.0	1.55	mg/L	1.0000	250	NR	75-125	5	20	QM-02
Chromium	0.104	0.0100	0.0009	mg/L	0.10000	0.0021	102	75-125	6	20	
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000	0.0089	97	75-125	4	20	
Copper	0.0890	0.0050	0.0005	mg/L	0.10000	0.0006	88	75-125	7	20	
Lead	0.101	0.0050	0.0001	mg/L	0.10000	0.0113	90	75-125	1	20	
Molybdenum	0.106	0.0100	0.0017	mg/L	0.10000	ND	106	75-125	2	20	
Nickel	0.0967	0.0050	0.0006	mg/L	0.10000	0.0037	93	75-125	3	20	



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Report No.: AZI0022

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090081 - EPA 3005A											
Matrix Spike Dup (6090081-MSD1)			Source: AZI0022-01			Prepared & Analyzed: 09/06/16					
Selenium	0.105	0.0100	0.0010	mg/L	0.10000	0.0023	102	75-125	4	20	
Silver	0.0874	0.0050	0.0005	mg/L	0.10000	ND	87	75-125	2	20	
Thallium	0.0943	0.0010	0.0002	mg/L	0.10000	ND	94	75-125	2	20	
Vanadium	0.118	0.0100	0.0071	mg/L	0.10000	ND	118	75-125	3	20	
Zinc	4.91	0.0100	0.0021	mg/L	0.10000	4.92	NR	75-125	3	20	
Lithium	0.0956	0.0500	0.0021	mg/L	0.10000	ND	96	75-125	6	20	
Post Spike (6090081-PS1)			Source: AZI0022-01			Prepared & Analyzed: 09/06/16					
Antimony	99.1			ug/L	100.00	1.42	98	80-120			
Arsenic	115			ug/L	100.00	14.4	101	80-120			
Barium	158			ug/L	100.00	62.7	95	80-120			
Beryllium	85.8			ug/L	100.00	0.382	85	80-120			
Boron	24500			ug/L	1000.0	24100	36	80-120			QM-02
Cadmium	89.6			ug/L	100.00	0.0388	90	80-120			
Calcium	243000			ug/L	1000.0	250000	NR	80-120			QM-02
Chromium	105			ug/L	100.00	2.07	103	80-120			
Cobalt	106			ug/L	100.00	8.86	97	80-120			
Copper	89.8			ug/L	100.00	0.564	89	80-120			
Lead	100			ug/L	100.00	11.3	89	80-120			
Molybdenum	104			ug/L	100.00	0.165	103	80-120			
Nickel	96.1			ug/L	100.00	3.70	92	80-120			
Selenium	104			ug/L	100.00	2.29	102	80-120			
Silver	86.3			ug/L	100.00	0.0004	86	80-120			
Thallium	91.4			ug/L	100.00	0.141	91	80-120			
Vanadium	118			ug/L	100.00	4.37	114	80-120			
Zinc	4920			ug/L	100.00	4920	NR	80-120			
Lithium	99.7			ug/L	100.00	1.36	98	80-120			



PACE ANALYTICAL SERVICES, INC.

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110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 16, 2016

Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

- R-01** Elevated reporting limit due to matrix interference.
- 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.



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

CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239 REPORT TO: Joju Abraham CC: Maria Padilla Heath McCorkle REQUESTED COMPLETION DATE: PO #: PROJECT NAME/STATE: Plant Kraft-Grumman Road PROJECT #: Phase II CCR		ANALYSIS REQUESTED: P P P P 3 7 3 3 Metals App. III & IV (EPA 6020/7470) Cl. F. SO. & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SW-646 9315/9320)		CONTAINER TYPE: PRESERVATION: # of C O N T A I N E R S		CONTAINER TYPE: P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION: 1 - HCl, -6°C 2 - H ₂ SO ₄ , -6°C 3 - HNO ₃ 4 - NaOH, -6°C 5 - NaOH/ZnAc, -6°C 6 - Na ₂ S ₂ O ₃ , -6°C 7 - -6°C not frozen			
Collection DATE: 8/31/16 Collection TIME: 1034 MATRIX CODE: GW CGRAB: ✓	SAMPLE IDENTIFICATION: GWC-10 Field Blank 1	CONTAINER TYPE: A PRESERVATION: 2 # of: 3	ANALYSIS REQUESTED: P P P P 1 1 1 2 Metals App. III & IV (EPA 6020/7470) Cl. F. SO. & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SW-646 9315/9320)	CONTAINER TYPE: B PRESERVATION: 3 # of: 3	CONTAINER TYPE: G PRESERVATION: 3 # of: 3	CONTAINER TYPE: V PRESERVATION: 4 # of: 4	CONTAINER TYPE: S PRESERVATION: 3 # of: 3	CONTAINER TYPE: O PRESERVATION: 3 # of: 3	REMARKS/ADDITIONAL INFORMATION: DW - DRINKING WATER S - SOIL WW - WASTEWATER SL - SLUDGE GW - GROUNDWATER SD - SOLID SW - SURFACE WATER A - AIR ST - STORMWATER L - LIQUID W - WATER P - PRODUCT MATRIX CODES:
SAMPLED BY AND TITLE: D. FLORES R. REYNOLDS (ML)		DATE/TIME: 8/31/16 1900		RELINQUISHED BY: [Signature]		DATE/TIME: 9/5/16 1500		LAB #: AZF0072 FOR LAB USE ONLY	
RECEIVED BY: Felix		DATE/TIME: 8/31/16 0920		RELINQUISHED BY: [Signature]		DATE/TIME: 9/5/16 1500		Entered into LIMS: CM Tracking #: 783973090298	
REMOVED BY LAB: Heath McCorkle DATE/TIME: 9/5/16 26		SAMPLE SHIPPED VIA: USPS # of Copies: 2 # of Copies: 2		CLIENT: Grumman (C)		OTHERS:			



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

CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-505-7239
 REPORT TO: Jolu Abraham
 CC: Maria Padilla Heath McCordle
 REQUESTED COMPLETION DATE: PO #: laburch@southernco.com
 PROJECT NAME/STATE: Plant Kraft Grumman Road
 PROJECT #: Phase II CCR

CONTAINER TYPE PRESERVATION	ANALYSIS REQUESTED				CONTAINER TYPE PRESERVATION
	P	P	P	P	
# of	3	7	3		
C O N T A I N E R S	Metals 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	C O M P	G R A B	SAMPLE IDENTIFICATION	RELINQUISHED BY:	DATE/TIME:
8-31-2016	1130	W	✓		Field Blank 1		8/31/16 8:30
8-31-2016	1250	GW	✓		GW-22		
8-31-2016	1405	GW	✓		GW-9		
8-31-2016	1520	GW	✓		GW-12		
8-31-2016	1635	GW	✓		GW-3		

SAMPLED BY AND TITLE: (MC) S. BEYOLDS
 RECEIVED BY: Fedex
 RECEIVED BY (IB): Jolu Abraham
 DATE/TIME: 8/31/16 1800
 DATE/TIME: 8/31/16 0920
 DATE/TIME: 8/31/16 25
 RELINQUISHED BY: Jolu Abraham
 DATE/TIME: 8/31/16 8:30
 RELINQUISHED BY: Jolu Abraham
 DATE/TIME: 8/31/16 8:30
 SAMPLE SHIPPED VIA: UPS
 CLIENT: OTHERS
 COURIER: OTHERS
 TRACKING #: 78397309278

LAB #:
 Entered into LIMS: *bat*
 Tracking #:
 FOR LAB USE ONLY
 AZ10072
 78397309278



PACE ANALYTICAL SERVICES, INC.

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

LOG-IN CHECKLIST

Printed: 9/16/2016 4:28:18PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 09/01/16 09:20

Work Order: AZI0022

Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 9

#Containers: 28

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

September 30, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Kraft Grumman Road
Pace Project No.: 30194996

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on September 02, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft Grumman Road
Pace Project No.: 30194996

Pennsylvania Certification IDs

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

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft Grumman Road
Pace Project No.: 30194996

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30194996001	GWC-10	Water	08/31/16 10:34	09/02/16 10:20
30194996002	Field Blank 1	Water	08/31/16 11:30	09/02/16 10:20
30194996003	GWC-11	Water	08/31/16 12:23	09/02/16 10:20
30194996004	GWC-13	Water	08/31/16 15:01	09/02/16 10:20
30194996005	GWC-2	Water	08/31/16 16:25	09/02/16 10:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft Grumman Road
 Pace Project No.: 30194996

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30194996001	GWC-10	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194996002	Field Blank 1	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194996003	GWC-11	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194996004	GWC-13	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194996005	GWC-2	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
 Pace Project No.: 30194996

Sample: GWC-10 Lab ID: 30194996001 Collected: 08/31/16 10:34 Received: 09/02/16 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.50 ± 0.361 (0.285) C:75% T:NA	pCi/L	09/14/16 11:35	13982-63-3	
Radium-228	EPA 9320	1.52 ± 0.587 (0.906) C:75% T:70%	pCi/L	09/28/16 13:07	15262-20-1	
Total Radium	Total Radium Calculation	3.02 ± 0.948 (1.19)	pCi/L	09/29/16 12:27	7440-14-4	

Sample: Field Blank 1 Lab ID: 30194996002 Collected: 08/31/16 11:30 Received: 09/02/16 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	-0.00701 ± 0.118 (0.295) C:65% T:NA	pCi/L	09/14/16 11:35	13982-63-3	
Radium-228	EPA 9320	0.268 ± 0.348 (0.741) C:77% T:86%	pCi/L	09/22/16 21:44	15262-20-1	
Total Radium	Total Radium Calculation	0.268 ± 0.466 (1.04)	pCi/L	09/26/16 14:07	7440-14-4	

Sample: GWC-11 Lab ID: 30194996003 Collected: 08/31/16 12:23 Received: 09/02/16 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.975 ± 0.316 (0.344) C:57% T:NA	pCi/L	09/14/16 11:35	13982-63-3	
Radium-228	EPA 9320	1.22 ± 0.491 (0.757) C:76% T:79%	pCi/L	09/22/16 21:44	15262-20-1	
Total Radium	Total Radium Calculation	2.20 ± 0.807 (1.10)	pCi/L	09/26/16 14:07	7440-14-4	

Sample: GWC-13 Lab ID: 30194996004 Collected: 08/31/16 15:01 Received: 09/02/16 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.355 ± 0.166 (0.225) C:69% T:NA	pCi/L	09/14/16 11:35	13982-63-3	
Radium-228	EPA 9320	0.875 ± 0.466 (0.823) C:78% T:75%	pCi/L	09/22/16 22:12	15262-20-1	
Total Radium	Total Radium Calculation	1.23 ± 0.632 (1.05)	pCi/L	09/26/16 14:07	7440-14-4	

Sample: GWC-2 Lab ID: 30194996005 Collected: 08/31/16 16:25 Received: 09/02/16 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.158 ± 0.126 (0.220) C:66% T:NA	pCi/L	09/14/16 12:50	13982-63-3	
Radium-228	EPA 9320	0.847 ± 0.429 (0.746) C:74% T:85%	pCi/L	09/22/16 21:45	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
Pace Project No.: 30194996

Sample: **GWC-2** Lab ID: **30194996005** Collected: 08/31/16 16:25 Received: 09/02/16 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	1.01 ± 0.555 (0.969)	pCi/L	09/26/16 14:07	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
Pace Project No.: 30194996

QC Batch: 232405 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30194996001, 30194996002, 30194996003, 30194996004, 30194996005

METHOD BLANK: 1138990 Matrix: Water
Associated Lab Samples: 30194996001, 30194996002, 30194996003, 30194996004, 30194996005

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

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
Pace Project No.: 30194996

QC Batch: 232402 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30194996001, 30194996002, 30194996003, 30194996004, 30194996005

METHOD BLANK: 1138986 Matrix: Water
Associated Lab Samples: 30194996001, 30194996002, 30194996003, 30194996004, 30194996005

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

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

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QUALIFIERS

Project: Plant Kraft Grumman Road
Pace Project No.: 30194996

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.

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WO#: 30194996



Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30146
 (770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CHAIN OF CUSTODY RECORD



CLIENT NAME: Georgia Power			CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239			REPORT TO: Joiu Abraham			CC: Maria Padilla Heath McCorkle		
REQUESTED COMPLETION DATE:			PO #: laburch@southernco.com			PROJECT NAME/STATE: Plant Kraft Grumman Road			PROJECT #: Phase II CCR		
Collection DATE	Collection TIME	MATRIX CODE*	C O M P	G R A B	SAMPLE IDENTIFICATION	CONTAINER TYPE:	PRESERVATION:	# of	ANALYSIS REQUESTED	RELINQUISHED BY:	DATE/TIME:
8/31/16	1034	GW	✓	✓	GWC-10	P	3	3	Metals App. III & IV (EPA 6020/470)	<i>[Signature]</i>	8/31/16 1800
8/31/16	1130	W	✓	✓	Field Blank 1	P	3	3	Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C)	<i>[Signature]</i>	9-7-16 1020
8/31/16	1223	GW	✓	✓	GWC-11	P	4	4	Radium 226 & 228 (SW-846 9315/9320)	<i>[Signature]</i>	
8/31/16	1501	GW	✓	✓	GWC-13	P	3	3			
8/31/16	1625	GW	✓	✓	GWC-2	P	3	3			

Plant Kraft - Grumman Rd COC CCRrev1

Sample Condition Upon Receipt Pittsburgh

30194996



Client Name: Georgia Power Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 6012 5098 9161

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

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

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

Temp should be above freezing to 6°C

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

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

Client Notification/ Resolution: Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

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

Laboratory Control Sample Assessment	
Count Date:	9/14/2016
Spike I.D.:	18-026
Spike Concentration (pCi/mL):	44.678
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.503
Target Conc. (pCi/L, g, F):	8.862
Uncertainty (Calculated):	0.418
Result (pCi/L, g, F):	7.333
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.556
Numerical Performance Indicator:	-4.37
Percent Recovery:	82.56%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30195003003
Duplicate Sample I.D.:	30195003003DUP
Sample Result (pCi/L, g, F):	0.079
Duplicate Result (pCi/L, g, F):	0.107
Sample Result Counting Uncertainty (pCi/L, g, F):	0.174
Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.171
Sample Duplicate Result (pCi/L, g, F):	See Below ##
Duplicate Duplicate Result (pCi/L, g, F):	-0.916
Are sample and/or duplicate results below MDC?	74.55%
Duplicate Numerical Performance Indicator:	N/A
Duplicate Status vs Numerical Indicator:	Fail***
Duplicate Status vs RPD:	Fail***

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
 30195003003
 30195003003DUP

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

Comments:

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

[Handwritten Signature]

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

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

Quality Control Sample Performance Assessment



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

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

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

Laboratory Control Sample Assessment	
Count Date:	9/22/2016
Spike I.D.:	16-025
Spike Concentration (pCi/mL):	25.604
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.801
Target Conc. (pCi/L, g, F):	6.393
Uncertainty (Calculated):	0.460
Result (pCi/L, g, F):	8.582
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.792
Numerical Performance Indicator:	4.64
Percent Recovery:	133.93%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30194996003
Duplicate Sample I.D.:	30194996003DUP
Sample Result (pCi/L, g, F):	1.218
Sample Duplicate Result (pCi/L, g, F):	0.440
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	2.067
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.494
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-2.517
Duplicate RPD:	51.73%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**

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

Comments:

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

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

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

[Handwritten signature]



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

September 30, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Kraft Gruman Road
Pace Project No.: 30194991

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on September 02, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft Gruman Road
Pace Project No.: 30194991

Pennsylvania Certification IDs

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

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

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SAMPLE SUMMARY

Project: Plant Kraft Gruman Road
Pace Project No.: 30194991

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30194991001	GWC-22	Water	08/31/16 12:50	09/02/16 10:20
30194991002	GWC-9	Water	08/31/16 14:05	09/02/16 10:20
30194991003	GWC-12	Water	08/31/16 15:20	09/02/16 10:20
30194991004	GWC-3	Water	08/31/16 16:35	09/02/16 10:20

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SAMPLE ANALYTE COUNT

Project: Plant Kraft Gruman Road
 Pace Project No.: 30194991

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30194991001	GWC-22	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194991002	GWC-9	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194991003	GWC-12	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1
30194991004	GWC-3	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	JAL	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Gruman Road
 Pace Project No.: 30194991

Sample: GWC-22 Lab ID: 30194991001 Collected: 08/31/16 12:50 Received: 09/02/16 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	2.60 ± 0.515 (0.184) C:79% T:NA	pCi/L	09/14/16 09:38	13982-63-3	
Radium-228	EPA 9320	3.36 ± 0.858 (0.878) C:74% T:84%	pCi/L	09/22/16 21:43	15262-20-1	
Total Radium	Total Radium Calculation	5.96 ± 1.37 (1.06)	pCi/L	09/26/16 14:07	7440-14-4	

Sample: GWC-9 Lab ID: 30194991002 Collected: 08/31/16 14:05 Received: 09/02/16 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.30 ± 0.337 (0.219) C:65% T:NA	pCi/L	09/14/16 09:38	13982-63-3	
Radium-228	EPA 9320	2.00 ± 0.647 (0.875) C:76% T:78%	pCi/L	09/22/16 21:43	15262-20-1	
Total Radium	Total Radium Calculation	3.30 ± 0.984 (1.09)	pCi/L	09/26/16 14:07	7440-14-4	

Sample: GWC-12 Lab ID: 30194991003 Collected: 08/31/16 15:20 Received: 09/02/16 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.953 ± 0.256 (0.193) C:80% T:NA	pCi/L	09/14/16 09:38	13982-63-3	
Radium-228	EPA 9320	1.66 ± 0.585 (0.840) C:75% T:73%	pCi/L	09/28/16 13:06	15262-20-1	
Total Radium	Total Radium Calculation	2.61 ± 0.841 (1.03)	pCi/L	09/29/16 12:27	7440-14-4	

Sample: GWC-3 Lab ID: 30194991004 Collected: 08/31/16 16:35 Received: 09/02/16 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.577 ± 0.202 (0.244) C:85% T:NA	pCi/L	09/14/16 09:38	13982-63-3	
Radium-228	EPA 9320	0.459 ± 0.394 (0.781) C:74% T:80%	pCi/L	09/28/16 13:07	15262-20-1	
Total Radium	Total Radium Calculation	1.04 ± 0.596 (1.03)	pCi/L	09/29/16 12:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Gruman Road
 Pace Project No.: 30194991

QC Batch: 232405 Analysis Method: EPA 9315
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
 Associated Lab Samples: 30194991001, 30194991002, 30194991003, 30194991004

METHOD BLANK: 1138990 Matrix: Water
 Associated Lab Samples: 30194991001, 30194991002, 30194991003, 30194991004

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Gruman Road
Pace Project No.: 30194991

QC Batch: 232402 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30194991001, 30194991002, 30194991003, 30194991004

METHOD BLANK: 1138986 Matrix: Water
Associated Lab Samples: 30194991001, 30194991002, 30194991003, 30194991004

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

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Kraft Gruman Road
Pace Project No.: 30194991

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

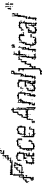
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WO#: 30194991



Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30339
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

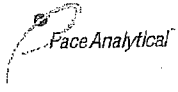
CHAIN OF CUSTODY RECORD



CLIENT NAME: Georgia Power		CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239		REPORT TO: Joju Abraham		CC: Maria Padilla Heath McCorkle		PROJECT NAME/STATE: Plant Kraft Grumman Road		PROJECT #: Phase II CCR																	
Collection DATE	Collection TIME	MATRIX CODE*	GRA B	SAMPLE IDENTIFICATION	CONTAINER TYPE	PRESERVATION	# of CONTAINERS	ANALYSIS REQUESTED	RELINQUISHED BY:	DATE/TIME:	RELINQUISHED BY:	DATE/TIME:															
8-31-2016	1130	W	✓	Field Blank 1			3			8/31/16 1800		8/31/16 1800															
8-31-2016	1250	GW	✓	GWC-22			3			8/31/16 1800		8/31/16 1800															
8-31-2016	1405	GW	✓	GWC-9			3			8/31/16 1800		8/31/16 1800															
8-31-2016	1520	GW	✓	GWC-12			3			8/31/16 1800		8/31/16 1800															
8-31-2016	1635	GW	✓	GWC-3			3			8/31/16 1800		8/31/16 1800															
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Plant Kraft - Grumman Rd COC CCRrev1

Sample Condition Upon Receipt Pittsburgh



Client Name: Georgia Power Project # 30194991

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 6812 5098 8/16

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

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

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

Temp should be above freezing to 6°C

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

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

Client Notification/ Resolution:
 Person Contacted: _____ Date/Time: _____ Contacted By: _____
 Comments/ Resolution: _____

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

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

Laboratory Control Sample Assessment	
LCS# (Y or N)?	N
LCS31289	LCS031289
Count Date:	9/14/2016
Spike I.D.:	16-026
Spike Concentration (pCi/mL):	44.678
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.503
Target Conc. (pCi/L, g, F):	8.882
Uncertainty (Calculated):	0.418
Result (pCi/L, g, F):	7.333
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.556
Numerical Performance Indicator:	-4.37
Percent Recovery:	82.56%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30195003003
Duplicate Sample I.D.:	30195003003DUP
Sample Result Counting Uncertainty (pCi/L, g, F):	0.079
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.107
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.174
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.171
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-0.916
Duplicate RPD:	74.55%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

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

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
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 Recovery:	

Quality Control Sample Performance Assessment



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

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

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSD31286	LCSD31286
Count Date:	9/22/2016
Spike I.D.:	16-025
Spike Concentration (pCi/mL):	25.604
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.801
Target Conc. (pCi/L, g, F):	6.393
Uncertainty (Calculated):	0.460
Result (pCi/L, g, F):	8.562
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.792
Numerical Performance Indicator:	4.64
Percent Recovery:	133.93%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30194996003
Duplicate Sample I.D.:	30194996003DUP
Sample Result (pCi/L, g, F):	1.218
Sample Result Counting Uncertainty (pCi/L, g, F):	0.440
Sample Duplicate Result (pCi/L, g, F):	2.067
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.494
Are sample and/or duplicate results below MDC?	See below ##
Duplicate Numerical Performance Indicator:	-2.917
Duplicate RPD:	51.73%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.
 Comments:
 ***Batch must be re-prepped due to unacceptable precision.

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
MS Alliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Alliquot (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:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

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



PACE ANALYTICAL SERVICES, INC.

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

Laboratory Report

Prepared For:

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

Attention: Mr. Joju Abraham

Report Number: AZI0058

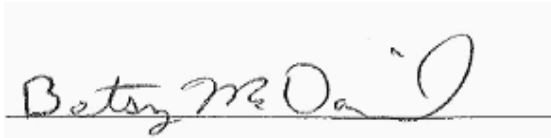
September 13, 2016

Project: CCR Event

Project #: Plant Kraft Grumman Road

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

Approved:



Project Manager

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All test results relate only to the samples analyzed.



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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-14	AZI0058-01	Ground Water	09/01/16 10:30	09/02/16 09:00
EB 9-1-16	AZI0058-02	DI Water	09/01/16 10:10	09/02/16 09:00
GWC-20	AZI0058-03	Ground Water	09/01/16 12:01	09/02/16 09:00
GWC-21	AZI0058-04	Ground Water	09/01/16 14:25	09/02/16 09:00
Dup-2	AZI0058-05	Ground Water	09/01/16 00:00	09/02/16 09:00
FB3 9-1-16	AZI0058-06	DI Water	09/01/16 14:20	09/02/16 09:00
GWC-16	AZI0058-07	Ground Water	09/01/16 16:05	09/02/16 09:00
GWC-15	AZI0058-08	Ground Water	09/01/16 17:36	09/02/16 09:00
Dup-3	AZI0058-09	Ground Water	09/01/16 00:00	09/02/16 09:00
GWC-17	AZI0058-10	Ground Water	09/01/16 09:40	09/02/16 09:00
FB 9-1-16	AZI0058-11	DI Water	09/01/16 11:30	09/02/16 09:00
GWC-4	AZI0058-12	Ground Water	09/01/16 12:55	09/02/16 09:00
EB3 9-1-16	AZI0058-13	DI Water	09/01/16 14:00	09/02/16 09:00
GWA-7	AZI0058-14	Ground Water	09/01/16 15:30	09/02/16 09:00



PACE ANALYTICAL SERVICES, INC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058

Project: CCR Event

Client ID: GWC-14

Lab Number ID: AZI0058-01

Date/Time Sampled: 9/1/2016 10:30:00AM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1170	25	10	mg/L	SM 2540 C		1	09/07/16 19:40	09/07/16 19:40	6090134	JPT
Inorganic Anions											
Chloride	60	5.0	0.28	mg/L	EPA 300.0		20	09/07/16 16:12	09/12/16 00:20	6090170	RLC
Fluoride	0.25	0.30	0.02	mg/L	EPA 300.0	J	1	09/07/16 16:12	09/08/16 02:24	6090170	RLC
Sulfate	730	20	1.0	mg/L	EPA 300.0		20	09/07/16 16:12	09/12/16 00:20	6090170	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:15	6090084	CSW
Arsenic	0.0024	0.0050	0.0016	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:15	6090084	CSW
Barium	0.0346	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:15	6090084	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:15	6090084	CSW
Boron	0.0710	0.100	0.0064	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:15	6090084	CSW
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:15	6090084	CSW
Calcium	194	25.0	1.55	mg/L	EPA 6020B		50	09/07/16 08:35	09/09/16 15:01	6090084	CSW
Chromium	0.0015	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:15	6090084	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:15	6090084	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:15	6090084	CSW
Molybdenum	0.0027	0.0100	0.0017	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:15	6090084	CSW
Selenium	0.0056	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:15	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:15	6090084	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:15	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 16:30	6090123	MTC



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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058

Project: CCR Event

Client ID: EB 9-1-16

Lab Number ID: AZI0058-02

Date/Time Sampled: 9/1/2016 10:10:00AM

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

Matrix: DI Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/07/16 19:40	09/07/16 19:40	6090134	JPT
Inorganic Anions											
Chloride	0.05	0.25	0.01	mg/L	EPA 300.0	J	1	09/07/16 16:12	09/08/16 02:44	6090170	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 02:44	6090170	RLC
Sulfate	0.23	1.0	0.05	mg/L	EPA 300.0	J	1	09/07/16 16:12	09/08/16 02:44	6090170	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:21	6090084	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:21	6090084	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:21	6090084	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:21	6090084	CSW
Boron	ND	0.100	0.0064	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:21	6090084	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:21	6090084	CSW
Calcium	0.0575	0.500	0.0311	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:21	6090084	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:21	6090084	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:21	6090084	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:21	6090084	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:21	6090084	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:21	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:21	6090084	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:21	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 16:33	6090123	MTC



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
 110 Technology Parkway, Peachtree Corners, GA 30092
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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058

Project: CCR Event

Client ID: GWC-20

Lab Number ID: AZI0058-03

Date/Time Sampled: 9/1/2016 12:01:00PM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	470	25	10	mg/L	SM 2540 C		1	09/07/16 19:40	09/07/16 19:40	6090134	JPT
Inorganic Anions											
Chloride	16	0.25	0.01	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 03:05	6090170	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 03:05	6090170	RLC
Sulfate	180	20	1.0	mg/L	EPA 300.0		20	09/07/16 16:12	09/12/16 00:41	6090170	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:27	6090084	CSW
Arsenic	0.215	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:27	6090084	CSW
Barium	0.0976	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:27	6090084	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:27	6090084	CSW
Boron	3.34	1.00	0.0642	mg/L	EPA 6020B		10	09/07/16 08:35	09/09/16 15:07	6090084	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:27	6090084	CSW
Calcium	67.2	5.00	0.311	mg/L	EPA 6020B		10	09/07/16 08:35	09/09/16 15:07	6090084	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:27	6090084	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:27	6090084	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:27	6090084	CSW
Molybdenum	0.296	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:27	6090084	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:27	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:27	6090084	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:27	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 16:40	6090123	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058

Project: CCR Event

Client ID: GWC-21

Lab Number ID: AZI0058-04

Date/Time Sampled: 9/1/2016 2:25:00PM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	184	25	10	mg/L	SM 2540 C		1	09/07/16 19:40	09/07/16 19:40	6090134	JPT
Inorganic Anions											
Chloride	5.9	0.25	0.01	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 03:26	6090170	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 03:26	6090170	RLC
Sulfate	36	1.0	0.05	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 03:26	6090170	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:32	6090084	CSW
Arsenic	0.0039	0.0050	0.0016	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:32	6090084	CSW
Barium	0.0770	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:32	6090084	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:32	6090084	CSW
Boron	0.620	0.100	0.0064	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:32	6090084	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:32	6090084	CSW
Calcium	40.5	5.00	0.311	mg/L	EPA 6020B		10	09/07/16 08:35	09/09/16 15:12	6090084	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:32	6090084	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:32	6090084	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:32	6090084	CSW
Molybdenum	0.0686	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:32	6090084	CSW
Selenium	0.0297	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:32	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:32	6090084	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:32	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 16:42	6090123	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058

Project: CCR Event

Client ID: Dup-2

Lab Number ID: AZI0058-05

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

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	725	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	42	0.25	0.01	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 04:28	6090170	RLC
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	09/07/16 16:12	09/08/16 04:28	6090170	RLC
Sulfate	420	10	0.51	mg/L	EPA 300.0		10	09/07/16 16:12	09/12/16 01:02	6090170	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:38	6090084	CSW
Arsenic	0.0557	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:38	6090084	CSW
Barium	0.0437	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:38	6090084	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:38	6090084	CSW
Boron	1.76	1.00	0.0642	mg/L	EPA 6020B		10	09/07/16 08:35	09/09/16 15:18	6090084	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:38	6090084	CSW
Calcium	95.5	5.00	0.311	mg/L	EPA 6020B		10	09/07/16 08:35	09/09/16 15:18	6090084	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:38	6090084	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:38	6090084	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:38	6090084	CSW
Molybdenum	0.0799	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:38	6090084	CSW
Selenium	0.0050	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:38	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:38	6090084	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:38	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 16:45	6090123	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058
Client ID: FB3 9-1-16
Date/Time Sampled: 9/1/2016 2:20:00PM
Matrix: DI Water

Project: CCR Event
Lab Number ID: AZI0058-06
Date/Time Received: 9/2/2016 9:00:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	31	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	0.05	0.25	0.01	mg/L	EPA 300.0	J	1	09/07/16 16:12	09/08/16 06:14	6090170	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 06:14	6090170	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 06:14	6090170	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:44	6090084	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:44	6090084	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:44	6090084	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:44	6090084	CSW
Boron	0.0097	0.100	0.0064	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:44	6090084	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:44	6090084	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:44	6090084	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:44	6090084	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:44	6090084	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:44	6090084	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:44	6090084	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:44	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:44	6090084	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:44	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 16:47	6090123	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058
Client ID: GWC-16
Date/Time Sampled: 9/1/2016 4:05:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AZI0058-07
Date/Time Received: 9/2/2016 9:00:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	878	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	43	0.25	0.01	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 06:35	6090170	RLC
Fluoride	0.55	0.30	0.02	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 06:35	6090170	RLC
Sulfate	430	10	0.51	mg/L	EPA 300.0		10	09/07/16 16:12	09/12/16 01:22	6090170	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:50	6090084	CSW
Arsenic	0.0551	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:50	6090084	CSW
Barium	0.0445	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:50	6090084	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:50	6090084	CSW
Boron	1.82	1.00	0.0642	mg/L	EPA 6020B		10	09/07/16 08:35	09/09/16 15:24	6090084	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:50	6090084	CSW
Calcium	93.8	5.00	0.311	mg/L	EPA 6020B		10	09/07/16 08:35	09/09/16 15:24	6090084	CSW
Chromium	0.0011	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:50	6090084	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:50	6090084	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:50	6090084	CSW
Molybdenum	0.0800	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:50	6090084	CSW
Selenium	0.0052	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/07/16 23:50	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:50	6090084	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/07/16 23:50	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 16:49	6090123	MTC



PACE ANALYTICAL SERVICES, INC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058

Project: CCR Event

Client ID: GWC-15

Lab Number ID: AZI0058-08

Date/Time Sampled: 9/1/2016 5:36:00PM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	539	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	10	0.25	0.01	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 06:56	6090170	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 06:56	6090170	RLC
Sulfate	120	5.0	0.26	mg/L	EPA 300.0		5	09/07/16 16:12	09/12/16 15:15	6090170	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:07	6090084	CSW
Arsenic	0.0533	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:07	6090084	CSW
Barium	0.0403	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:07	6090084	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:07	6090084	CSW
Boron	9.01	1.00	0.0642	mg/L	EPA 6020B		10	09/07/16 08:35	09/12/16 12:45	6090084	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:07	6090084	CSW
Calcium	119	25.0	1.55	mg/L	EPA 6020B		50	09/07/16 08:35	09/09/16 15:30	6090084	CSW
Chromium	0.0011	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 00:07	6090084	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:07	6090084	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:07	6090084	CSW
Molybdenum	0.132	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:07	6090084	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:07	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:07	6090084	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:07	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 17:11	6090124	MTC



PACE ANALYTICAL SERVICES, INC.

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

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058

Project: CCR Event

Client ID: Dup-3

Lab Number ID: AZI0058-09

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

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	620	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	10	0.25	0.01	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 07:17	6090170	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 07:17	6090170	RLC
Sulfate	120	5.0	0.26	mg/L	EPA 300.0		5	09/07/16 16:12	09/12/16 01:43	6090170	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:13	6090084	CSW
Arsenic	0.0532	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:13	6090084	CSW
Barium	0.0399	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:13	6090084	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:13	6090084	CSW
Boron	5.25	5.00	0.321	mg/L	EPA 6020B		50	09/07/16 08:35	09/09/16 15:35	6090084	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:13	6090084	CSW
Calcium	128	25.0	1.55	mg/L	EPA 6020B		50	09/07/16 08:35	09/09/16 15:36	6090084	CSW
Chromium	0.0010	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 00:13	6090084	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:13	6090084	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:13	6090084	CSW
Molybdenum	0.128	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:13	6090084	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:13	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:13	6090084	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:13	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 17:13	6090124	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058

Project: CCR Event

Client ID: GWC-17

Lab Number ID: AZI0058-10

Date/Time Sampled: 9/1/2016 9:40:00AM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1270	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	610	12	0.70	mg/L	EPA 300.0		50	09/07/16 16:12	09/12/16 13:31	6090170	RLC
Fluoride	0.68	0.30	0.02	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 07:38	6090170	RLC
Sulfate	310	50	2.6	mg/L	EPA 300.0		50	09/07/16 16:12	09/12/16 13:31	6090170	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:18	6090084	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:18	6090084	CSW
Barium	0.203	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:18	6090084	CSW
Beryllium	0.0014	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 00:18	6090084	CSW
Boron	0.408	0.100	0.0064	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:18	6090084	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:18	6090084	CSW
Calcium	71.9	5.00	0.311	mg/L	EPA 6020B		10	09/07/16 08:35	09/09/16 15:41	6090084	CSW
Chromium	0.0011	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 00:18	6090084	CSW
Cobalt	0.0046	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 00:18	6090084	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:18	6090084	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:18	6090084	CSW
Selenium	0.0012	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 00:18	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:18	6090084	CSW
Lithium	0.0066	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 00:18	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 17:15	6090124	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058

Project: CCR Event

Client ID: FB 9-1-16

Lab Number ID: AZI0058-11

Date/Time Sampled: 9/1/2016 11:30:00AM

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

Matrix: DI Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	0.21	0.25	0.01	mg/L	EPA 300.0	J	1	09/07/16 16:12	09/08/16 08:21	6090170	RLC
Fluoride	0.04	0.30	0.02	mg/L	EPA 300.0	J	1	09/07/16 16:12	09/08/16 08:21	6090170	RLC
Sulfate	0.38	1.0	0.05	mg/L	EPA 300.0	J	1	09/07/16 16:12	09/08/16 08:21	6090170	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:24	6090084	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:24	6090084	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:24	6090084	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:24	6090084	CSW
Boron	0.0072	0.100	0.0064	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 00:24	6090084	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:24	6090084	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:24	6090084	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:24	6090084	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:24	6090084	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:24	6090084	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:24	6090084	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:24	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:24	6090084	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:24	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 17:18	6090124	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058

Project: CCR Event

Client ID: GWC-4

Lab Number ID: AZI0058-12

Date/Time Sampled: 9/1/2016 12:55:00PM

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

Matrix: Ground Water

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	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	09/07/16 16:12	09/12/16 02:24	6090170	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 08:42	6090170	RLC
Sulfate	210	5.0	0.26	mg/L	EPA 300.0		5	09/07/16 16:12	09/12/16 02:24	6090170	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:30	6090084	CSW
Arsenic	0.0033	0.0050	0.0016	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 00:30	6090084	CSW
Barium	0.123	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:30	6090084	CSW
Beryllium	0.0004	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 00:30	6090084	CSW
Boron	6.48	0.500	0.0321	mg/L	EPA 6020B		5	09/07/16 08:35	09/08/16 00:36	6090084	CSW
Cadmium	0.0002	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 00:30	6090084	CSW
Calcium	9.91	0.500	0.0311	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:30	6090084	CSW
Chromium	0.0150	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:30	6090084	CSW
Cobalt	0.0024	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 00:30	6090084	CSW
Lead	0.0166	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:30	6090084	CSW
Molybdenum	0.0350	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:30	6090084	CSW
Selenium	0.0067	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 00:30	6090084	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 00:30	6090084	CSW
Lithium	0.0092	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 00:30	6090084	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 17:20	6090124	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058

Project: CCR Event

Client ID: EB3 9-1-16

Lab Number ID: AZI0058-13

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

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

Matrix: DI Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	67	25	10	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	0.05	0.25	0.01	mg/L	EPA 300.0	J	1	09/07/16 16:12	09/08/16 09:03	6090170	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 09:03	6090170	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 09:03	6090170	RLC
Metals, Total											
Antimony	0.0013	0.0030	0.0008	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 19:59	6090121	KLH
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 19:59	6090121	KLH
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 19:59	6090121	KLH
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 19:59	6090121	KLH
Boron	0.0086	0.100	0.0064	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 19:59	6090121	KLH
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 19:59	6090121	KLH
Calcium	0.0420	0.500	0.0311	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 19:59	6090121	KLH
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 19:59	6090121	KLH
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 19:59	6090121	KLH
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 19:59	6090121	KLH
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 19:59	6090121	KLH
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 19:59	6090121	KLH
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 19:59	6090121	KLH
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 19:59	6090121	KLH
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	09/07/16 08:50	09/07/16 17:27	6090124	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058

Project: CCR Event

Client ID: GWA-7

Lab Number ID: AZI0058-14

Date/Time Sampled: 9/1/2016 3:30:00PM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	3660	100	40	mg/L	SM 2540 C		1	09/07/16 20:30	09/07/16 20:30	6090135	JPT
Inorganic Anions											
Chloride	190	1.2	0.07	mg/L	EPA 300.0		5	09/07/16 16:12	09/12/16 04:08	6090170	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	09/07/16 16:12	09/08/16 09:24	6090170	RLC
Sulfate	73	5.0	0.26	mg/L	EPA 300.0		5	09/07/16 16:12	09/12/16 04:08	6090170	RLC
Metals, Total											
Antimony	0.0017	0.0030	0.0008	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 23:03	6090121	KLH
Arsenic	0.0287	0.0050	0.0016	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 23:03	6090121	KLH
Barium	0.415	0.0500	0.0022	mg/L	EPA 6020B		5	09/07/16 08:35	09/08/16 22:51	6090121	KLH
Beryllium	0.0017	0.0030	0.0004	mg/L	EPA 6020B	J	5	09/07/16 08:35	09/08/16 22:51	6090121	KLH
Boron	11.6	1.00	0.0642	mg/L	EPA 6020B		10	09/07/16 08:35	09/12/16 14:11	6090121	KLH
Cadmium	0.0007	0.0010	0.00007	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 23:03	6090121	KLH
Calcium	5.59	2.50	0.155	mg/L	EPA 6020B		5	09/07/16 08:35	09/08/16 22:51	6090121	KLH
Chromium	0.119	0.0100	0.0009	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 23:03	6090121	KLH
Cobalt	0.0102	0.0100	0.0005	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 23:03	6090121	KLH
Lead	0.0663	0.0050	0.0001	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 23:03	6090121	KLH
Molybdenum	0.0098	0.0100	0.0017	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 23:03	6090121	KLH
Selenium	0.0438	0.0100	0.0010	mg/L	EPA 6020B		1	09/07/16 08:35	09/08/16 23:03	6090121	KLH
Thallium	0.0005	0.0010	0.0002	mg/L	EPA 6020B	J	1	09/07/16 08:35	09/08/16 23:03	6090121	KLH
Lithium	ND	0.0500	0.0103	mg/L	EPA 6020B		5	09/07/16 08:35	09/08/16 22:51	6090121	KLH
Mercury	0.00017	0.00050	0.000041	mg/L	EPA 7470A	J	1	09/07/16 08:50	09/07/16 17:30	6090124	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090134 - SM 2540 C											
Blank (6090134-BLK1)						Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6090134-BS1)						Prepared & Analyzed: 09/07/16					
Total Dissolved Solids	375	25	10	mg/L	400.00		94	84-108			
Duplicate (6090134-DUP1)						Source: AZI0050-02					
Total Dissolved Solids	4860	25	10	mg/L		4920			1	10	
Duplicate (6090134-DUP2)						Source: AZI0051-03					
Total Dissolved Solids	393	25	10	mg/L		396			0.8	10	
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					
Total Dissolved Solids	580	25	10	mg/L		539			7	10	
Duplicate (6090135-DUP2)						Source: AZI0077-04					
Total Dissolved Solids	691	25	10	mg/L		769			11	10	QR-03



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September 13, 2016

Report No.: AZI0058

Inorganic Anions - Quality Control

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



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September 13, 2016

Report No.: AZI0058

Metals, Total - Quality Control

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



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September 13, 2016

Report No.: AZI0058

Metals, Total - Quality Control

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



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Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058

Metals, Total - Quality Control

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

Batch 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							



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090121 - EPA 3005A											
Blank (6090121-BLK1)						Prepared: 09/07/16 Analyzed: 09/08/16					
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
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			



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September 13, 2016

Report No.: AZI0058

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 (6090121-MS1)			Source: AZI0059-01			Prepared: 09/07/16 Analyzed: 09/08/16					
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			
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			



PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090121 - EPA 3005A											
Post Spike (6090121-PS1)			Source: AZI0059-01			Prepared: 09/07/16 Analyzed: 09/08/16					
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			
Batch 6090123 - EPA 7470A											
Blank (6090123-BLK1)						Prepared & Analyzed: 09/07/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6090123-BS1)						Prepared & Analyzed: 09/07/16					
Mercury	0.00241	0.00050	0.000041	mg/L	2.5000E-3		97	80-120			
Matrix Spike (6090123-MS1)			Source: AZI0050-05			Prepared & Analyzed: 09/07/16					
Mercury	0.00234	0.00050	0.000041	mg/L	2.5000E-3	ND	94	75-125			
Matrix Spike Dup (6090123-MSD1)			Source: AZI0050-05			Prepared & Analyzed: 09/07/16					
Mercury	0.00230	0.00050	0.000041	mg/L	2.5000E-3	ND	92	75-125	2	20	
Post Spike (6090123-PS1)			Source: AZI0050-05			Prepared & Analyzed: 09/07/16					
Mercury	1.70			ug/L	1.6667	0.0134	101	80-120			
Batch 6090124 - EPA 7470A											
Blank (6090124-BLK1)						Prepared & Analyzed: 09/07/16					
Mercury	ND	0.00050	0.000041	mg/L							



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Report No.: AZI0058

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090124 - EPA 7470A											
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			



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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 13, 2016

Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

- QR-03** The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to suspected matrix interference and/or non-homogeneous sample matrix.
- QM-05** The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.
- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

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



Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30052
 (770) 734-4200 : FAX (770) 734-4201 www.ashi-lab.com

PAGE: 1 OF 1

CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308
 REPORT TO: Jeju Abraham
 OCC: Maria Padilla Health McCorkle
 REQUESTED COMPLETION DATE: laburchi@southernco.com
 PROJECT NAME/STATE: Plant Kraft, Grumman Road
 PROJECT #: Phase II COR

CONTAINER TYPE	PRESERVATION	CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, $^{-6}$C	P - PLASTIC	1 - HCl, $^{-6}$C
A - AMBER GLASS	2 - H ₂ SO ₄ , $^{-6}$C	A - AMBER GLASS	2 - H ₂ SO ₄ , $^{-6}$C
G - CLEAR GLASS	3 - HNO ₃	G - CLEAR GLASS	3 - HNO ₃
V - VOA VIAL	4 - NaOH, $^{-6}$C	V - VOA VIAL	4 - NaOH, $^{-6}$C
S - STERILE	5 - NaOH/ZnAc, $^{-6}$C	S - STERILE	5 - NaOH/ZnAc, $^{-6}$C
O - OTHER	6 - Na ₂ S ₂ O ₈ , $^{-6}$C	O - OTHER	6 - Na ₂ S ₂ O ₈ , $^{-6}$C
	7 - $^{-6}$C not frozen		7 - $^{-6}$C not frozen

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

CONTAINER TYPE	PRESERVATION	ANALYSIS REQUESTED	RELINQUISHED BY:	DATE/TIME:
3	3	Metals App. III & IV (EPA 8020/7470) Cl, T, SO ₄ & TDS (EPA 300.0 & SM 2540C) Radum 226 & 228 (GW-846 9315/9320)	[Signature]	9-2-16 0900
3	3	GWC-14		
3	3	EB 9-1-16		
3	3	GWC-20		
3	3	GWC-21		
3	3	Dup-2		
3	3	Field B 9/1/16 FB391-16		
3	3	GWC-16		
4	3	GWC-15		
3	3	Dup-3		

SAMPLED BY AND TITLE: D. FUGGIA (ACC) DATE/TIME: 9/2/16 0910
 RECEIVED BY: [Signature] DATE/TIME: 9/2/16 0910
 RECEIVED BY AB: [Signature] DATE/TIME: 9/2/16 0910
 SHIP CHECKED: [Signature] DATE/TIME: 9/2/16 0910
 SAMPLE SHIPPED VIA: UPS FEDEX COURIER OTHERS: CLIENT
 RELINQUISHED BY: [Signature] DATE/TIME: 9-2-16 0900
 RELINQUISHED BY: [Signature] DATE/TIME: 9-2-16 0900
 LAB #: A-ZI 0058
 Entered into LIMS: [Signature]
 Tracking #: GA

Plant Kraft - Grumman Rd COC CORrev1



Pace Analytical Services, Inc.
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PAGE: 1 OF 1

CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239		REPORT TO: Jolu Abraham CC: Maria Padilla Heath McCorkle PO #: laburchi@southerncc.com		PROJECT NAME/STATE: Plant Kraft Grumman Road Phase II CCR	
CONTAINER TYPE: PRESERVATION # of C O N T A I N E R S		ANALYSIS REQUESTED		CONTAINER TYPE PRESERVATION 1 - HCl, -6°C 2 - H ₂ SO ₄ , -6°C 3 - HNO ₃ 4 - NaOH, -6°C 5 - NaOH/ZnAc, -6°C 6 - Na ₂ S ₂ O ₃ , -6°C 7 - -6°C not frozen	
CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		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	
LABORATORY USE ONLY LAB #: Entered into LIMS: Tracking #:		DATE/TIME: DATE/TIME:		DATE/TIME: DATE/TIME:	
RELINQUISHED BY: RELINQUISHED BY:		SAMPLE SHIPPED VIA: UPS FED-EX USES COURIER OTHER'S		DATE/TIME: DATE/TIME:	
RECEIVED BY LAB: RECEIVED BY:		RECEIVED BY:		DATE/TIME: DATE/TIME:	



PACE ANALYTICAL SERVICES, INC.

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

LOG-IN CHECKLIST

Printed: 9/13/2016 5:20:21PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 09/02/16 09:00

Work Order: AZI0058

Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 14

#Containers: 43

Minimum Temp(C): 1.0

Maximum Temp(C): 1.0

Custody Seal(s) Used: Yes

CHECKLIST ITEMS

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

Comments:



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

October 04, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Kraft Grumman Road
Pace Project No.: 30195128

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on September 06, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft Grumman Road
Pace Project No.: 30195128

Pennsylvania Certification IDs

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

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft Grumman Road
Pace Project No.: 30195128

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30195128001	GWC-14	Water	09/01/16 10:30	09/06/16 08:50
30195128002	EB 9-1-16	Water	09/01/16 10:10	09/06/16 08:50
30195128003	GWC-20	Water	09/01/16 12:01	09/06/16 08:50
30195128004	GWC-21	Water	09/01/16 14:25	09/06/16 08:50
30195128005	DUP-2	Water	09/01/16 00:01	09/06/16 08:50
30195128006	FB39-1-16	Water	09/01/16 14:20	09/06/16 08:50
30195128007	GWC-16	Water	09/01/16 16:05	09/06/16 08:50
30195128008	GWC-15	Water	09/01/16 17:36	09/06/16 08:50
30195128009	DUP-3	Water	09/01/16 00:01	09/06/16 08:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft Grumman Road
 Pace Project No.: 30195128

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30195128001	GWC-14	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195128002	EB 9-1-16	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195128003	GWC-20	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195128004	GWC-21	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195128005	DUP-2	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195128006	FB39-1-16	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195128007	GWC-16	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195128008	GWC-15	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195128009	DUP-3	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
 Pace Project No.: 30195128

Sample: GWC-14		Lab ID: 30195128001	Collected: 09/01/16 10:30	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	0.242 ± 0.138 (0.202) C:93% T:NA	pCi/L	09/28/16 09:32	13982-63-3	
Radium-228	EPA 9320	1.04 ± 0.479 (0.774) C:65% T:78%	pCi/L	09/23/16 12:39	15262-20-1	
Total Radium	Total Radium Calculation	1.28 ± 0.617 (0.976)	pCi/L	10/04/16 15:09	7440-14-4	

Sample: EB 9-1-16		Lab ID: 30195128002	Collected: 09/01/16 10:10	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	0.0136 ± 0.0684 (0.180) C:90% T:NA	pCi/L	09/28/16 09:08	13982-63-3	
Radium-228	EPA 9320	0.421 ± 0.392 (0.794) C:72% T:77%	pCi/L	09/23/16 16:43	15262-20-1	
Total Radium	Total Radium Calculation	0.435 ± 0.460 (0.974)	pCi/L	10/04/16 15:21	7440-14-4	

Sample: GWC-20		Lab ID: 30195128003	Collected: 09/01/16 12:01	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	0.562 ± 0.211 (0.249) C:93% T:NA	pCi/L	09/28/16 09:08	13982-63-3	
Radium-228	EPA 9320	1.65 ± 0.560 (0.763) C:77% T:80%	pCi/L	09/23/16 16:43	15262-20-1	
Total Radium	Total Radium Calculation	2.21 ± 0.771 (1.01)	pCi/L	10/04/16 15:21	7440-14-4	

Sample: GWC-21		Lab ID: 30195128004	Collected: 09/01/16 14:25	Received: 09/06/16 08:50	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.610 ± 0.220 (0.195) C:78% T:NA	pCi/L	09/28/16 09:08	13982-63-3	
Radium-228	EPA 9320	0.441 ± 0.398 (0.802) C:69% T:78%	pCi/L	09/23/16 16:44	15262-20-1	
Total Radium	Total Radium Calculation	1.05 ± 0.618 (0.997)	pCi/L	10/04/16 15:21	7440-14-4	

Sample: DUP-2		Lab ID: 30195128005	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	0.733 ± 0.257 (0.299) C:85% T:NA	pCi/L	09/28/16 11:34	13982-63-3	
Radium-228	EPA 9320	1.38 ± 0.583 (0.954) C:68% T:80%	pCi/L	09/23/16 16:44	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
 Pace Project No.: 30195128

Sample: DUP-2 Lab ID: 30195128005 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
Total Radium	Total Radium Calculation	2.11 ± 0.840 (1.25)	pCi/L	10/04/16 15:21	7440-14-4	

Sample: FB39-1-16 Lab ID: 30195128006 Collected: 09/01/16 14:20 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	0.0437 ± 0.0842 (0.194) C:88% T:NA	pCi/L	09/28/16 11:34	13982-63-3	
Radium-228	EPA 9320	0.330 ± 0.413 (0.877) C:79% T:88%	pCi/L	09/23/16 22:37	15262-20-1	
Total Radium	Total Radium Calculation	0.374 ± 0.497 (1.07)	pCi/L	10/04/16 15:21	7440-14-4	

Sample: GWC-16 Lab ID: 30195128007 Collected: 09/01/16 16:05 Received: 09/06/16 08:50 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.475 ± 0.192 (0.240) C:94% T:NA	pCi/L	09/28/16 11:34	13982-63-3	
Radium-228	EPA 9320	1.51 ± 0.598 (0.932) C:74% T:82%	pCi/L	09/23/16 22:37	15262-20-1	
Total Radium	Total Radium Calculation	1.99 ± 0.790 (1.17)	pCi/L	10/04/16 15:21	7440-14-4	

Sample: GWC-15 Lab ID: 30195128008 Collected: 09/01/16 17:36 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	0.625 ± 0.315 (0.428) C:89% T:NA	pCi/L	09/28/16 11:35	13982-63-3	
Radium-228	EPA 9320	1.82 ± 0.575 (0.703) C:73% T:84%	pCi/L	09/23/16 22:09	15262-20-1	
Total Radium	Total Radium Calculation	2.45 ± 0.890 (1.13)	pCi/L	10/04/16 15:21	7440-14-4	

Sample: DUP-3 Lab ID: 30195128009 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	0.451 ± 0.227 (0.286) C:91% T:NA	pCi/L	09/28/16 11:35	13982-63-3	
Radium-228	EPA 9320	0.600 ± 0.420 (0.816) C:75% T:87%	pCi/L	09/23/16 22:07	15262-20-1	
Total Radium	Total Radium Calculation	1.05 ± 0.647 (1.10)	pCi/L	10/04/16 15:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
Pace Project No.: 30195128

QC Batch: 232981 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30195128008, 30195128009

METHOD BLANK: 1141806 Matrix: Water
Associated Lab Samples: 30195128008, 30195128009

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
 Pace Project No.: 30195128

QC Batch: 232987 Analysis Method: EPA 9320
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
 Associated Lab Samples: 30195128008, 30195128009

METHOD BLANK: 1141823 Matrix: Water
 Associated Lab Samples: 30195128008, 30195128009

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
 Pace Project No.: 30195128

QC Batch: 232984 Analysis Method: EPA 9320
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
 Associated Lab Samples: 30195128001

METHOD BLANK: 1141814 Matrix: Water
 Associated Lab Samples: 30195128001

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	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
Pace Project No.: 30195128

QC Batch: 232979 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30195128002, 30195128003, 30195128004, 30195128005, 30195128006, 30195128007

METHOD BLANK: 1141799 Matrix: Water
Associated Lab Samples: 30195128002, 30195128003, 30195128004, 30195128005, 30195128006, 30195128007

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.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
 Pace Project No.: 30195128

QC Batch: 232985 Analysis Method: EPA 9320
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
 Associated Lab Samples: 30195128002, 30195128003, 30195128004, 30195128005, 30195128006, 30195128007

METHOD BLANK: 1141817 Matrix: Water
 Associated Lab Samples: 30195128002, 30195128003, 30195128004, 30195128005, 30195128006, 30195128007

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	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
Pace Project No.: 30195128

QC Batch:	232978	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	30195128001		

METHOD BLANK:	1141797	Matrix:	Water
Associated Lab Samples:	30195128001		

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	

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QUALIFIERS

Project: Plant Kraft Grumman Road
Pace Project No.: 30195128

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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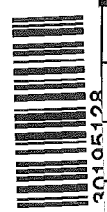
CHAIN OF CUSTODY RECORD

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

PAGE: / OF /

CLIENT NAME: Georgia Power													
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308													
REPORT TO: Joju Abraham			CC: Maria Padilla Heath McCorkle										
REQUESTED COMPLETION DATE: laburchi@southernco.com			PO #:										
PROJECT NAME/STATE: Plant Kraft Grumman Road													
PROJECT #: Phase II COR													
Collection DATE	Collection TIME	MATRIX CODE*	COR			SAMPLE IDENTIFICATION	CONTAINER TYPE: PRESERVATION: # of	P 3	P 7	P 3	ANALYSIS REQUESTED	L A B I D N U M B E R	CONTAINER TYPE PRESERVATION
			G	R	A								
9/11/16	1030	GW	✓			GWC-14	3	1	1	1		P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	
9/11/16	1010	W	✓			EB 9-1-16	3	1	1	1		1 - HCl, ≤6°C 2 - H2SO4, ≤6°C 3 - HNO3 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na2S2O3, ≤6°C 7 - ≤6°C not frozen	
9/11/16	1201	GW	✓			GWC-20	3	1	1	1		DW - DRINKING WATER S - SOIL MW - WASTEWATER SL - SLUDGE GW - GROUNDWATER SD - SOLID SW - SURFACE WATER A - AIR ST - STORMWATER L - LIQUID W - WATER P - PRODUCT	
9/11/16	1425	GW	✓			GWC-21	3	1	1	1		*MATRIX CODES:	
		GW	✓			Dup-2	3	1	1	1		REMARKS/ADDITIONAL INFORMATION	
9/11/16	1420	W	✓			FIELD # 9/11/16 FB3 9/1-16	3	1	1	1			
9/11/16	1605	GW	✓			GWC-16	3	1	1	1		SAMPLE ID: FB3 9-1-16 006	
9/11/16	1736	GW	✓			GWC-15	4	1	1	2		007	
		GW	✓			Dup-3	3	1	1	1		008	
DATE/TIME: 9-2-16											LAB #		
DATE/TIME: 9-2-16											FOR LAB USE ONLY		
RELINQUISHED BY:											Entered into LIMS		
RELINQUISHED BY:											Tracking #		
SAMPLE SHIPPED VIA:													
UPS FEDEX USPS COURIER CLIENT OTHERS													
Carrier Special Handling Temperature MHA													
Packaged Yes No NA													
Iced Yes No NA													

WO#: 30195128



Plant Kraft -Grumman Rd COC CCRrev1

Sample Condition Upon Receipt Pittsburgh



Client Name: Pace, GA Project # 30195128

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: 097R 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. <u>No Signature</u>
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: <u>WT</u>		X		5. <u>Time on 006 bottle is 1620</u>
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used: -Pace Containers Used:	X			10.
Containers Intact:	X			11.
Filtered volume received for Dissolved tests			X	12.
All containers needing preservation have been checked.	X			13.
All containers needing preservation are found to be in compliance with EPA recommendation.	X			<u>PHL2</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>097R</u> Date/time of preservation: _____
				Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):			X	14.
Trip Blank Present:		X		15.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: <u>097R</u> Date: <u>9-6-16</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: WRR
Date: 9/23/2016
Worklist: 31361
Matrix: DW

Method Blank Assessment	
MB Sample ID	1141799
MB concentration:	0.035
MB 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		LCS (Y or N)?	N
		LCS31361	LCS31361
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		

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30195129012	30195129012
Duplicate Sample I.D.:	30195129012DUP	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	
Duplicate RPD:	13.44%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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

Comments:

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

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

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

Laboratory Control Sample Assessment	
Count Date:	9/28/2016
Spike I.D.:	16-026
Spike Concentration (pCi/mL):	44.677
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.504
Target Conc. (pCi/L, g, F):	8.870
Uncertainty (Calculated):	0.417
Result (pCi/L, g, F):	7.482
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.849
Numerical Performance Indicator:	-2.87
Percent Recovery:	84.36%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30195128008
Duplicate Sample I.D.:	30195128008DUP
Sample Result (pCi/L, g, F):	0.825
Sample Duplicate Result (pCi/L, g, F):	0.301
Sample Duplicate Result (pCi/L, g, F):	0.359
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.228
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	1.384
Duplicate RPD:	54.21%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

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

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
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:	

Handwritten signature/initials

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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



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

Laboratory Control Sample Assessment		LCS D (Y or N)?	N
		LCS31365	LCS31365
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		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30195127001	30195127001
Duplicate Sample I.D.:	30195127001DUP	30195127001DUP
Sample Result (pCi/L, g, F):	4.765	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.691	
Sample Duplicate Result (pCi/L, g, F):	5.113	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.692	
Are sample and/or duplicate results below MDC? :	See Below ##	
Duplicate Numerical Performance Indicator:	-0.699	
Duplicate RPD:	7.06%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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

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

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

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

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 9/15/2016
Worklist: 31366
Matrix: DW



Method Blank Assessment	
MB Sample ID	1141817
MB Concentration:	0.293
MB 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	
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

Duplicate Sample Assessment	
Sample I.D.:	30195129012
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
Duplicate RPD:	19.46%
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.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

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

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: 9/15/2016
Worklist: 31367
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Laboratory Control Sample Assessment		LCS#	(Y or N)?
		LCS31367	N
Count Date:	9/23/2016	LCS#	31367
Spike I.D.:	16-025		
Spike Concentration (pCi/mL):	25.595		
Volume Used (mL):	0.20		
Aliquot Volume (L, g, F):	0.813		
Target Conc. (pCi/L, g, F):	6.293		
Uncertainty (Calculated):	0.453		
Result (pCi/L, g, F):	7.559		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.863		
Numerical Performance Indicator:	2.55		
Percent Recovery:	120.12%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		

Duplicate Sample Assessment	
Sample I.D.:	30195128008
Duplicate Sample I.D.:	30195128008DUP
Sample Result (pCi/L, g, F):	1.816
Sample Duplicate Result (pCi/L, g, F):	0.475
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.232
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.428
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	1.791
Duplicate RPD:	38.33%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

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

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

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

Handwritten signature



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

October 04, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Kraft Grumman Road
Pace Project No.: 30195130

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on September 06, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft Grumman Road
Pace Project No.: 30195130

Pennsylvania Certification IDs

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

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

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SAMPLE SUMMARY

Project: Plant Kraft Grumman Road
Pace Project No.: 30195130

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30195130001	GWC-17	Water	09/01/16 09:40	09/06/16 08:50
30195130002	FB 9-1-16	Water	09/01/16 11:30	09/06/16 08:50
30195130003	GWC-4	Water	09/01/16 12:55	09/06/16 08:50
30195130004	EB3 9-1-16	Water	09/01/16 14:00	09/06/16 08:50
30195130005	GWA-7	Water	09/01/16 15:30	09/06/16 08:50

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SAMPLE ANALYTE COUNT

Project: Plant Kraft Grumman Road
 Pace Project No.: 30195130

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30195130001	GWC-17	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195130002	FB 9-1-16	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195130003	GWC-4	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195130004	EB3 9-1-16	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30195130005	GWA-7	EPA 9315	WRR	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
 Pace Project No.: 30195130

Sample: GWC-17 Lab ID: 30195130001 Collected: 09/01/16 09:40 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	1.96 ± 0.500 (0.307) C:86% T:NA	pCi/L	09/28/16 11:35	13982-63-3	
Radium-228	EPA 9320	3.23 ± 0.865 (0.919) C:75% T:77%	pCi/L	09/23/16 22:33	15262-20-1	
Total Radium	Total Radium Calculation	5.19 ± 1.37 (1.23)	pCi/L	10/04/16 15:21	7440-14-4	

Sample: FB 9-1-16 Lab ID: 30195130002 Collected: 09/01/16 11:30 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	-0.0386 ± 0.111 (0.336) C:88% T:NA	pCi/L	09/28/16 11:35	13982-63-3	
Radium-228	EPA 9320	0.979 ± 0.507 (0.878) C:76% T:66%	pCi/L	09/28/16 12:22	15262-20-1	
Total Radium	Total Radium Calculation	0.979 ± 0.618 (1.21)	pCi/L	10/04/16 15:21	7440-14-4	

Sample: GWC-4 Lab ID: 30195130003 Collected: 09/01/16 12:55 Received: 09/06/16 08:50 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	2.68 ± 0.665 (0.451) C:84% T:NA	pCi/L	09/28/16 15:06	13982-63-3	
Radium-228	EPA 9320	2.59 ± 0.790 (1.01) C:67% T:83%	pCi/L	09/23/16 22:34	15262-20-1	
Total Radium	Total Radium Calculation	5.27 ± 1.46 (1.46)	pCi/L	10/04/16 15:21	7440-14-4	

Sample: EB3 9-1-16 Lab ID: 30195130004 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	0.107 ± 0.154 (0.332) C:85% T:NA	pCi/L	09/28/16 11:35	13982-63-3	
Radium-228	EPA 9320	1.05 ± 0.483 (0.811) C:71% T:88%	pCi/L	09/23/16 22:07	15262-20-1	
Total Radium	Total Radium Calculation	1.16 ± 0.637 (1.14)	pCi/L	10/04/16 15:39	7440-14-4	

Sample: GWA-7 Lab ID: 30195130005 Collected: 09/01/16 15:30 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	5.36 ± 1.07 (0.355) C:97% T:NA	pCi/L	10/04/16 11:54	13982-63-3	
Radium-228	EPA 9320	5.64 ± 1.33 (1.05) C:60% T:79%	pCi/L	09/23/16 22:07	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
Pace Project No.: 30195130

Sample: **GWA-7** Lab ID: **30195130005** Collected: 09/01/16 15:30 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	11.0 ± 2.40 (1.41)	pCi/L	10/04/16 15:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
 Pace Project No.: 30195130

QC Batch: 232981 Analysis Method: EPA 9315
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
 Associated Lab Samples: 30195130001, 30195130002, 30195130003, 30195130004, 30195130005

METHOD BLANK: 1141806 Matrix: Water
 Associated Lab Samples: 30195130001, 30195130002, 30195130003, 30195130004, 30195130005

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
 Pace Project No.: 30195130

QC Batch: 232987 Analysis Method: EPA 9320
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
 Associated Lab Samples: 30195130001, 30195130002, 30195130003, 30195130004, 30195130005

METHOD BLANK: 1141823 Matrix: Water
 Associated Lab Samples: 30195130001, 30195130002, 30195130003, 30195130004, 30195130005

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

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Kraft Grumman Road
Pace Project No.: 30195130

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: 30195130001

[1] The sampler's signature was not listed on the COC.

REPORT OF LABORATORY ANALYSIS

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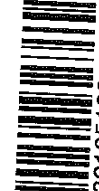
CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201 : www.pas-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 PO #: laburch@southernco.com REQUESTED COMPLETION DATE: PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase II CCR		ANALYSIS REQUESTED CONTAINER TYPE: P 3 PRESERVATION: P 7 # of CONTAINERS: 3 ANALYSIS REQUESTED: Metals App. III & IV (EPA 6020/7470) Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SW-846 9315/9320)		CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O 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		
COLLECTION DATE 9-1-2016 9-1-2016 9-1-2016 9-1-2016 9-1-2016	MATRIX CODE* GW W GW W GW	SAMPLE IDENTIFICATION GWC-17 FB 9-1-16 GWC-4 EB 3 9-1-16 GWA-7	CONTAINER TYPE P P P P P	PRESERVATION 7 7 7 7 7	ANALYSIS REQUESTED Metals App. III & IV Cl, F, SO ₄ & TDS Radium 226 & 228 (SW-846 9315/9320)	L A B N U M B E R 001 002 003 004 005
SAMPLED BY AND TITLE: Brandon Reynolds (Acc)		DATE/TIME: 9-2-2016	RELINQUISHED BY: [Signature]		DATE/TIME: 9-2-16	LAB # Entered into LIMS Tracking #
RECEIVED BY: [Signature]		DATE/TIME: 9-2-16/0850	RELINQUISHED BY: [Signature]		DATE/TIME: 9-2-16	
RECEIVED BY LAB: [Signature]		DATE/TIME: 9-2-16/0850	RELINQUISHED BY: [Signature]		DATE/TIME: 9-2-16	LAB # Entered into LIMS Tracking #
RECEIVED BY: [Signature]		DATE/TIME: 9-2-16/0850	RELINQUISHED BY: [Signature]		DATE/TIME: 9-2-16	

WO#: 30195130



Plant Kraft - Grumman Rd COC CCRrev1

Sample Condition Upon Receipt Pittsburgh



Client Name: Pace, GA

Project # 30195130

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: 097R 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. <i>[Signature]</i>
Sample Labels match COC:	X			5. <i>[Signature]</i>
-Includes date/time/ID/Analysis Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used:		X		
Containers Intact:	X			11.
Filtered volume received for Dissolved tests			X	12.
All containers needing preservation have been checked.	X			13.
All containers needing preservation are found to be in compliance with EPA recommendation.	X			<u>PHL2</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>097R</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			X	14.
Trip Blank Present:		X		15.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: <u>097R</u> Date: <u>9-6-16</u>

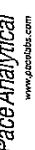
Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

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

Laboratory Control Sample Assessment		LCSD (Y or N)?	N
Count Date:	9/23/2016	LCSD31367	
Spike I.D.:	18-025		
Spike Concentration (pCi/mL):	25-595		
Volume Used (mL):	0.20		
Aliquot Volume (L, g, F):	0.813		
Target Conc. (pCi/L, g, F):	6.283		
Uncertainty (Calculated):	0.453		
Result (pCi/L, g, F):	7.559		
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.863		
Numerical Performance Indicator:	2.55		
Percent Recovery:	120.12%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	30195126008	30195126008
Duplicate Sample I.D.:	30195126008DUP	80195126008DUP
Sample Result (pCi/L, g, F):	1.816	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.475	
Sample Duplicate Result (pCi/L, g, F):	1.232	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.428	
Are sample and/or duplicate results below MDC?	See Below ##	
Duplicate Numerical Performance Indicator:	1.791	
Duplicate RPD:	36.33%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	

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

Comments:

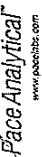
***Batch must be re-prepped due to unacceptable precision.

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
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:	

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Quality Control Sample Performance Assessment



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

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

Method Blank Assessment	
MB Sample ID	1141808
MB Concentration:	-0.021
MB Counting Uncertainty:	0.092
MB MDC:	0.290
MB Numerical Performance Indicator:	-0.45
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSD31362	LCSD31362
Count Date:	9/28/2016
Spike I.D.:	16-026
Spike Concentration (pCi/mL):	44.677
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.504
Target Conc. (pCi/L, g, F):	8.870
Uncertainty (Calculated):	0.417
Result (pCi/L, g, F):	7.482
LCSD Counting Uncertainty (pCi/L, g, F):	0.849
Numerical Performance Indicator:	-2.87
Percent Recovery:	84.36%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30195128008
Duplicate Sample I.D.:	30195128008DUP
Sample Result (pCi/L, g, F):	0.625
Sample Result Counting Uncertainty (pCi/L, g, F):	0.301
Sample Duplicate Result (pCi/L, g, F):	0.359
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.228
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	1.384
Duplicate RPD:	54.21%
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.
30195128008
30195128008DUP

Comments:

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

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

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



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: AZI0060

September 15, 2016

Project: CCR Event

Project #: Plant Kraft Gumman Road

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

Approved:

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

Project Manager

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



PACE ANALYTICAL SERVICES, INC.

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

Attention: Mr. Joju Abraham

September 15, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-4 Filtered	AZI0060-01	Ground Water	09/01/16 13:30	09/02/16 09:00
GWA-7 Filtered	AZI0060-02	Ground Water	09/01/16 16:15	09/02/16 09:00



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 15, 2016

Report No.: AZI0060

Project: CCR Event

Client ID: GWC-4 Filtered

Lab Number ID: AZI0060-01

Date/Time Sampled: 9/1/2016 1:30:00PM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Metals, Dissolved											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 22:59	6090168	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 22:59	6090168	CSW
Barium	0.0707	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 22:59	6090168	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 22:59	6090168	CSW
Boron	6.44	0.500	0.0321	mg/L	EPA 6020B	B-01	5	09/08/16 10:40	09/09/16 23:11	6090168	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 22:59	6090168	CSW
Calcium	10.6	2.50	0.155	mg/L	EPA 6020B		5	09/08/16 10:40	09/09/16 23:11	6090168	CSW
Chromium	0.0057	0.0100	0.0009	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 22:59	6090168	CSW
Cobalt	0.0012	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 22:59	6090168	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 22:59	6090168	CSW
Molybdenum	0.0062	0.0100	0.0017	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 22:59	6090168	CSW
Selenium	0.0016	0.0100	0.0010	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 22:59	6090168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/09/16 22:59	6090168	CSW
Lithium	0.0027	0.0500	0.0021	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/09/16 22:59	6090168	CSW
Mercury	ND	0.0005	0.00004	mg/L	EPA 7470A		1	09/08/16 09:30	09/08/16 14:14	6090173	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 15, 2016

Report No.: AZI0060

Project: CCR Event

Client ID: GWA-7 Filtered

Lab Number ID: AZI0060-02

Date/Time Sampled: 9/1/2016 4:15:00PM

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

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Metals, Dissolved											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	09/08/16 10:40	09/10/16 00:08	6090168	CSW
Arsenic	0.0046	0.0050	0.0016	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/10/16 00:08	6090168	CSW
Barium	0.124	0.0100	0.0004	mg/L	EPA 6020B		1	09/08/16 10:40	09/10/16 00:08	6090168	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/10/16 00:08	6090168	CSW
Boron	12.1	1.00	0.0642	mg/L	EPA 6020B	B-01	10	09/08/16 10:40	09/13/16 13:14	6090168	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	09/08/16 10:40	09/10/16 00:08	6090168	CSW
Calcium	3.72	0.500	0.0311	mg/L	EPA 6020B		1	09/08/16 10:40	09/10/16 00:08	6090168	CSW
Chromium	0.0319	0.0100	0.0009	mg/L	EPA 6020B		1	09/08/16 10:40	09/10/16 00:08	6090168	CSW
Cobalt	0.0022	0.0100	0.0005	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/10/16 00:08	6090168	CSW
Lead	0.0003	0.0050	0.0001	mg/L	EPA 6020B	J	1	09/08/16 10:40	09/10/16 00:08	6090168	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	09/08/16 10:40	09/10/16 00:08	6090168	CSW
Selenium	0.0162	0.0100	0.0010	mg/L	EPA 6020B		1	09/08/16 10:40	09/10/16 00:08	6090168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	09/08/16 10:40	09/10/16 00:08	6090168	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	09/08/16 10:40	09/10/16 00:08	6090168	CSW
Mercury	ND	0.0005	0.00004	mg/L	EPA 7470A		1	09/08/16 09:30	09/08/16 14:16	6090173	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

September 15, 2016

Report No.: AZI0060

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090168 - EPA 3005A											
Blank (6090168-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	0.0214	0.100	0.0064	mg/L							J
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.100	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 (6090168-BS1)						Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	0.108	0.0030	0.0008	mg/L	0.10000		108	80-120			
Arsenic	0.0986	0.0050	0.0016	mg/L	0.10000		99	80-120			
Barium	0.0990	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	1.04	0.100	0.0064	mg/L	1.0000		104	80-120			
Cadmium	0.104	0.0010	0.00007	mg/L	0.10000		104	80-120			
Calcium	1.04	0.100	0.0311	mg/L	1.0000		104	80-120			
Chromium	0.0999	0.0100	0.0009	mg/L	0.10000		100	80-120			
Cobalt	0.0973	0.0100	0.0005	mg/L	0.10000		97	80-120			
Copper	0.0983	0.0050	0.0005	mg/L	0.10000		98	80-120			
Lead	0.100	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	0.0982	0.0050	0.0006	mg/L	0.10000		98	80-120			
Selenium	0.0977	0.0100	0.0010	mg/L	0.10000		98	80-120			
Silver	0.101	0.0050	0.0005	mg/L	0.10000		101	80-120			
Thallium	0.0984	0.0010	0.0002	mg/L	0.10000		98	80-120			
Vanadium	0.100	0.0100	0.0071	mg/L	0.10000		100	80-120			
Zinc	0.102	0.0100	0.0021	mg/L	0.10000		102	80-120			
Lithium	0.103	0.0500	0.0021	mg/L	0.10000		103	80-120			



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September 15, 2016

Report No.: AZI0060

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090168 - EPA 3005A											
Matrix Spike (6090168-MS1)			Source: AZI0060-02			Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	0.109	0.0150	0.0042	mg/L	0.10000	ND	109	75-125			
Arsenic	0.102	0.0250	0.0082	mg/L	0.10000	0.0046	98	75-125			
Barium	0.220	0.0500	0.0022	mg/L	0.10000	0.124	96	75-125			
Beryllium	0.0965	0.0150	0.0004	mg/L	0.10000	0.0002	96	75-125			
Boron	13.0	1.00	0.0642	mg/L	1.0000	12.1	95	75-125			
Cadmium	0.0986	0.0050	0.0004	mg/L	0.10000	ND	99	75-125			
Calcium	5.49	0.500	0.155	mg/L	1.0000	3.72	177	75-125			QM-02
Chromium	0.126	0.0500	0.0047	mg/L	0.10000	0.0319	95	75-125			
Cobalt	0.0971	0.0500	0.0026	mg/L	0.10000	0.0022	95	75-125			
Copper	0.0920	0.0250	0.0027	mg/L	0.10000	ND	92	75-125			
Lead	0.0944	0.0250	0.0006	mg/L	0.10000	0.0003	94	75-125			
Molybdenum	0.102	0.0500	0.0086	mg/L	0.10000	ND	102	75-125			
Nickel	0.106	0.0250	0.0028	mg/L	0.10000	0.0127	93	75-125			
Selenium	0.109	0.0500	0.0050	mg/L	0.10000	0.0162	92	75-125			
Silver	0.0952	0.0250	0.0024	mg/L	0.10000	ND	95	75-125			
Thallium	0.0932	0.0050	0.0010	mg/L	0.10000	ND	93	75-125			
Vanadium	0.333	0.0500	0.0357	mg/L	0.10000	0.265	68	75-125			
Zinc	0.103	0.0500	0.0105	mg/L	0.10000	0.0023	101	75-125			
Lithium	0.0956	0.250	0.0103	mg/L	0.10000	ND	96	75-125			J
Matrix Spike Dup (6090168-MSD1)			Source: AZI0060-02			Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	0.106	0.0150	0.0042	mg/L	0.10000	ND	106	75-125	4	20	
Arsenic	0.103	0.0250	0.0082	mg/L	0.10000	0.0046	98	75-125	0.5	20	
Barium	0.213	0.0500	0.0022	mg/L	0.10000	0.124	89	75-125	3	20	
Beryllium	0.0924	0.0150	0.0004	mg/L	0.10000	0.0002	92	75-125	4	20	
Boron	12.7	1.00	0.0642	mg/L	1.0000	12.1	57	75-125	3	20	QM-02
Cadmium	0.0952	0.0050	0.0004	mg/L	0.10000	ND	95	75-125	3	20	
Calcium	5.51	0.500	0.155	mg/L	1.0000	3.72	180	75-125	0.4	20	QM-02
Chromium	0.125	0.0500	0.0047	mg/L	0.10000	0.0319	93	75-125	1	20	
Cobalt	0.0941	0.0500	0.0026	mg/L	0.10000	0.0022	92	75-125	3	20	
Copper	0.0918	0.0250	0.0027	mg/L	0.10000	ND	92	75-125	0.2	20	
Lead	0.0925	0.0250	0.0006	mg/L	0.10000	0.0003	92	75-125	2	20	
Molybdenum	0.103	0.0500	0.0086	mg/L	0.10000	ND	103	75-125	0.07	20	
Nickel	0.102	0.0250	0.0028	mg/L	0.10000	0.0127	89	75-125	4	20	
Selenium	0.107	0.0500	0.0050	mg/L	0.10000	0.0162	90	75-125	2	20	
Silver	0.0970	0.0250	0.0024	mg/L	0.10000	ND	97	75-125	2	20	
Thallium	0.0923	0.0050	0.0010	mg/L	0.10000	ND	92	75-125	0.9	20	
Vanadium	0.337	0.0500	0.0357	mg/L	0.10000	0.265	71	75-125	1	20	
Zinc	0.0978	0.0500	0.0105	mg/L	0.10000	0.0023	95	75-125	5	20	
Lithium	0.0935	0.250	0.0103	mg/L	0.10000	ND	94	75-125	2	20	J



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Attention: Mr. Joju Abraham

September 15, 2016

Report No.: AZI0060

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090168 - EPA 3005A											
Post Spike (6090168-PS1)			Source: AZI0060-02			Prepared: 09/08/16 Analyzed: 09/09/16					
Antimony	104			ug/L	100.00	0.602	104	80-120			
Arsenic	102			ug/L	100.00	4.55	98	80-120			
Barium	217			ug/L	100.00	124	93	80-120			
Beryllium	95.3			ug/L	100.00	0.177	95	80-120			
Boron	13600			ug/L	1000.0	12100	149	80-120			QM-02
Cadmium	98.7			ug/L	100.00	-0.0244	99	80-120			
Calcium	5490			ug/L	1000.0	3720	178	80-120			QM-02
Chromium	129			ug/L	100.00	31.9	97	80-120			
Cobalt	96.7			ug/L	100.00	2.25	94	80-120			
Copper	93.2			ug/L	100.00	0.394	93	80-120			
Lead	94.5			ug/L	100.00	0.276	94	80-120			
Molybdenum	107			ug/L	100.00	0.647	106	80-120			
Nickel	107			ug/L	100.00	12.7	94	80-120			
Selenium	115			ug/L	100.00	16.2	99	80-120			
Silver	97.3			ug/L	100.00	0.0498	97	80-120			
Thallium	94.9			ug/L	100.00	0.0297	95	80-120			
Vanadium	350			ug/L	100.00	265	85	80-120			
Zinc	98.8			ug/L	100.00	2.27	97	80-120			
Lithium	92.0			ug/L	100.00	0.0479	92	80-120			

Batch 6090173 - EPA 7470A

Blank (6090173-BLK1)					Prepared & Analyzed: 09/08/16						
Mercury	ND	0.0005	0.00004	mg/L							
LCS (6090173-BS1)					Prepared & Analyzed: 09/08/16						
Mercury	0.0023	0.0005	0.00004	mg/L	2.5000E-3		94	80-120			



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September 15, 2016

Report No.: AZI0060

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6090173 - EPA 7470A											
Matrix Spike (6090173-MS1)			Source: AZI0060-01			Prepared & Analyzed: 09/08/16					
Mercury	0.0021	0.0005	0.00004	mg/L	2.5000E-3	ND	85	75-125			
Matrix Spike Dup (6090173-MSD1)			Source: AZI0060-01			Prepared & Analyzed: 09/08/16					
Mercury	0.0021	0.0005	0.00004	mg/L	2.5000E-3	ND	86	75-125	1	20	
Post Spike (6090173-PS1)			Source: AZI0060-01			Prepared & Analyzed: 09/08/16					
Mercury	1.52			ug/L	1.6667	0.0012	91	80-120			



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Attention: Mr. Joju Abraham

September 15, 2016

Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).
- B-01** Analyte was detected in the associated method blank at an estimated level equal to or greater than the MDL. Sample values reported as greater than the MDL and less than 10x the method blank value are reported as estimated values.

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



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

CHAIN OF CUSTODY RECORD

PAGE: 1 OF 1

CLIENT NAME: Georgia Power				CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE Atlanta, GA 30306 404-506-7239				REPORT TO: Jeju Abraham				CC: Maria Padilla Heath McCatle				REQUESTED COMPLETION DATE: PO #: GPC10684198					
PROJECT NAME/STATE: Plant Kraft Gramman Road												PROJECT #: Phase II COC									
Collection DATE	Collection TIME	MATRIX CODE	C O M P	G R A B	SAMPLE IDENTIFICATION	DATE/TIME	DATE/TIME	RELINQUISHED BY:	RELINQUISHED BY:	SAMPLE SHIPPED VIA:	USPS	FED-EX	USPS	COURIER # of Coolers	CLIENT	OTHER	FS				
9-1-2016	1330	GW	✓	✓	GW-4 Filters		9-2-2016			UPS											
9-1-2016	1615	GW	✓	✓	GW-7 Filters					UPS											

CONTAINER TYPE PRESERVATION	ANALYSIS REQUESTED	# of CONTAINERS	P		P		DATE/TIME	DATE/TIME
			3	7	7	3		
EPA 60207470 Metals App. III & IV	EPA 8260/7470	2	1		IC (Cl. F. 804)			
TDS	SM 2540C	2						
Radium 226 & 228 SW-846 9316/9320		1	1					

CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER																PRESERVATION 1 - HCl, $\leq 6^{\circ}\text{C}$ 2 - H_2SO_4 , $\leq 6^{\circ}\text{C}$ 3 - $\text{HNO}_3</math> 4 - \text{NaOH}, $\leq 6^{\circ}\text{C}$ 5 - \text{NaOH}/\text{ZnAc}, $\leq 6^{\circ}\text{C}$ 6 - \text{Na}_2\text{S}_2\text{O}_3, $\leq 6^{\circ}\text{C}$ 7 - $\leq 6^{\circ}\text{C}$ not frozen $															
MATRIX CODES: DW - DRINKING WATER WW - WASTEWATER GW - GROUNDWATER SW - SURFACE WATER ST - STORM WATER W - WATER																S - SOIL SL - SLUDGE SD - SOLID A - AIR L - LIQUID P - PRODUCT															
REMARKS/ADDITIONAL INFORMATION																															
LAB #: AZI0060																															
Entered into LIMS: CH																															



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: 9/15/2016 2:21:26PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 09/02/16 09:00

Work Order: AZI0060

Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 2

#Containers: 4

Minimum Temp(C): 1.0

Maximum Temp(C): 1.0

Custody Seal(s) Used: Yes

CHECKLIST ITEMS

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

Comments:

Product Name: Low-Flow System

Date: 2016-10-25 09:59:07

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 35.62"
Longitude -81° -10' -59.58"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 21 ft

Pump placement from TOC 18.1 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 21.1 ft
Screen Length 5 ft
Depth to Water 5.64 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1837319 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	09:41:58	600.10	23.11	6.17	2920.72	1000.00	6.00	0.02	-92.30
Last 5	09:46:58	900.00	23.09	6.18	2861.88	1000.00	6.00	0.01	-87.71
Last 5	09:51:58	1200.00	23.16	6.18	2743.82	1000.00	6.00	0.01	-84.50
Last 5	09:56:58	1499.98	23.22	6.17	2810.06	1000.00	6.00	0.01	-82.85
Last 5									
Variance 0			-0.02	0.01	-58.84			-0.01	4.59
Variance 1			0.08	-0.00	-118.06			-0.01	3.21
Variance 2			0.05	-0.00	66.24			0.00	1.65

Notes

Sample field filtered.

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-24 17:35:15

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 44.05"
Longitude -81° -10' -43.01"
Sonde SN 407447
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 19 ft

Pump placement from TOC 18.85 ft

Well Information:

Well ID GWA-8
Well diameter 2 in
Well Total Depth 20.85 ft
Screen Length 5 ft
Depth to Water 7.55 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1748051 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 18 in
Total Volume Pumped 5.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	17:11:43	900.02	25.12	4.71	302.28	4.62	8.90	0.52	19.56
Last 5	17:16:43	1200.01	24.84	4.53	321.04	4.12	9.00	0.39	15.19
Last 5	17:21:43	1500.01	24.78	4.41	348.86	4.46	8.90	0.49	-0.27
Last 5	17:26:43	1800.01	24.73	4.37	354.65	1.73	8.90	0.10	-9.04
Last 5	17:31:43	2100.01	24.65	4.36	354.91	1.31	8.90	0.13	-15.22
Variance 0			-0.05	-0.12	27.82			0.10	-15.46
Variance 1			-0.06	-0.05	5.79			-0.39	-8.77
Variance 2			-0.07	-0.01	0.26			0.03	-6.17

Notes

Grab Samples

GWA-8
GWA-8

Product Name: Low-Flow System

Date: 2016-10-25 14:33:45

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 22.46"
Longitude -81° -10' -56.05"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 25 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.2 ft
Screen Length 5 ft
Depth to Water 17.87 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	14:11:04	300.01	25.09	5.50	372.60	19.60	18.00	0.38	102.17
Last 5	14:16:04	600.00	24.50	5.49	372.91	4.82	150.00	0.21	106.84
Last 5	14:21:04	900.01	24.47	5.50	371.25	3.59	18.00	0.16	108.19
Last 5	14:26:04	1200.01	25.19	5.51	366.99	3.40	18.00	0.13	108.88
Last 5	14:31:04	1500.01	25.39	5.51	366.38	1.75	18.00	0.12	109.32
Variance 0			-0.03	0.00	-1.66			-0.05	1.35
Variance 1			0.72	0.01	-4.26			-0.03	0.69
Variance 2			0.20	0.01	-0.61			-0.01	0.43

Notes

Sampled @ 1431, sunny 71F

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-26 16:27:38

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 43.93"
Longitude -81° -10' -42.62"
Sonde SN 407447
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter in
Tubing Length 29 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 31.35 ft
Screen Length 5 ft
Depth to Water 14.13 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.19 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 24 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 100
Last 5	16:00:52	300.02	22.76	4.53	348.21	5.07	14.70	0.18	-1.69
Last 5	16:05:52	600.02	22.40	4.51	325.66	4.02	14.70	0.13	-2.34
Last 5	16:10:52	900.02	22.27	4.50	311.54	3.79	14.70	0.11	-3.72
Last 5	16:15:52	1200.02	22.09	4.49	300.66	2.89	14.70	0.09	-4.79
Last 5	16:20:52	1500.02	22.12	4.48	302.98	--	--	0.09	-5.34
Variance 0			-0.13	-0.02	-14.12			-0.02	-1.38
Variance 1			-0.18	-0.01	-10.88			-0.01	-1.07
Variance 2			0.03	-0.01	2.32			-0.01	-0.55

Notes

EB-3 at 1616, sampled at 1620, sunny 77

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-25 12:09:09

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 20.38"
Longitude -81° -10' -55.3"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 22 ft

Pump placement from TOC 21 ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 22.9 ft
Screen Length 5 ft
Depth to Water 19.64 ft

Pumping Information:

Final Pumping Rate 115 mL/min
Total System Volume 0.1881953 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 6.32 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	11:45:08	2099.99	22.98	6.23	438.00	2.64	19.70	0.20	-15.74
Last 5	11:50:08	2399.97	22.98	6.26	454.88	2.15	19.70	0.19	-18.82
Last 5	11:55:08	2699.97	23.01	6.30	471.26	1.68	19.70	0.19	-20.75
Last 5	12:00:08	2999.97	23.03	6.34	489.05	1.44	19.70	0.18	-22.80
Last 5	12:05:08	3299.96	23.03	6.34	492.90	1.09	19.70	0.17	-21.00
Variance 0			0.03	0.04	16.38			-0.00	-1.93
Variance 1			0.02	0.04	17.79			-0.01	-2.05
Variance 2			0.00	0.00	3.85			-0.01	1.80

Notes

Sample time 1205 , Sunny 75F

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-26 16:31:19

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 26.26"
Longitude -81° -10' -57.06"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 21.25 ft

Well Information:

Well ID GWC-4
Well diameter 2 in
Well Total Depth 26.25 ft
Screen Length 5 ft
Depth to Water 13.94 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 13 in
Total Volume Pumped 5.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 100	pH +/- 0.1	SpCond µS/cm +/- 5%	Turb NTU +/- 10	DTW ft	RDO mg/L +/- 0.5	ORP mV +/- 10
Stabilization									
Last 5	16:09:08	1200.00	23.48	6.19	1497.78	125.00	15.10	0.11	-27.35
Last 5	16:14:08	1500.00	23.43	6.17	1509.66	218.00	15.20	0.10	-27.11
Last 5	16:19:08	1800.00	23.35	6.14	1535.42	310.00	15.20	0.08	-25.88
Last 5	16:24:08	2100.00	23.33	6.08	1548.11	302.00	15.20	0.07	-23.82
Last 5	16:29:08	2400.00	23.17	6.06	1564.16	319.00	15.20	0.07	-22.23
Variance 0			-0.08	-0.04	25.76			-0.01	1.23
Variance 1			-0.02	-0.05	12.69			-0.01	2.05
Variance 2			-0.16	-0.03	16.06			-0.01	1.60

Notes

Sampled at 1624, Sunny 78F

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-26 14:57:45

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 29.71"
Longitude -81° -10' -57.98"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 23.6 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 26.6 ft
Screen Length 5 ft
Depth to Water 9.64 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5 in
Total Volume Pumped 5.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	14:36:18	900.00	23.88	5.27	439.95	8.21	10.10	0.15	32.33
Last 5	14:41:18	1200.00	23.88	5.26	426.12	8.91	10.10	0.12	30.95
Last 5	14:46:18	1500.00	23.79	5.26	424.91	7.00	10.10	0.17	29.95
Last 5	14:51:18	1800.00	23.74	5.27	423.44	5.11	10.20	0.12	28.84
Last 5	14:56:18	2100.00	23.75	5.27	425.57	4.94	10.20	0.13	28.15
Variance 0			-0.09	0.00	-1.21			0.05	-1.01
Variance 1			-0.05	0.00	-1.47			-0.05	-1.11
Variance 2			0.00	0.00	2.13			0.01	-0.69

Notes

Sampled at 1441, Sunny 78F

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-26 15:02:34

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 43.67"
Longitude -81° -10' -43.2"
Sonde SN 407447
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 20.6 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 22.6 ft
Screen Length 5 ft
Depth to Water 7.12 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.3319465 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 14.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 100
Last 5	14:40:18	4500.76	24.11	5.21	641.43	7.07	7.60	0.04	-94.45
Last 5	14:45:18	4800.75	24.12	5.21	639.49	7.00	7.60	0.03	-93.37
Last 5	14:50:18	5100.67	24.06	5.21	649.04	6.93	7.60	0.03	-96.35
Last 5	14:55:18	5400.68	24.11	5.21	645.56	5.75	7.60	0.03	-93.69
Last 5	15:00:18	5700.68	24.01	5.21	654.36	4.72	7.60	0.04	-96.84
Variance 0			-0.06	-0.00	9.55			0.00	-2.98
Variance 1			0.05	-0.00	-3.48			-0.00	2.66
Variance 2			-0.10	0.00	8.80			0.00	-3.15

Notes

2nd rad bottle, sample time 1500, sunny 78

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-26 11:04:54

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 36.65"
Longitude -81° -11' -6.42"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 24 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 27.4 ft
Screen Length 5 ft
Depth to Water 7.55 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 216 in
Total Volume Pumped 13.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	10:42:44	4499.93	24.47	4.03	243.39	12.00	21.80	2.28	231.59
Last 5	10:47:44	4799.93	24.51	4.03	243.35	11.90	22.40	2.38	227.57
Last 5	10:52:44	5099.93	24.42	4.03	244.00	12.90	23.70	2.39	228.63
Last 5	10:57:48	5403.93	24.44	4.14	238.29	12.20	24.50	2.63	204.74
Last 5	11:02:48	5703.92	25.65	4.23	236.24	10.70	25.60	3.37	152.72
Variance 0			-0.08	-0.00	0.65			0.01	1.06
Variance 1			0.01	0.11	-5.72			0.24	-23.89
Variance 2			1.21	0.09	-2.04			0.74	-52.02

Notes

WL not stabilized, well purged dry

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-27 08:51:46

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 36.61"
Longitude -81° -11' -6.42"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 22.4 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 27.4 ft
Screen Length 5 ft
Depth to Water 7.85 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 24 in
Total Volume Pumped 1.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	08:44:39	300.02	21.64	4.66	236.68	16.30	8.90	0.32	30.26
Last 5	08:49:39	600.01	22.14	4.65	230.71	2.88	9.60	0.19	30.70
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.49	-0.01	-5.98			-0.13	0.43
Variance 2			0.00	0.00	0.00			0.00	0.00

Notes

Well purged dry 10/26/16, allowed recharge, then sampled
Sampled at 0849, Sunny 62F

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-25 19:09:41

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 44.05"
Longitude -81° -10' -43.01"
Sonde SN 407447
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 18 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-10
Well diameter 2 in
Well Total Depth 20.6 ft
Screen Length 5 ft
Depth to Water 7.3 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.2703416 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 24 in
Total Volume Pumped 21.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 100
Last 5	18:45:27	9608.77	22.54	4.73	4935.49	22.60	9.30	0.07	5.05
Last 5	18:50:27	9908.77	22.58	4.72	4924.28	19.70	9.30	0.07	4.61
Last 5	18:55:29	10210.77	22.48	4.72	4932.78	14.30	9.30	0.07	4.96
Last 5	19:00:29	10510.78	22.54	4.72	4950.40	11.50	9.30	0.07	5.14
Last 5	19:05:29	10810.77	22.52	4.72	4943.35	9.58	9.30	0.07	4.67
Variance 0			-0.11	-0.00	8.51			-0.00	0.35
Variance 1			0.06	-0.00	17.62			-0.00	0.18
Variance 2			-0.01	-0.00	-7.05			-0.00	-0.47

Notes

1905 sample time ,dark-68

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-26 17:47:15

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 29.84"
Longitude -81° -11' -5.35"
Sonde SN 407447
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 20.6 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 22.6 ft
Screen Length 5 ft
Depth to Water 10.01 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2819465 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 30 in
Total Volume Pumped 3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 100
Last 5	17:25:02	900.02	23.97	5.10	163.39	3.57	12.10	0.27	48.88
Last 5	17:30:02	1200.02	23.91	5.09	165.68	3.18	12.50	0.24	48.30
Last 5	17:35:02	1500.02	23.81	5.09	168.41	2.30	12.80	0.21	47.85
Last 5	17:40:02	1799.94	23.71	5.08	171.71	2.00	12.80	0.22	47.44
Last 5	17:45:02	2099.94	23.72	5.08	176.35	2.08	12.80	0.22	47.23
Variance 0			-0.10	-0.00	2.72			-0.02	-0.45
Variance 1			-0.10	-0.01	3.30			0.00	-0.40
Variance 2			0.01	-0.01	4.65			0.00	-0.22

Notes

Sample at 1745, sunny 70

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-26 11:49:00

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 27.77"
Longitude -81° -11' -3.97"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 21.7 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 5 ft
Depth to Water 10.23 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	11:32:36	300.02	24.75	4.03	2144.32	13.30	10.70	0.35	114.33
Last 5	11:37:36	600.01	24.59	4.03	2129.23	7.53	10.70	0.18	112.72
Last 5	11:42:36	900.01	24.54	4.03	2119.54	5.37	10.70	0.14	113.58
Last 5	11:47:36	1200.01	24.56	4.04	2106.10	3.72	10.70	0.11	115.11
Last 5									
Variance 0			-0.15	0.00	-15.10			-0.18	-1.61
Variance 1			-0.06	-0.00	-9.69			-0.04	0.86
Variance 2			0.02	0.00	-13.44			-0.03	1.53

Notes

Sampled at 1147, Sunny 74F

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-26 13:33:52

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 24.15"
Longitude -81° -11' -3.12"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 24 ft

Pump placement from TOC 20.8 ft

Well Information:

Well ID GWC-13
Well diameter 2 in
Well Total Depth 23.8 ft
Screen Length 5 ft
Depth to Water 11.54 ft

Pumping Information:

Final Pumping Rate 0 mL/min
Total System Volume 0.1971222 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6 in
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	13:12:35	1799.99	25.00	3.55	0.00	5.30	12.30	5.56	17.49
Last 5	13:17:35	2099.98	22.86	4.95	114.01	5.19	12.30	0.20	71.96
Last 5	13:22:35	2400.02	22.67	4.94	108.43	5.00	12.30	0.13	69.37
Last 5	13:27:35	2699.99	22.59	4.94	104.43	3.28	12.30	0.12	67.36
Last 5	13:32:35	2999.97	22.62	4.95	103.53	3.58	12.30	0.12	66.22
Variance 0			-0.19	-0.01	-5.58			-0.07	-2.59
Variance 1			-0.08	0.00	-3.99			-0.01	-2.01
Variance 2			0.03	0.00	-0.90			-0.00	-1.14

Notes

Sampled at 1332, Sunny 78F

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-25 11:50:28

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407447
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-14
Well diameter 2 in
Well Total Depth 27 ft
Screen Length 5 ft
Depth to Water 16.98 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.3215856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6 in
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 0.5	+/- 10
Last 5	11:29:16	600.00	22.45	4.82	871.22	6.22	17.60	0.24	67.44
Last 5	11:34:16	900.00	22.50	4.80	908.70	5.88	17.60	0.18	67.37
Last 5	11:39:16	1200.00	22.54	4.80	903.53	4.28	17.60	0.18	67.10
Last 5	11:44:16	1500.00	22.37	4.79	901.25	3.71	17.60	0.16	65.51
Last 5	11:49:16	1800.00	22.36	4.79	908.40	2.71	17.60	0.15	64.51
Variance 0			0.03	-0.00	-5.17			-0.00	-0.27
Variance 1			-0.17	-0.00	-2.28			-0.02	-1.59
Variance 2			-0.01	-0.00	7.15			-0.01	-1.00

Notes

Grab Samples

GWC-14
GWC-14

Product Name: Low-Flow System

Date: 2016-10-25 13:27:09

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407447
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 26 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-15
Well diameter 2 in
Well Total Depth 26.8 ft
Screen Length 5 ft
Depth to Water 17.97 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.326049 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6 in
Total Volume Pumped 5.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 100
Last 5	13:05:01	1200.00	23.76	6.59	917.92	0.47	18.40	0.11	26.64
Last 5	13:10:01	1500.00	23.74	6.55	881.09	0.50	18.40	0.10	28.67
Last 5	13:15:01	1800.01	23.72	6.52	856.57	--	--	0.10	30.25
Last 5	13:20:01	2100.01	23.65	6.48	828.44	--	--	0.08	31.89
Last 5	13:25:02	2401.01	23.73	6.46	818.53	--	--	0.08	30.83
Variance 0			-0.02	-0.03	-24.52			-0.00	1.58
Variance 1			-0.06	-0.03	-28.13			-0.02	1.64
Variance 2			0.08	-0.02	-9.92			-0.00	-1.05

Notes

1325 sample time, sunny 75

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-25 10:34:16

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 43.02"
Longitude -81° -10' -58.99"
Sonde SN 407447
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25.2 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-16
Well diameter 2 in
Well Total Depth 28.2 ft
Screen Length 5 ft
Depth to Water 19.33 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.3224783 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 8 in
Total Volume Pumped 6.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 100
Last 5	10:12:05	2100.65	23.15	5.55	842.42	12.40	20.00	1.26	-2.18
Last 5	10:17:05	2400.65	23.27	5.55	866.85	8.26	20.00	1.20	-4.25
Last 5	10:22:05	2700.65	23.52	5.55	879.46	5.61	20.00	1.13	-5.69
Last 5	10:27:05	3000.65	23.79	5.58	883.02	5.18	20.00	1.08	-8.35
Last 5	10:32:05	3300.59	23.88	5.58	883.77	3.59	20.00	1.04	-9.56
Variance 0			0.25	-0.00	12.61			-0.07	-1.44
Variance 1			0.27	0.03	3.56			-0.05	-2.66
Variance 2			0.09	0.01	0.74			-0.04	-1.21

Notes

Grab Samples
GWC-16
GWC-16

Product Name: Low-Flow System

Date: 2016-10-26 10:24:05

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 38.62"
Longitude -81° -11' -12.09"
Sonde SN 407447
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 21 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 23.2 ft
Screen Length 5 ft
Depth to Water 5.74 ft

Pumping Information:

Final Pumping Rate 110 mL/min
Total System Volume 0.2837319 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 18 in
Total Volume Pumped 4.95 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 100
Last 5	10:01:16	1500.02	22.99	4.74	2354.85	2.91	7.30	0.48	-36.94
Last 5	10:06:16	1800.02	22.90	4.65	2488.91	3.91	7.30	0.44	-38.25
Last 5	10:11:16	2100.02	22.88	4.46	2762.94	2.60	7.30	0.24	-36.26
Last 5	10:16:17	2400.34	22.89	4.39	2775.31	3.34	7.30	0.13	-35.69
Last 5	10:21:17	2700.34	22.95	4.45	2720.84	3.90	7.30	0.19	-38.88
Variance 0			-0.02	-0.19	274.03			-0.19	1.99
Variance 1			0.02	-0.07	12.38			-0.11	0.57
Variance 2			0.05	0.06	-54.47			0.05	-3.20

Notes

FB-3 poured at 1000, sampled at 1021, sunny 68

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-25 16:13:39

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 30.19"
Longitude -81° -10' -59.02"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 26 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWC-19
Well diameter 2 in
Well Total Depth 25.9 ft
Screen Length 5 ft
Depth to Water 7.55 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.206049 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 13 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	15:56:42	300.01	24.51	4.83	513.13	1.40	8.50	0.41	40.86
Last 5	16:01:42	600.01	24.15	4.82	507.81	0.94	8.70	0.21	39.38
Last 5	16:06:42	900.01	24.02	4.81	501.68	1.66	8.80	0.15	38.30
Last 5	16:11:42	1200.01	23.94	4.81	495.43	2.50	8.00	0.12	37.57
Last 5									
Variance 0			-0.36	-0.00	-5.32			-0.21	-1.47
Variance 1			-0.13	-0.01	-6.14			-0.06	-1.09
Variance 2			-0.08	-0.01	-6.25			-0.03	-0.73

Notes

Sampled at 1611, Sunny 77F

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-25 13:21:42

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 19.51"
Longitude -81° -10' -55.19"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 22 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 25 ft
Screen Length 5 ft
Depth to Water 19.95 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5 in
Total Volume Pumped 3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	13:05:05	300.02	24.25	6.07	516.05	1.07	20.40	0.29	3.72
Last 5	13:10:05	600.01	23.98	6.07	504.52	3.36	20.40	0.18	6.94
Last 5	13:15:05	900.00	23.90	6.06	508.36	3.01	20.40	0.14	8.99
Last 5	13:20:05	1200.00	23.81	6.06	499.78	2.84	20.50	0.13	9.84
Last 5									
Variance 0			-0.27	-0.00	-11.53			-0.11	3.22
Variance 1			-0.08	-0.00	3.83			-0.03	2.05
Variance 2			-0.08	-0.00	-8.58			-0.02	0.85

Notes

Sampled at 1320, Sunny 77F

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-25 15:18:34

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407447
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 21.8 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 23.8 ft
Screen Length 5 ft
Depth to Water 19.16 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.2973026 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7 in
Total Volume Pumped 5.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 100
Last 5	14:55:12	1200.02	25.48	5.60	68.74	10.30	19.70	7.03	73.90
Last 5	15:00:12	1500.02	25.42	5.52	68.76	8.72	19.70	7.14	74.55
Last 5	15:05:12	1800.02	25.33	5.47	69.19	7.57	19.70	7.07	75.30
Last 5	15:10:12	2100.02	25.28	5.44	68.98	6.15	19.70	6.95	76.17
Last 5	15:15:12	2400.02	25.38	5.41	69.50	4.07	19.70	6.88	77.23
Variance 0			-0.09	-0.05	0.42			-0.07	0.75
Variance 1			-0.05	-0.03	-0.21			-0.11	0.86
Variance 2			0.10	-0.03	0.52			-0.07	1.06

Notes

Sunny 75, sample time - 1515

Grab Samples

Product Name: Low-Flow System

Date: 2016-10-26 12:28:03

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 28.57"
Longitude -81° -11' -6.33"
Sonde SN 407447
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 16.6 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-22
Well diameter 2 in
Well Total Depth 18.6 ft
Screen Length 5 ft
Depth to Water 6.67 ft

Pumping Information:

Final Pumping Rate 160 mL/min
Total System Volume 0.3440928 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 11.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 100
Last 5	12:05:18	3000.77	25.42	4.61	2184.92	3.12	7.00	0.23	37.21
Last 5	12:10:18	3300.76	25.42	4.61	2282.17	3.84	7.00	0.21	36.61
Last 5	12:15:18	3600.77	25.42	4.61	2367.93	1.86	7.00	0.20	36.40
Last 5	12:20:18	3900.76	25.55	4.60	2437.32	1.82	7.00	0.20	35.53
Last 5	12:25:18	4200.76	25.69	4.60	2481.31	1.62	7.00	0.20	34.59
Variance 0			-0.00	-0.00	85.76			-0.01	-0.20
Variance 1			0.14	-0.01	69.39			0.00	-0.88
Variance 2			0.14	-0.00	43.99			-0.00	-0.93

Notes

Dub-3 sampled, sample time 1225, sunny 76

Grab Samples



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: AZJ0702

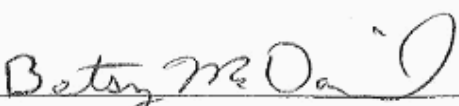
November 03, 2016

Project: CCR Event

Project #: Plant Kraft Grumman Road

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

Approved:



Project Manager

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All test results relate only to the samples analyzed.



PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWA-8	AZJ0702-01	Ground Water	10/24/16 17:31	10/25/16 15:35
FB-1-10-24-16	AZJ0702-02	Water	10/24/16 17:10	10/25/16 15:35
EB-1-10-24-16	AZJ0702-03	Water	10/24/16 18:15	10/25/16 15:35



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2016

Report No.: AZJ0702

Project: CCR Event

Client ID: GWA-8

Lab Number ID: AZJ0702-01

Date/Time Sampled: 10/24/2016 5:31:00PM

Date/Time Received: 10/25/2016 3:35:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	216	25	10	mg/L	SM 2540 C		1	10/31/16 19:05	10/31/16 19:05	6100829	JPT
Inorganic Anions											
Chloride	13	0.25	0.01	mg/L	EPA 300.0		1	10/26/16 15:29	10/27/16 09:11	6100701	RNB
Fluoride	0.18	0.30	0.02	mg/L	EPA 300.0	J	1	10/26/16 15:29	10/27/16 09:11	6100701	RNB
Sulfate	160	10	0.51	mg/L	EPA 300.0		10	10/26/16 15:29	11/01/16 12:58	6100701	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:14	6100710	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:14	6100710	CSW
Barium	0.0700	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:14	6100710	CSW
Beryllium	ND	0.0030	0.0004	mg/L	EPA 6020B		5	10/27/16 14:30	11/01/16 15:47	6100710	CSW
Boron	0.126	0.100	0.0064	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:14	6100710	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:14	6100710	CSW
Calcium	22.5	2.50	0.155	mg/L	EPA 6020B		5	10/27/16 14:30	11/01/16 15:47	6100710	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:14	6100710	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:14	6100710	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:14	6100710	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:14	6100710	CSW
Selenium	0.0013	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/27/16 14:30	10/29/16 02:14	6100710	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:14	6100710	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:14	6100710	CSW
Zinc	0.0024	0.0100	0.0021	mg/L	EPA 6020B	J	1	10/27/16 14:30	10/29/16 02:14	6100710	CSW
Lithium	ND	0.0500	0.0103	mg/L	EPA 6020B		5	10/27/16 14:30	11/01/16 15:47	6100710	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 13:25	6100740	MTC



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 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2016

Report No.: AZJ0702

Project: CCR Event

Client ID: FB-1-10-24-16

Lab Number ID: AZJ0702-02

Date/Time Sampled: 10/24/2016 5:10:00PM

Date/Time Received: 10/25/2016 3:35:00PM

Matrix: Water

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	0.05	0.25	0.01	mg/L	EPA 300.0	J	1	10/26/16 15:29	10/27/16 11:46	6100701	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	10/26/16 15:29	10/27/16 11:46	6100701	RNB
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	10/26/16 15:29	10/27/16 11:46	6100701	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:20	6100710	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:20	6100710	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:20	6100710	CSW
Beryllium	ND	0.0030	0.0004	mg/L	EPA 6020B		5	10/27/16 14:30	11/01/16 15:52	6100710	CSW
Boron	0.0084	0.100	0.0064	mg/L	EPA 6020B	J	1	10/27/16 14:30	10/29/16 02:20	6100710	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:20	6100710	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:20	6100710	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:20	6100710	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:20	6100710	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:20	6100710	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:20	6100710	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:20	6100710	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:20	6100710	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:20	6100710	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:20	6100710	CSW
Lithium	ND	0.0500	0.0103	mg/L	EPA 6020B		5	10/27/16 14:30	11/01/16 15:52	6100710	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 13:27	6100740	MTC



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Attention: Mr. Joju Abraham

November 03, 2016

Report No.: AZJ0702

Project: CCR Event

Client ID: EB-1-10-24-16

Lab Number ID: AZJ0702-03

Date/Time Sampled: 10/24/2016 6:15:00PM

Date/Time Received: 10/25/2016 3:35:00PM

Matrix: Water

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	0.05	0.25	0.01	mg/L	EPA 300.0	J	1	10/26/16 15:29	10/27/16 11:25	6100701	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	10/26/16 15:29	10/27/16 11:25	6100701	RNB
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	10/26/16 15:29	10/27/16 11:25	6100701	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:25	6100710	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:25	6100710	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:25	6100710	CSW
Beryllium	ND	0.0030	0.0004	mg/L	EPA 6020B		5	10/27/16 14:30	11/01/16 15:58	6100710	CSW
Boron	0.0072	0.100	0.0064	mg/L	EPA 6020B	J	1	10/27/16 14:30	10/29/16 02:25	6100710	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:25	6100710	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:25	6100710	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:25	6100710	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:25	6100710	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:25	6100710	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:25	6100710	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:25	6100710	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:25	6100710	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:25	6100710	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	10/27/16 14:30	10/29/16 02:25	6100710	CSW
Lithium	ND	0.0500	0.0103	mg/L	EPA 6020B		5	10/27/16 14:30	11/01/16 15:58	6100710	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 13:30	6100740	MTC



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Attention: Mr. Joju Abraham

November 03, 2016

Report No.: AZJ0702

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	



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Report No.: AZJ0702

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			
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
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



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Report No.: AZJ0702

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					
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							
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			



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Report No.: AZJ0702

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					
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			
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



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 03, 2016

Report No.: AZJ0702

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			
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			
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				



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2016

Report No.: AZJ0702

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100740 - EPA 7470A											
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			



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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2016

Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

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

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



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

CHAIN OF CUSTODY RECORD

PAGE: 1 OF 1

CLIENT NAME: Georgia Power		CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-505-7239		REPORT TO: Lauren Petty Health, McCorkle		CC: Maria Padilla Health, McCorkle		PO #: laburch@southernco.com		PROJECT NAME/STATE: Plant Kraft Grumman Road		PROJECT #: Phase 2 CCR & State D&O	
Collection DATE	Collection TIME	MATRIX CODE	CORR	G	SAMPLE IDENTIFICATION	CONTAINER TYPE	ANALYSIS REQUESTED	LAB #	DATE/TIME	RELINQUISHED BY	DATE/TIME	LAB #	DATE/TIME
10/24/16	1731	GW	X		GWA-8	↓	Metals (See attached) EPA 6020 C, P, SO ₄ & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (GW-646 9315/9320)	↓	11/16/16	Angela	11/16/16	AZ50702	11/16/16
10/24/16	1710	W	Y		FB-1-10-24-16	↓		↓	11/16/16		11/16/16		11/16/16
10/24/16	1815	W	Y		EB-1-10-24-16	↓		↓	11/16/16		11/16/16		11/16/16
CONTAINER TYPE: P - PLASTIC, A - AMBER GLASS, G - CLEAR GLASS, V - VOA VIAL, S - STERILE, O - OTHER PRESERVATION: 1 - HCl, -6°C, 2 - H ₂ SO ₄ , -6°C, 3 - HNO ₃ , 4 - NaOH, -6°C, 5 - NaOH/ZnAc, -6°C, 6 - Na ₂ S ₂ O ₅ , -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:													
ANALYSIS REQUESTED: P 3, P 3, P 7, P 3 RELINQUISHED BY: Angela DATE/TIME: 10/24/16 1815 RELINQUISHED BY: Angela DATE/TIME: 10/24/16 1815 SAMPLE SHIPPED VIA: COURIER CLIENT: OTHER FS OTHER FS: BLW													

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR State



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: 11/3/2016 7:50:24AM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 10/25/16 15:35

Work Order: AZJ0702

Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 3

#Containers: 10

Minimum Temp(C): 2.0

Maximum Temp(C): 2.0

Custody Seal(s) Used: Yes

CHECKLIST ITEMS

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

Comments:

November 30, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Kraft Grumman Road
Pace Project No.: 30200502

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



REPORT OF LABORATORY ANALYSIS

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

Project: Plant Kraft Grumman Road
Pace Project No.: 30200502

Pennsylvania Certification IDs

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft Grumman Road
Pace Project No.: 30200502

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30200502001	GWA-8	Water	10/24/16 17:31	10/26/16 10:30
30200502002	FB-1-10-24-16	Water	10/24/16 17:10	10/26/16 10:30
30200502003	EB-1-10-24-16	Water	10/24/16 18:15	10/26/16 10:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft Grumman Road
Pace Project No.: 30200502

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30200502001	GWA-8	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30200502002	FB-1-10-24-16	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200502003	EB-1-10-24-16	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200502

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWA-8		Lab ID: 30200502001	Collected: 10/24/16 17:31	Received: 10/26/16 10:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226		EPA 9315	0.981 ± 0.398 (0.465) C:91% T:NA	pCi/L	11/09/16 07:00	13982-63-3	
Radium-228		EPA 9320	1.98 ± 0.640 (0.836) C:72% T:73%	pCi/L	11/19/16 19:46	15262-20-1	
Total Radium		Total Radium Calculation	2.96 ± 1.04 (1.30)	pCi/L	11/28/16 17:31	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FB-1-10-24-16		Lab ID: 30200502002	Collected: 10/24/16 17:10	Received: 10/26/16 10:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226		EPA 9315	0.0530 ± 0.168 (0.421) C:83% T:NA	pCi/L	11/09/16 07:01	13982-63-3	
Radium-228		EPA 9320	0.320 ± 0.371 (0.781) C:78% T:84%	pCi/L	11/28/16 15:21	15262-20-1	
Total Radium		Total Radium Calculation	0.373 ± 0.539 (1.20)	pCi/L	11/29/16 16:28	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EB-1-10-24-16		Lab ID: 30200502003	Collected: 10/24/16 18:15	Received: 10/26/16 10:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226		EPA 9315	0.273 ± 0.219 (0.383) C:93% T:NA	pCi/L	11/09/16 07:00	13982-63-3	
Radium-228		EPA 9320	0.880 ± 0.421 (0.719) C:81% T:81%	pCi/L	11/28/16 15:22	15262-20-1	
Total Radium		Total Radium Calculation	1.15 ± 0.640 (1.10)	pCi/L	11/29/16 16:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200502

QC Batch: 239218 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Associated Lab Samples: 30200502001, 30200502002, 30200502003

METHOD BLANK: 1175535 Matrix: Water

Associated Lab Samples: 30200502001, 30200502002, 30200502003

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200502

QC Batch: 239880

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30200502001

METHOD BLANK: 1178547

Matrix: Water

Associated Lab Samples: 30200502001

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200502

QC Batch: 239882

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30200502002, 30200502003

METHOD BLANK: 1178558

Matrix: Water

Associated Lab Samples: 30200502002, 30200502003

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

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QUALIFIERS

Project: Plant Kraft Grumman Road

Pace Project No.: 30200502

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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WO#: 30200502



30200502

Chain of Custody



Results Requested By: 11/28/2016

Owner Received Date:

Workorder Name: Plant Kraft Grumman Road

Workorder: AZJ0702

Report To:		Subcontract To:		Requested Analysis			
Betsy McDaniel Pace Analytical Atlanta 110 Technology Parkway Peachtree Corners, GA 30092 Phone (770)-734-4200		Pace - Pittsburgh 1638 Roseytown Road Stes. 2,3,4 Greensburg, PA 15601 Phone (724) 850-5600		Radium 226, 228, Total			
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	LAB USE ONLY
1	GWA-8	G	10/24/2016 17:31	AZJ0702-01	GW	2	001
2	FB-1-10-24-16	G	10/24/2016 17:10	AZJ0702-02	W	1	002
3	EB-1-10-24-16	G	10/24/2016 18:15	AZJ0702-03	W	1	003
4							
5							
6							
7							
8							
9							
10							
Transfers		Released By	Date/Time	Received By	Date/Time	Comments	
1				<i>[Signature]</i>	10/26/16 10:30		
2							
3							

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

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



CHAIN OF CUSTODY RECORD

30200502

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

PAGE: 1

OF 1

Form containing client information, project details, analysis requested, container list, and laboratory use only section.

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
Plant Kraft -Grumman Rd COC Phase 2 CCR State

Sample Condition Upon Receipt Pittsburgh



Client Name: PACE GA

Project # 30200502

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: MSTR 10812 5100 0582

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

Thermometer Used NA Type of Ice: Wet Blue None Q

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:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: <u>WT</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. ID on sample 003 is EB-1-10-24-16
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used: -Pace Containers Used:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10.
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PA L2
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>TAW</u> Date/time of preservation: _____
				Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
Trip Blank Present:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rad Aqueous Samples Screened > 0.5 mrem/hr	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>TAW</u> Date: <u>10-26-16</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: 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		N
LCS32405		LCS32405
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	

Duplicate Sample Assessment	
Sample I.D.:	30200226001
Duplicate Sample I.D.:	30200226001DUJ
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
Duplicate RPD:	109.60%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

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

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

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample 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:	

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Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JC2
Date: 11/8/2016
Worklist: 32293
Matrix: DW

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

LCSID (Y or N)? N
LCS32293 LC-SD32293
Count Date: 11/9/2016
Spike I.D.: 16-026
Spike Concentration (pCi/mL): 44.875
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: 85.28%
Status vs Numerical Indicator: N/A
Status vs Recovery: Pass

Duplicate Sample Assessment

Sample I.D.: 30200502001
Duplicate Sample I.D.: 30200502001DUP
Sample Result Counting Uncertainty (pCi/L, g, F): 0.981
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.372
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 1.175
Are sample and/or duplicate results below MDC? 0.397
Duplicate Numerical Performance Indicator: See Below #
Duplicate Status vs Numerical 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

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

Comments:

Sample Matrix Spike Control Assessment

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

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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
MB 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	
Count Date:	11/28/2016
Spike I.D.:	16-027
Spike Concentration (pCi/mL):	25.962
Volume Used (mL):	0.20
Alliquot 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

Duplicate Sample Assessment	
Sample I.D.:	30200749001
Duplicate Sample I.D.:	30200749001DUP
Sample Result Counting Uncertainty (pCi/L, g, F):	1.763
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.390
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	2.026
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-0.892
Duplicate RPD:	13.88%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

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

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

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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: AZJ0753

May 10, 2017

Project: CCR Event

Project #: Plant Kraft Grumman Road

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

Approved:

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

Project Manager

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All test results relate only to the samples analyzed.



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 10, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-16	AZJ0753-01	Ground Water	10/25/16 10:32	10/26/16 16:35
GWC-14	AZJ0753-02	Ground Water	10/25/16 11:49	10/26/16 16:35
GWC-3	AZJ0753-03	Ground Water	10/25/16 12:05	10/26/16 16:35
GWC-15	AZJ0753-04	Ground Water	10/25/16 13:25	10/26/16 16:35
GWC-21	AZJ0753-05	Ground Water	10/25/16 15:15	10/26/16 16:35
GWC-10	AZJ0753-06	Ground Water	10/25/16 19:05	10/26/16 16:35



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 10, 2017

Case Narrative

Plant Kraft Grumman Road Report AZJ0753 5/10/2017

This revised report replaces the original report submitted on 11/4/2016.

Per client request, sample AZJ0753-04 (GWC-15) had vanadium and zinc data added. No other changes were made to this report.



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 10, 2017

Report No.: AZJ0753

Project: CCR Event

Client ID: GWC-16

Lab Number ID: AZJ0753-01

Date/Time Sampled: 10/25/2016 10:32:00AM

Date/Time Received: 10/26/2016 4:35:00PM

Matrix: Ground Water

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	10/28/16 13:30	10/28/16 13:30	6100767	JPT
Inorganic Anions											
Chloride	34	0.25	0.01	mg/L	EPA 300.0		1	10/30/16 13:20	10/30/16 19:46	6100789	RLC
Fluoride	0.36	0.30	0.02	mg/L	EPA 300.0		1	10/30/16 13:20	10/30/16 19:46	6100789	RLC
Sulfate	360	10	0.51	mg/L	EPA 300.0		10	10/30/16 13:20	11/02/16 03:49	6100789	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:31	6100754	CSW
Arsenic	0.0466	0.0050	0.0016	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:31	6100754	CSW
Barium	0.0464	0.0100	0.0004	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:31	6100754	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:31	6100754	CSW
Boron	1.26	0.100	0.0064	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:31	6100754	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:31	6100754	CSW
Calcium	94.1	5.00	0.311	mg/L	EPA 6020B		10	10/28/16 09:30	11/02/16 16:21	6100754	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:31	6100754	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:31	6100754	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 14:31	6100754	CSW
Molybdenum	0.0800	0.0100	0.0017	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:31	6100754	CSW
Selenium	0.0085	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 14:31	6100754	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:31	6100754	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:31	6100754	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:31	6100754	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:31	6100754	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 14:46	6100745	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 10, 2017

Report No.: AZJ0753

Project: CCR Event

Client ID: GWC-14

Lab Number ID: AZJ0753-02

Date/Time Sampled: 10/25/2016 11:49:00AM

Date/Time Received: 10/26/2016 4:35:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	633	25	10	mg/L	SM 2540 C		1	10/28/16 13:30	10/28/16 13:30	6100767	JPT
Inorganic Anions											
Chloride	36	0.25	0.01	mg/L	EPA 300.0		1	10/30/16 13:20	10/30/16 20:07	6100789	RLC
Fluoride	0.43	0.30	0.02	mg/L	EPA 300.0		1	10/30/16 13:20	10/30/16 20:07	6100789	RLC
Sulfate	420	10	0.51	mg/L	EPA 300.0		10	10/30/16 13:20	11/02/16 05:35	6100789	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:37	6100754	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:37	6100754	CSW
Barium	0.0248	0.0100	0.0004	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:37	6100754	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:37	6100754	CSW
Boron	0.0819	0.100	0.0064	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 14:37	6100754	CSW
Cadmium	0.0002	0.0010	0.00007	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 14:37	6100754	CSW
Calcium	100	25.0	1.55	mg/L	EPA 6020B		50	10/28/16 09:30	11/02/16 16:28	6100754	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:37	6100754	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:37	6100754	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:37	6100754	CSW
Molybdenum	0.0028	0.0100	0.0017	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 14:37	6100754	CSW
Selenium	0.0023	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 14:37	6100754	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:37	6100754	CSW
Vanadium	0.0206	0.0100	0.0071	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:37	6100754	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:37	6100754	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:37	6100754	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 14:48	6100745	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

May 10, 2017

Attention: Mr. Joju Abraham

Report No.: AZJ0753

Project: CCR Event

Client ID: GWC-3

Lab Number ID: AZJ0753-03

Date/Time Sampled: 10/25/2016 12:05:00PM

Date/Time Received: 10/26/2016 4:35:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	267	25	10	mg/L	SM 2540 C		1	10/28/16 13:30	10/28/16 13:30	6100767	JPT
Inorganic Anions											
Chloride	2.5	0.25	0.01	mg/L	EPA 300.0		1	10/30/16 13:20	10/30/16 21:09	6100789	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	10/30/16 13:20	10/30/16 21:09	6100789	RLC
Sulfate	16	1.0	0.05	mg/L	EPA 300.0		1	10/30/16 13:20	10/30/16 21:09	6100789	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:42	6100754	CSW
Arsenic	0.328	0.0050	0.0016	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:42	6100754	CSW
Barium	0.0655	0.0100	0.0004	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:42	6100754	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:42	6100754	CSW
Boron	0.746	0.100	0.0064	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:42	6100754	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:42	6100754	CSW
Calcium	63.6	5.00	0.311	mg/L	EPA 6020B		10	10/28/16 09:30	11/02/16 16:34	6100754	CSW
Chromium	0.0012	0.0100	0.0009	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 14:42	6100754	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:42	6100754	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:42	6100754	CSW
Molybdenum	0.0765	0.0100	0.0017	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:42	6100754	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:42	6100754	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:42	6100754	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:42	6100754	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:42	6100754	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:42	6100754	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 14:51	6100745	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

May 10, 2017

Attention: Mr. Joju Abraham

Report No.: AZJ0753

Project: CCR Event

Client ID: GWC-15

Lab Number ID: AZJ0753-04

Date/Time Sampled: 10/25/2016 1:25:00PM

Date/Time Received: 10/26/2016 4:35:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	449	25	10	mg/L	SM 2540 C		1	10/28/16 13:30	10/28/16 13:30	6100767	JPT
Inorganic Anions											
Chloride	6.5	0.25	0.01	mg/L	EPA 300.0		1	10/30/16 13:20	10/30/16 21:29	6100789	RLC
Fluoride	0.50	0.30	0.02	mg/L	EPA 300.0		1	10/30/16 13:20	10/30/16 21:29	6100789	RLC
Sulfate	100	5.0	0.26	mg/L	EPA 300.0		5	10/30/16 13:20	11/02/16 05:57	6100789	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:59	6100754	CSW
Arsenic	0.0551	0.0050	0.0016	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:59	6100754	CSW
Barium	0.0329	0.0100	0.0004	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:59	6100754	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:59	6100754	CSW
Boron	1.66	0.100	0.0064	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:59	6100754	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:59	6100754	CSW
Calcium	106	25.0	1.55	mg/L	EPA 6020B		50	10/28/16 09:30	11/02/16 16:40	6100754	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:59	6100754	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:59	6100754	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:59	6100754	CSW
Molybdenum	0.117	0.0100	0.0017	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:59	6100754	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:59	6100754	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:59	6100754	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:59	6100754	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:59	6100754	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 14:59	6100754	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/01/16 09:50	11/01/16 12:56	6100823	MTC



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Georgia Power
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 Atlanta GA, 30339

May 10, 2017

Attention: Mr. Joju Abraham

Report No.: AZJ0753

Project: CCR Event

Client ID: GWC-21

Lab Number ID: AZJ0753-05

Date/Time Sampled: 10/25/2016 3:15:00PM

Date/Time Received: 10/26/2016 4:35:00PM

Matrix: Ground Water

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	10/28/16 13:30	10/28/16 13:30	6100767	JPT
Inorganic Anions											
Chloride	4.4	0.25	0.01	mg/L	EPA 300.0		1	10/30/16 13:20	10/30/16 21:50	6100789	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	10/30/16 13:20	10/30/16 21:50	6100789	RLC
Sulfate	16	1.0	0.05	mg/L	EPA 300.0		1	10/30/16 13:20	10/30/16 21:50	6100789	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 15:05	6100754	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 15:05	6100754	CSW
Barium	0.0217	0.0100	0.0004	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 15:05	6100754	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 15:05	6100754	CSW
Boron	0.0658	0.100	0.0064	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 15:05	6100754	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 15:05	6100754	CSW
Calcium	3.91	0.500	0.0311	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 15:05	6100754	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 15:05	6100754	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 15:05	6100754	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 15:05	6100754	CSW
Molybdenum	0.0018	0.0100	0.0017	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 15:05	6100754	CSW
Selenium	0.0095	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/28/16 09:30	10/31/16 15:05	6100754	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 15:05	6100754	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/28/16 09:30	10/31/16 15:05	6100754	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/01/16 09:50	11/01/16 12:58	6100823	MTC



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May 10, 2017

Attention: Mr. Joju Abraham

Report No.: AZJ0753

Project: CCR Event

Client ID: GWC-10

Lab Number ID: AZJ0753-06

Date/Time Sampled: 10/25/2016 7:05:00PM

Date/Time Received: 10/26/2016 4:35:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	2790	25	10	mg/L	SM 2540 C		1	10/28/16 13:30	10/28/16 13:30	6100767	JPT
Inorganic Anions											
Chloride	560	25	1.4	mg/L	EPA 300.0		100	10/30/16 13:20	11/02/16 06:18	6100789	RLC
Fluoride	0.16	0.30	0.02	mg/L	EPA 300.0	J	1	10/30/16 13:20	10/30/16 22:10	6100789	RLC
Sulfate	1000	100	5.1	mg/L	EPA 300.0		100	10/30/16 13:20	11/02/16 06:18	6100789	RLC
Metals, Total											
Antimony	0.0045	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:04	6100776	CSW
Arsenic	0.0159	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:04	6100776	CSW
Barium	0.0717	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:04	6100776	CSW
Beryllium	0.0004	0.0030	0.00008	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 01:04	6100776	CSW
Boron	22.4	1.00	0.0642	mg/L	EPA 6020B		10	10/31/16 08:45	11/03/16 21:26	6100776	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:04	6100776	CSW
Calcium	278	25.0	1.55	mg/L	EPA 6020B		50	10/31/16 08:45	11/03/16 12:29	6100776	CSW
Chromium	0.0020	0.0100	0.0009	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 01:04	6100776	CSW
Cobalt	0.0078	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 01:04	6100776	CSW
Lead	0.0143	0.0050	0.0001	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:04	6100776	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:04	6100776	CSW
Selenium	0.0020	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 01:04	6100776	CSW
Thallium	0.0003	0.0010	0.0002	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 01:04	6100776	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:04	6100776	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/01/16 09:50	11/01/16 13:01	6100823	MTC



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Attention: Mr. Joju Abraham

May 10, 2017

Report No.: AZJ0753

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100767 - SM 2540 C											
Blank (6100767-BLK1)						Prepared & Analyzed: 10/28/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6100767-BS1)						Prepared & Analyzed: 10/28/16					
Total Dissolved Solids	382	25	10	mg/L	400.00		96	84-108			
Duplicate (6100767-DUP1)						Source: AZJ0743-01 Prepared & Analyzed: 10/28/16					
Total Dissolved Solids	2920	25	10	mg/L		2900			0.8	10	
Duplicate (6100767-DUP2)						Source: AZJ0754-01 Prepared & Analyzed: 10/28/16					
Total Dissolved Solids	3600	25	10	mg/L		3560			1	10	



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May 10, 2017

Report No.: AZJ0753

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100789 - EPA 300.0											
Blank (6100789-BLK1)						Prepared & Analyzed: 10/30/16					
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 (6100789-BS1)						Prepared & Analyzed: 10/30/16					
Chloride	10.1	0.25	0.01	mg/L	10.010		101	90-110			
Fluoride	9.61	0.30	0.004	mg/L	10.020		96	90-110			
Sulfate	9.98	1.0	0.09	mg/L	10.020		100	90-110			
Matrix Spike (6100789-MS1)						Source: AZJ0753-02 Prepared & Analyzed: 10/30/16					
Chloride	42.5	0.25	0.01	mg/L	10.010	36.0	65	90-110			QM-02
Fluoride	13.2	0.30	0.004	mg/L	10.020	0.43	128	90-110			QM-05
Sulfate	256	1.0	0.09	mg/L	10.020	270	NR	90-110			QM-02
Matrix Spike (6100789-MS2)						Source: AZJ0760-01 Prepared: 10/30/16 Analyzed: 10/31/16					
Chloride	13.4	0.25	0.01	mg/L	10.010	3.04	103	90-110			
Fluoride	10.3	0.30	0.004	mg/L	10.020	0.15	101	90-110			
Sulfate	28.7	1.0	0.09	mg/L	10.020	20.4	83	90-110			QM-05
Matrix Spike Dup (6100789-MSD1)						Source: AZJ0753-02 Prepared & Analyzed: 10/30/16					
Chloride	42.4	0.25	0.01	mg/L	10.010	36.0	64	90-110	0.2	15	QM-02
Fluoride	12.9	0.30	0.004	mg/L	10.020	0.43	125	90-110	2	15	QM-05
Sulfate	255	1.0	0.09	mg/L	10.020	270	NR	90-110	0.3	15	QM-02



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May 10, 2017

Report No.: AZJ0753

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	0.0400	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							



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Attention: Mr. Joju Abraham

May 10, 2017

Report No.: AZJ0753

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 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	0.0400	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	0.0250	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	0.0100	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	0.0100	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	0.0400	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	0.0250	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	0.0100	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	0.0100	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			



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Attention: Mr. Joju Abraham

May 10, 2017

Report No.: AZJ0753

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	0.0400	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	0.0250	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	0.0100	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	0.0100	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, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 10, 2017

Report No.: AZJ0753

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 6100776 - EPA 3005A

Blank (6100776-BLK1)

Prepared: 10/31/16 Analyzed: 11/01/16

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 (6100776-BS1)

Prepared: 10/31/16 Analyzed: 11/01/16

Antimony	0.101	0.0030	0.0008	mg/L	0.10000		101	80-120			
Arsenic	0.0980	0.0050	0.0016	mg/L	0.10000		98	80-120			
Barium	0.0996	0.0100	0.0004	mg/L	0.10000		100	80-120			
Beryllium	0.100	0.0030	0.00008	mg/L	0.10000		100	80-120			
Boron	1.04	0.0400	0.0064	mg/L	1.0000		104	80-120			
Cadmium	0.0984	0.0010	0.00007	mg/L	0.10000		98	80-120			
Calcium	0.996	0.500	0.0311	mg/L	1.0000		100	80-120			
Chromium	0.106	0.0100	0.0009	mg/L	0.10000		106	80-120			
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000		100	80-120			
Copper	0.0976	0.0250	0.0005	mg/L	0.10000		98	80-120			
Lead	0.0959	0.0050	0.0001	mg/L	0.10000		96	80-120			
Molybdenum	0.103	0.0100	0.0017	mg/L	0.10000		103	80-120			
Nickel	0.0980	0.0100	0.0006	mg/L	0.10000		98	80-120			
Selenium	0.0999	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	0.0975	0.0010	0.0002	mg/L	0.10000		98	80-120			
Vanadium	0.103	0.0100	0.0071	mg/L	0.10000		103	80-120			
Zinc	0.109	0.0100	0.0021	mg/L	0.10000		109	80-120			
Lithium	0.104	0.0500	0.0021	mg/L	0.10000		104	80-120			



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 10, 2017

Report No.: AZJ0753

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100776 - EPA 3005A											
Matrix Spike (6100776-MS1)			Source: AZJ0754-04				Prepared: 10/31/16 Analyzed: 11/01/16				
Antimony	0.105	0.0030	0.0008	mg/L	0.10000	ND	105	75-125			
Arsenic	0.103	0.0050	0.0016	mg/L	0.10000	ND	103	75-125			
Barium	0.185	0.0100	0.0004	mg/L	0.10000	0.0876	98	75-125			
Beryllium	0.0987	0.0030	0.00008	mg/L	0.10000	0.0001	99	75-125			
Boron	3.89	0.200	0.0321	mg/L	1.0000	3.39	51	75-125			QM-02
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125			
Calcium	26.1	2.50	0.155	mg/L	1.0000	24.7	138	75-125			QM-02
Chromium	0.108	0.0100	0.0009	mg/L	0.10000	ND	108	75-125			
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000	ND	103	75-125			
Copper	0.100	0.0250	0.0005	mg/L	0.10000	ND	100	75-125			
Lead	0.0966	0.0050	0.0001	mg/L	0.10000	ND	97	75-125			
Molybdenum	0.105	0.0100	0.0017	mg/L	0.10000	ND	105	75-125			
Nickel	0.102	0.0100	0.0006	mg/L	0.10000	ND	102	75-125			
Selenium	0.0961	0.0100	0.0010	mg/L	0.10000	ND	96	75-125			
Silver	0.105	0.0100	0.0005	mg/L	0.10000	ND	105	75-125			
Thallium	0.102	0.0010	0.0002	mg/L	0.10000	ND	102	75-125			
Vanadium	0.109	0.0100	0.0071	mg/L	0.10000	ND	109	75-125			
Zinc	0.110	0.0100	0.0021	mg/L	0.10000	0.0029	108	75-125			
Lithium	0.101	0.0500	0.0021	mg/L	0.10000	ND	101	75-125			
Matrix Spike Dup (6100776-MSD1)			Source: AZJ0754-04				Prepared: 10/31/16 Analyzed: 11/01/16				
Antimony	0.105	0.0030	0.0008	mg/L	0.10000	ND	105	75-125	0.5	20	
Arsenic	0.103	0.0050	0.0016	mg/L	0.10000	ND	103	75-125	0.4	20	
Barium	0.183	0.0100	0.0004	mg/L	0.10000	0.0876	95	75-125	1	20	
Beryllium	0.0971	0.0030	0.00008	mg/L	0.10000	0.0001	97	75-125	2	20	
Boron	4.08	0.200	0.0321	mg/L	1.0000	3.39	70	75-125	5	20	QM-02
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125	0.9	20	
Calcium	25.6	2.50	0.155	mg/L	1.0000	24.7	81	75-125	2	20	
Chromium	0.105	0.0100	0.0009	mg/L	0.10000	ND	105	75-125	3	20	
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	ND	102	75-125	1	20	
Copper	0.0958	0.0250	0.0005	mg/L	0.10000	ND	96	75-125	4	20	
Lead	0.0988	0.0050	0.0001	mg/L	0.10000	ND	99	75-125	2	20	
Molybdenum	0.105	0.0100	0.0017	mg/L	0.10000	ND	105	75-125	0.7	20	
Nickel	0.0981	0.0100	0.0006	mg/L	0.10000	ND	98	75-125	4	20	
Selenium	0.0917	0.0100	0.0010	mg/L	0.10000	ND	92	75-125	5	20	
Silver	0.0998	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	5	20	
Thallium	0.103	0.0010	0.0002	mg/L	0.10000	ND	103	75-125	0.8	20	
Vanadium	0.105	0.0100	0.0071	mg/L	0.10000	ND	105	75-125	4	20	
Zinc	0.106	0.0100	0.0021	mg/L	0.10000	0.0029	103	75-125	4	20	
Lithium	0.101	0.0500	0.0021	mg/L	0.10000	ND	101	75-125	0.2	20	



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 10, 2017

Report No.: AZJ0753

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100776 - EPA 3005A											
Post Spike (6100776-PS1)			Source: AZJ0754-04			Prepared: 10/31/16 Analyzed: 11/01/16					
Antimony	95.4			ug/L	100.00	0.285	95	80-120			
Arsenic	100			ug/L	100.00	1.52	99	80-120			
Barium	183			ug/L	100.00	87.6	95	80-120			
Beryllium	100			ug/L	100.00	0.122	100	80-120			
Boron	4170			ug/L	1000.0	3390	78	80-120			QM-02
Cadmium	102			ug/L	100.00	0.0002	102	80-120			
Calcium	24400			ug/L	1000.0	24700	NR	80-120			QM-02
Chromium	108			ug/L	100.00	0.787	107	80-120			
Cobalt	106			ug/L	100.00	0.276	105	80-120			
Copper	98.4			ug/L	100.00	0.269	98	80-120			
Lead	96.1			ug/L	100.00	0.0637	96	80-120			
Molybdenum	107			ug/L	100.00	0.493	107	80-120			
Nickel	102			ug/L	100.00	0.157	102	80-120			
Selenium	104			ug/L	100.00	0.280	104	80-120			
Silver	100			ug/L	100.00	0.0089	100	80-120			
Thallium	100			ug/L	100.00	0.0644	100	80-120			
Vanadium	110			ug/L	100.00	2.12	108	80-120			
Zinc	110			ug/L	100.00	2.89	107	80-120			
Lithium	102			ug/L	100.00	0.684	101	80-120			

Batch 6100823 - EPA 7470A

Blank (6100823-BLK1)					Prepared & Analyzed: 11/01/16						
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6100823-BS1)					Prepared & Analyzed: 11/01/16						
Mercury	0.00233	0.00050	0.000041	mg/L	2.5000E-3		93	80-120			



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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 10, 2017

Report No.: AZJ0753

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100823 - EPA 7470A											
Matrix Spike (6100823-MS1)			Source: AZJ0760-05			Prepared & Analyzed: 11/01/16					
Mercury	0.00230	0.00050	0.000041	mg/L	2.5000E-3	ND	92	75-125			
Matrix Spike Dup (6100823-MSD1)			Source: AZJ0760-05			Prepared & Analyzed: 11/01/16					
Mercury	0.00228	0.00050	0.000041	mg/L	2.5000E-3	ND	91	75-125	0.7	20	
Post Spike (6100823-PS1)			Source: AZJ0760-05			Prepared & Analyzed: 11/01/16					
Mercury	1.63			ug/L	1.6667	-0.0558	98	80-120			



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Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 10, 2017

Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

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

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



CHAIN OF CUSTODY RECORD

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

PAGE: 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 PO #: lahurch@southernco.com PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase 2 CCR & State D&O		ANALYSIS REQUESTED CONTAINER TYPE: P P P P P P P P P P PRESERVATION: 3 3 3 3 3 3 3 3 3 3 # of CONTAINERS →		CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O 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		LAB #: A270753 Entered into LIMS: Tracking #								
Collection DATE	Collection TIME	MATRIX CODE*	C O M P	G R A B	SAMPLE IDENTIFICATION	CONTAINER TYPE	PRESERVATION	# of CONTAINERS	RELINQUISHED BY:	DATE/TIME:	RELINQUISHED BY:	DATE/TIME:
10/25/16	1032	GW	X	X	GW C-16	P	(EPA 6020/7470) Metals App. III & IV	3	1	10/20/16 1030	10/20/16 1030	
10/25/16	1149	GW	X	X	GW C-14	P	(EPA 6020/7470) Metals App. III & IV	3	1			
10/25/16	1205	GW	X	X	GW C-3	P	(EPA 6020/7470) Metals App. III & IV	3	1			
10/25/16	1325	GW	X	X	GW C-15	P	(EPA 6020/7470) Metals App. III & IV	3	1			
10/25/16	1515	GW	X	X	GW C-21	P	(EPA 6020/7470) Metals App. III & IV	3	1			
10/25/16	1905	GW	X	X	GW C-10	P	(EPA 6020/7470) Metals App. III & IV	3	1			
RECEIVED BY: J. B. ... (KRC) DATE/TIME: 10/26/16 1905 RECEIVED BY: ... DATE/TIME: 10/26/16 1635 RECEIVED BY: ... DATE/TIME: 10/26/16 1635												
RECEIVED BY LAB: ... DATE/TIME: 10/26/16 1635 RECEIVED BY: ... DATE/TIME: 10/26/16 1635												
CLIENT: ... CLIENT ID: ... OTHER FS: ... COPIES: ... COPIES: ...												

Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR State

December 05, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Kraft Grumman Road
Pace Project No.: 30200751

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft Grumman Road
Pace Project No.: 30200751

Pennsylvania Certification IDs

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200751

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30200751001	GWC-16	Water	10/25/16 10:32	10/27/16 09:30
30200751002	GWC-14	Water	10/25/16 11:49	10/27/16 09:30
30200751003	GWC-3	Water	10/25/16 12:05	10/27/16 09:30
30200751004	GWC-15	Water	10/25/16 13:25	10/27/16 09:30
30200751005	GWC-21	Water	10/25/16 15:15	10/27/16 09:30
30200751006	GWC-10	Water	10/25/16 19:05	10/27/16 09:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft Grumman Road
Pace Project No.: 30200751

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30200751001	GWC-16	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200751002	GWC-14	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200751003	GWC-3	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200751004	GWC-15	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200751005	GWC-21	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200751006	GWC-10	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Plant Kraft Grumman Road

Pace Project No.: 30200751

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Plant Kraft Grumman Road

Pace Project No.: 30200751

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
- GWC-10 (Lab ID: 30200751006)
 - Radium-228
- GWC-14 (Lab ID: 30200751002)
 - Radium-228
- GWC-15 (Lab ID: 30200751004)
 - Radium-228
- GWC-16 (Lab ID: 30200751001)
 - Radium-228
- GWC-21 (Lab ID: 30200751005)
 - Radium-228
- GWC-3 (Lab ID: 30200751003)
 - Radium-228

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Plant Kraft Grumman Road

Pace Project No.: 30200751

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.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
Pace Project No.: 30200751

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-16 Lab ID: 30200751001 Collected: 10/25/16 10:32 Received: 10/27/16 09:30 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	0.436 ± 0.209 (0.257) C:96% T:NA	pCi/L	11/17/16 15:50	13982-63-3	
Radium-228		EPA 9320	1.54 ± 0.557 (0.815) C:68% T:84%	pCi/L	11/29/16 11:25	15262-20-1	1c
Total Radium		Total Radium Calculation	1.98 ± 0.766 (1.07)	pCi/L	11/30/16 08:33	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-14 Lab ID: 30200751002 Collected: 10/25/16 11:49 Received: 10/27/16 09:30 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	0.229 ± 0.178 (0.319) C:93% T:NA	pCi/L	11/17/16 15:50	13982-63-3	
Radium-228		EPA 9320	1.31 ± 0.493 (0.729) C:77% T:78%	pCi/L	11/29/16 11:25	15262-20-1	1c
Total Radium		Total Radium Calculation	1.54 ± 0.671 (1.05)	pCi/L	11/30/16 08:33	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-3 Lab ID: 30200751003 Collected: 10/25/16 12:05 Received: 10/27/16 09:30 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	0.556 ± 0.397 (0.626) C:98% T:NA	pCi/L	11/17/16 08:56	13982-63-3	
Radium-228		EPA 9320	1.38 ± 0.528 (0.751) C:78% T:82%	pCi/L	11/29/16 11:22	15262-20-1	1c
Total Radium		Total Radium Calculation	1.94 ± 0.925 (1.38)	pCi/L	11/30/16 08:33	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-15 Lab ID: 30200751004 Collected: 10/25/16 13:25 Received: 10/27/16 09:30 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	0.442 ± 0.389 (0.707) C:95% T:NA	pCi/L	11/17/16 08:56	13982-63-3	
Radium-228		EPA 9320	0.602 ± 0.466 (0.907) C:73% T:81%	pCi/L	11/29/16 11:51	15262-20-1	1c
Total Radium		Total Radium Calculation	1.04 ± 0.855 (1.61)	pCi/L	11/30/16 08:33	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-21 Lab ID: 30200751005 Collected: 10/25/16 15:15 Received: 10/27/16 09:30 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	0.282 ± 0.180 (0.272) C:97% T:NA	pCi/L	11/17/16 08:56	13982-63-3	
Radium-228		EPA 9320	0.917 ± 0.422 (0.702) C:81% T:78%	pCi/L	11/29/16 11:22	15262-20-1	1c

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200751

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	1.20 ± 0.602 (0.974)	pCi/L	11/30/16 08:33	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.04 ± 0.346 (0.339) C:94% T:NA	pCi/L	11/17/16 08:56	13982-63-3	
Radium-228	EPA 9320	1.20 ± 0.445 (0.628) C:74% T:83%	pCi/L	11/29/16 11:22	15262-20-1	1c
Total Radium	Total Radium Calculation	2.24 ± 0.791 (0.967)	pCi/L	11/30/16 08:33	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200751

QC Batch: 239634 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Associated Lab Samples: 30200751001, 30200751002, 30200751003, 30200751004, 30200751005, 30200751006

METHOD BLANK: 1177541 Matrix: Water

Associated Lab Samples: 30200751001, 30200751002, 30200751003, 30200751004, 30200751005, 30200751006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00510 ± 0.0867 (0.243) C:98% T:NA	pCi/L	11/17/16 15:50	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200751

QC Batch: 239884 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Associated Lab Samples: 30200751001, 30200751002, 30200751003, 30200751004, 30200751005, 30200751006

METHOD BLANK: 1178563 Matrix: Water

Associated Lab Samples: 30200751001, 30200751002, 30200751003, 30200751004, 30200751005, 30200751006

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

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QUALIFIERS

Project: Plant Kraft Grumman Road
Pace Project No.: 30200751

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.

REPORT OF LABORATORY ANALYSIS

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WO# : 30200751



30200751

Chain of Custody



Workorder: AZJ0753

Workorder Name: Plant Kraft Grumman Road

Results Requested By: 11/28/2016

Report To:

Betsy McDaniel
Pace Analytical Atlanta
110 Technology Parkway
Peachtree Corners, GA 30092
Phone (770)-734-4200

Subcontract To:

Pace - Pittsburgh
1638 Roseytown Road
Stes. 2,3,4
Greensburg, PA 15601
Phone (724) 850-5600

Owner Received Date:

Preserved Containers

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	NO3	NO2	NO	LAB USE ONLY
1	GWC-16	G	10/25/2016 10:32	AZJ0753-01	GW	1			X
2	GWC-14	G	10/25/2016 11:49	AZJ0753-02	GW	1			X
3	GWC-3	G	10/25/2016 12:05	AZJ0753-03	GW	1			X
4	GWC-15	G	10/25/2016 13:25	AZJ0753-04	GW	1			X
5	GWC-21	G	10/25/2016 15:15	AZJ0753-05	GW	1			X
6	GWC-10	G	10/25/2016 19:05	AZJ0753-06	GW	1			X
7									
8									
9									
10									
Radium 226, 228, Total									

Transfers	Released By	Date/Time	Received By	Date/Time	Received on Ice Y or N	Sample Intact Y or N
1	<i>McDaniel</i>	10/26/16	<i>Michelle Embert</i>	10/27/16 9:30	N	Y
2						
3						

Cooler Temperature on Receipt NA °C Custody Seal Y of N

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

30200751

CHAIN OF CUSTODY RECORD

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

PAGE: 1 OF 1

CLIENT NAME: Georgia Power		CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239		REPORT TO: Lauren Petty CC: Maria Padilla Heath McCorkle		REQUESTED COMPLETION DATE: PO #: laburch@southernco.com		PROJECT NAME/STATE: Plant Kraft Grumman Road Phase 2 CCR & State D&O		PROJECT #:																															
Collection DATE	Collection TIME	MATRIX CODE*	COMPARISON	SAMPLE IDENTIFICATION	ANALYSIS REQUESTED	CONTAINER TYPE	CONTAINER PRESERVATION	CONTAINER TYPE	CONTAINER PRESERVATION	LAB #	DATE/TIME																														
10/25/16	1032	GW	X	GW-C-16	Metals App. III & IV (EPA 6020/7470) Metals (See attached) EPA 6020 Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SW-846 9315/9320)	3	P 3 P 7 P 3	P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen		10/20/16 1030																														
10/25/16	1149	GW	X	GW-C-14		3					10/20/16 1030																														
10/25/16	1205	GW	X	GW-C-3		3					10/20/16 1030																														
10/25/16	1325	GW	X	GW-C-15		3					10/20/16 1030																														
10/25/16	1515	GW	X	GW-C-21		3					10/20/16 1030																														
10/25/16	1405	GW	X	GW-C-10		3					10/20/16 1030																														
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Checked Yes	No	NA	Ice	No	NA	Thermocouple	Yes	No	NA	Max	Min	Other	Other	Other																											

Plant Kraft Grumman Road State constituents As, Ba, Cr, Pb, Sb, Se, V, Zn
Plant Kraft - Grumman Rd COC Phase 2 CCR State

FOR LAB USE ONLY
LAB # A270753
Entered into LIMS Tracking #

DATE/TIME: 10/20/16 1030
DATE/TIME: 10/20/16 1030

DATE/TIME: 10/20/16 1635
DATE/TIME: 10/20/16 1030

DATE/TIME: 10/20/16 1030

DATE/TIME: 10/20/16 1030

Sample Condition Upon Receipt Pittsburgh



Client Name: Pace Georgia Project # 30200751

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 10812 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:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: <u>WT</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used: -Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10.
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Filtered volume received for Dissolved tests All containers needing preservation have been checked.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13. <u>PH < 2</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics	Initial when completed: <u>KH</u>		Date/time of preservation	
	Lot # of added preservative			
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rad Aqueous Samples Screened > 0.5 mrem/hr	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>KH</u> Date: <u>10-27-16</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLLW
Date: 11/22/2016
Worklist: 32407
Matrix: DW

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		Y
LCS32407		
Count Date:	11/29/2016	16-027
Spike I.D.:	16-027	25.954
Spike Concentration (pCi/mL):	0.20	0.20
Volume Used (mL):	0.808	0.808
Aliquot Volume (L, g, F):	6.426	6.422
Target Conc. (pCi/L, g, F):	0.463	0.462
Uncertainty (Calculated):	7.751	0.384
Result (pCi/L, g, F):	0.815	0.395
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	2.77	-19.46
Numerical Performance Indicator:	120.61%	5.97%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Fail Low**

Duplicate Sample Assessment	
Sample I.D.:	LCS32407
Duplicate Sample I.D.:	LCS32407
Sample Result (pCi/L, g, F):	7.751
Sample Duplicate Result (pCi/L, g, F):	0.815
Sample Duplicate Result Counting Uncertainty (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
Duplicate Numerical Performance Indicator:	181.42%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

**Batch must be re-prepped due to LCSD failure.

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

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
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:	

MSD NOT SPIKED - CANNOT ASSESS PRECISION TO CLIENT INFORMED AND GAVE PERMISSION TO REPORT BASED ON ACCEPTABLE LCS and MSB

1 of 1 *OK* 12/5/16

Quality Control Sample Performance Assessment



Analyst. Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 11/15/2016
Worklist: 32363
Matrix: DW

Method Blank Assessment	
MB Sample ID	1177541
MB concentration:	0.005
M/B Counting Uncertainty:	0.087
MB MDC:	0.243
MB Numerical Performance Indicator:	0.12
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSD32363	LCSD32363
Count Date:	11/17/2016
Spike I.D.:	16-026
Spike Concentration (pCi/mL):	44.674
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.500
Target Conc. (pCi/L, g, F):	8.939
Uncertainty (Calculated):	0.420
Result (pCi/L, g, F):	6.836
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.731
Numerical Performance Indicator:	-4.89
Percent Recovery:	76.47%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30200847004
Duplicate Sample I.D.:	30200847004DUP
Sample Result (pCi/L, g, F):	0.688
Sample Duplicate Result (pCi/L, g, F):	0.263
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.523
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.222
Are sample and/or duplicate results below MDC?	See below ##
Duplicate Numerical Performance Indicator:	0.937
Duplicate RPD:	27.20%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

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

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

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



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: AZJ0754

May 10, 2017

Project: CCR Event

Project #: Plant Kraft Grumman Road

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

Approved:

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

Project Manager

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All test results relate only to the samples analyzed.



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 10, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWA-7	AZJ0754-01	Ground Water	10/25/16 09:57	10/26/16 16:35
GWC-20	AZJ0754-02	Ground Water	10/25/16 13:20	10/26/16 16:35
GWC-1	AZJ0754-03	Ground Water	10/25/16 14:31	10/26/16 16:35
GWC-19	AZJ0754-04	Ground Water	10/25/16 16:11	10/26/16 16:35
EB-2-10-25-16	AZJ0754-05	Water	10/25/16 17:10	10/26/16 16:35
Dup-1	AZJ0754-06	Ground Water	10/25/16 00:00	10/26/16 16:35



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Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 10, 2017

Case Narrative

Plant Kraft Grumman Road Report AZJ0754 5/10/2017

This revised report replaces the original report submitted on 11/4/2016.

Per client request, samples AZJ0754-01 (GWA-7) and AZJ0754-02 (GWC-20) had vanadium and zinc data added. No other changes were made to this report.



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

May 10, 2017

Attention: Mr. Joju Abraham

Report No.: AZJ0754

Project: CCR Event

Client ID: GWA-7

Lab Number ID: AZJ0754-01

Date/Time Sampled: 10/25/2016 9:57:00AM

Date/Time Received: 10/26/2016 4:35:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	3560	25	10	mg/L	SM 2540 C		1	10/28/16 13:30	10/28/16 13:30	6100767	JPT
Inorganic Anions											
Chloride	150	0.25	0.01	mg/L	EPA 300.0		1	10/30/16 13:20	10/30/16 22:31	6100789	RLC
Chloride	200	12	0.70	mg/L	EPA 300.0		50	10/30/16 13:20	11/02/16 06:39	6100789	RLC
Fluoride	0.07	0.30	0.02	mg/L	EPA 300.0	J	1	10/30/16 13:20	10/30/16 22:31	6100789	RLC
Sulfate	26	1.0	0.05	mg/L	EPA 300.0		1	10/30/16 13:20	10/30/16 22:31	6100789	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 03:27	6100776	CSW
Arsenic	0.0069	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 03:27	6100776	CSW
Barium	0.173	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 03:27	6100776	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 03:27	6100776	CSW
Boron	21.4	1.00	0.0642	mg/L	EPA 6020B		10	10/31/16 08:45	11/03/16 15:11	6100776	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 03:27	6100776	CSW
Calcium	6.43	0.500	0.0311	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 03:27	6100776	CSW
Chromium	0.0519	0.0100	0.0009	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 03:27	6100776	CSW
Cobalt	0.0037	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 03:27	6100776	CSW
Lead	0.0003	0.0050	0.0001	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 03:27	6100776	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 03:27	6100776	CSW
Selenium	0.0310	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 03:27	6100776	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 03:27	6100776	CSW
Vanadium	0.425	0.0100	0.0071	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 03:27	6100776	CSW
Zinc	0.0035	0.0100	0.0021	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 03:27	6100776	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 03:27	6100776	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/01/16 09:50	11/01/16 13:03	6100823	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

May 10, 2017

Attention: Mr. Joju Abraham

Report No.: AZJ0754

Project: CCR Event

Client ID: GWC-20

Lab Number ID: AZJ0754-02

Date/Time Sampled: 10/25/2016 1:20:00PM

Date/Time Received: 10/26/2016 4:35:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	289	25	10	mg/L	SM 2540 C		1	10/28/16 13:30	10/28/16 13:30	6100767	JPT
Inorganic Anions											
Chloride	8.1	0.25	0.01	mg/L	EPA 300.0		1	10/30/16 13:20	10/30/16 22:52	6100789	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	10/30/16 13:20	10/30/16 22:52	6100789	RLC
Sulfate	79	5.0	0.26	mg/L	EPA 300.0		5	10/30/16 13:20	11/02/16 07:00	6100789	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:09	6100776	CSW
Arsenic	0.307	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:09	6100776	CSW
Barium	0.0702	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:09	6100776	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:09	6100776	CSW
Boron	2.54	1.00	0.0642	mg/L	EPA 6020B		10	10/31/16 08:45	11/03/16 21:33	6100776	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:09	6100776	CSW
Calcium	50.1	5.00	0.311	mg/L	EPA 6020B		10	10/31/16 08:45	11/03/16 12:42	6100776	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:09	6100776	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:09	6100776	CSW
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 01:09	6100776	CSW
Molybdenum	0.395	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:09	6100776	CSW
Selenium	0.0014	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 01:09	6100776	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:09	6100776	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:09	6100776	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:09	6100776	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:09	6100776	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/01/16 09:50	11/01/16 13:05	6100823	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

May 10, 2017

Attention: Mr. Joju Abraham

Report No.: AZJ0754

Project: CCR Event

Client ID: GWC-1

Lab Number ID: AZJ0754-03

Date/Time Sampled: 10/25/2016 2:31:00PM

Date/Time Received: 10/26/2016 4:35:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	230	25	10	mg/L	SM 2540 C		1	10/28/16 13:30	10/28/16 13:30	6100767	JPT
Inorganic Anions											
Chloride	5.1	0.25	0.01	mg/L	EPA 300.0		1	10/30/16 13:20	10/31/16 00:35	6100789	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	10/30/16 13:20	10/31/16 00:35	6100789	RLC
Sulfate	83	5.0	0.26	mg/L	EPA 300.0		5	10/30/16 13:20	11/02/16 07:22	6100789	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:15	6100776	CSW
Arsenic	0.0035	0.0050	0.0016	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 01:15	6100776	CSW
Barium	0.0504	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:15	6100776	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:15	6100776	CSW
Boron	1.22	0.100	0.0064	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:15	6100776	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:15	6100776	CSW
Calcium	28.3	2.50	0.155	mg/L	EPA 6020B		5	10/31/16 08:45	11/03/16 12:48	6100776	CSW
Chromium	0.0018	0.0100	0.0009	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 01:15	6100776	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:15	6100776	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:15	6100776	CSW
Molybdenum	0.242	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:15	6100776	CSW
Selenium	0.0022	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 01:15	6100776	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:15	6100776	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:15	6100776	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/01/16 09:50	11/01/16 13:12	6100823	MTC



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 Atlanta GA, 30339

May 10, 2017

Attention: Mr. Joju Abraham

Report No.: AZJ0754

Project: CCR Event

Client ID: GWC-19

Lab Number ID: AZJ0754-04

Date/Time Sampled: 10/25/2016 4:11:00PM

Date/Time Received: 10/26/2016 4:35:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	14300	25	10	mg/L	SM 2540 C		1	10/28/16 13:30	10/28/16 13:30	6100767	JPT
Inorganic Anions											
Chloride	22	0.25	0.01	mg/L	EPA 300.0		1	10/30/16 13:20	10/31/16 00:56	6100789	RLC
Fluoride	0.29	0.30	0.02	mg/L	EPA 300.0	J	1	10/30/16 13:20	10/31/16 00:56	6100789	RLC
Sulfate	230	10	0.51	mg/L	EPA 300.0		10	10/30/16 13:20	11/02/16 07:44	6100789	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:21	6100776	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:21	6100776	CSW
Barium	0.0876	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:21	6100776	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 01:21	6100776	CSW
Boron	3.39	0.500	0.0321	mg/L	EPA 6020B		5	10/31/16 08:45	11/03/16 21:41	6100776	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:21	6100776	CSW
Calcium	24.7	2.50	0.155	mg/L	EPA 6020B		5	10/31/16 08:45	11/03/16 12:54	6100776	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:21	6100776	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:21	6100776	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:21	6100776	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:21	6100776	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:21	6100776	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:21	6100776	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:21	6100776	CSW
Zinc	0.0029	0.0100	0.0021	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 01:21	6100776	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:21	6100776	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/01/16 09:50	11/01/16 13:15	6100823	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 10, 2017

Report No.: AZJ0754

Project: CCR Event

Client ID: EB-2-10-25-16

Lab Number ID: AZJ0754-05

Date/Time Sampled: 10/25/2016 5:10:00PM

Date/Time Received: 10/26/2016 4:35:00PM

Matrix: Water

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	10/28/16 13:30	10/28/16 13:30	6100767	JPT
Inorganic Anions											
Chloride	0.04	0.25	0.01	mg/L	EPA 300.0	J	1	10/30/16 13:20	10/31/16 01:16	6100789	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	10/30/16 13:20	10/31/16 01:16	6100789	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	10/30/16 13:20	10/31/16 01:16	6100789	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:26	6100776	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:26	6100776	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:26	6100776	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:26	6100776	CSW
Boron	0.0313	0.100	0.0064	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 01:26	6100776	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:26	6100776	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:26	6100776	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:26	6100776	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:26	6100776	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:26	6100776	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:26	6100776	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:26	6100776	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:26	6100776	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:26	6100776	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 13:32	6100740	MTC



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

May 10, 2017

Report No.: AZJ0754

Project: CCR Event

Client ID: Dup-1

Lab Number ID: AZJ0754-06

Date/Time Sampled: 10/25/2016 12:00:00AM

Date/Time Received: 10/26/2016 4:35:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	275	25	10	mg/L	SM 2540 C		1	10/28/16 13:30	10/28/16 13:30	6100767	JPT
Inorganic Anions											
Chloride	22	0.25	0.01	mg/L	EPA 300.0		1	10/30/16 13:20	10/31/16 01:37	6100789	RLC
Fluoride	0.07	0.30	0.02	mg/L	EPA 300.0	J	1	10/30/16 13:20	10/31/16 01:37	6100789	RLC
Sulfate	240	10	0.51	mg/L	EPA 300.0		10	10/30/16 13:20	11/02/16 08:05	6100789	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:44	6100776	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:44	6100776	CSW
Barium	0.0863	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:44	6100776	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	10/31/16 08:45	11/01/16 01:44	6100776	CSW
Boron	3.36	0.500	0.0321	mg/L	EPA 6020B		5	10/31/16 08:45	11/03/16 21:48	6100776	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:44	6100776	CSW
Calcium	24.5	2.50	0.155	mg/L	EPA 6020B		5	10/31/16 08:45	11/03/16 13:01	6100776	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:44	6100776	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:44	6100776	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:44	6100776	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:44	6100776	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:44	6100776	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:44	6100776	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 08:45	11/01/16 01:44	6100776	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	10/28/16 08:45	10/28/16 13:35	6100740	MTC



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Report No.: AZJ0754

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100767 - SM 2540 C											
Blank (6100767-BLK1)						Prepared & Analyzed: 10/28/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6100767-BS1)						Prepared & Analyzed: 10/28/16					
Total Dissolved Solids	382	25	10	mg/L	400.00		96	84-108			
Duplicate (6100767-DUP1)						Source: AZJ0743-01 Prepared & Analyzed: 10/28/16					
Total Dissolved Solids	2920	25	10	mg/L		2900			0.8	10	
Duplicate (6100767-DUP2)						Source: AZJ0754-01 Prepared & Analyzed: 10/28/16					
Total Dissolved Solids	3600	25	10	mg/L		3560			1	10	



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Report No.: AZJ0754

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100789 - EPA 300.0											
Blank (6100789-BLK1)						Prepared & Analyzed: 10/30/16					
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 (6100789-BS1)						Prepared & Analyzed: 10/30/16					
Chloride	10.1	0.25	0.01	mg/L	10.010		101	90-110			
Fluoride	9.61	0.30	0.004	mg/L	10.020		96	90-110			
Sulfate	9.98	1.0	0.09	mg/L	10.020		100	90-110			
Matrix Spike (6100789-MS1)						Source: AZJ0753-02 Prepared & Analyzed: 10/30/16					
Chloride	42.5	0.25	0.01	mg/L	10.010	36.0	65	90-110			QM-02
Fluoride	13.2	0.30	0.004	mg/L	10.020	0.43	128	90-110			QM-05
Sulfate	256	1.0	0.09	mg/L	10.020	270	NR	90-110			QM-02
Matrix Spike (6100789-MS2)						Source: AZJ0760-01 Prepared: 10/30/16 Analyzed: 10/31/16					
Chloride	13.4	0.25	0.01	mg/L	10.010	3.04	103	90-110			
Fluoride	10.3	0.30	0.004	mg/L	10.020	0.15	101	90-110			
Sulfate	28.7	1.0	0.09	mg/L	10.020	20.4	83	90-110			QM-05
Matrix Spike Dup (6100789-MSD1)						Source: AZJ0753-02 Prepared & Analyzed: 10/30/16					
Chloride	42.4	0.25	0.01	mg/L	10.010	36.0	64	90-110	0.2	15	QM-02
Fluoride	12.9	0.30	0.004	mg/L	10.020	0.43	125	90-110	2	15	QM-05
Sulfate	255	1.0	0.09	mg/L	10.020	270	NR	90-110	0.3	15	QM-02



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 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			
Batch 6100776 - EPA 3005A											
Blank (6100776-BLK1) Prepared: 10/31/16 Analyzed: 11/01/16											
Antimony	ND	0.0030	0.0008	mg/L							
Arsenic	ND	0.0050	0.0016	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00008	mg/L							
Boron	ND	0.0400	0.0064	mg/L							
Cadmium	ND	0.0010	0.00007	mg/L							
Calcium	ND	0.500	0.0311	mg/L							
Chromium	ND	0.0100	0.0009	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0005	mg/L							
Lead	ND	0.0050	0.0001	mg/L							
Molybdenum	ND	0.0100	0.0017	mg/L							
Nickel	ND	0.0100	0.0006	mg/L							
Selenium	ND	0.0100	0.0010	mg/L							
Silver	ND	0.0100	0.0005	mg/L							
Thallium	ND	0.0010	0.0002	mg/L							
Vanadium	ND	0.0100	0.0071	mg/L							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100776 - EPA 3005A											
LCS (6100776-BS1)						Prepared: 10/31/16 Analyzed: 11/01/16					
Antimony	0.101	0.0030	0.0008	mg/L	0.10000		101	80-120			
Arsenic	0.0980	0.0050	0.0016	mg/L	0.10000		98	80-120			
Barium	0.0996	0.0100	0.0004	mg/L	0.10000		100	80-120			
Beryllium	0.100	0.0030	0.00008	mg/L	0.10000		100	80-120			
Boron	1.04	0.0400	0.0064	mg/L	1.0000		104	80-120			
Cadmium	0.0984	0.0010	0.00007	mg/L	0.10000		98	80-120			
Calcium	0.996	0.500	0.0311	mg/L	1.0000		100	80-120			
Chromium	0.106	0.0100	0.0009	mg/L	0.10000		106	80-120			
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000		100	80-120			
Copper	0.0976	0.0250	0.0005	mg/L	0.10000		98	80-120			
Lead	0.0959	0.0050	0.0001	mg/L	0.10000		96	80-120			
Molybdenum	0.103	0.0100	0.0017	mg/L	0.10000		103	80-120			
Nickel	0.0980	0.0100	0.0006	mg/L	0.10000		98	80-120			
Selenium	0.0999	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	0.0975	0.0010	0.0002	mg/L	0.10000		98	80-120			
Vanadium	0.103	0.0100	0.0071	mg/L	0.10000		103	80-120			
Zinc	0.109	0.0100	0.0021	mg/L	0.10000		109	80-120			
Lithium	0.104	0.0500	0.0021	mg/L	0.10000		104	80-120			
Matrix Spike (6100776-MS1)						Source: AZJ0754-04 Prepared: 10/31/16 Analyzed: 11/01/16					
Antimony	0.105	0.0030	0.0008	mg/L	0.10000	ND	105	75-125			
Arsenic	0.103	0.0050	0.0016	mg/L	0.10000	ND	103	75-125			
Barium	0.185	0.0100	0.0004	mg/L	0.10000	0.0876	98	75-125			
Beryllium	0.0987	0.0030	0.00008	mg/L	0.10000	0.0001	99	75-125			
Boron	3.89	0.200	0.0321	mg/L	1.0000	3.39	51	75-125			QM-02
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125			
Calcium	26.1	2.50	0.155	mg/L	1.0000	24.7	138	75-125			QM-02
Chromium	0.108	0.0100	0.0009	mg/L	0.10000	ND	108	75-125			
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000	ND	103	75-125			
Copper	0.100	0.0250	0.0005	mg/L	0.10000	ND	100	75-125			
Lead	0.0966	0.0050	0.0001	mg/L	0.10000	ND	97	75-125			
Molybdenum	0.105	0.0100	0.0017	mg/L	0.10000	ND	105	75-125			
Nickel	0.102	0.0100	0.0006	mg/L	0.10000	ND	102	75-125			
Selenium	0.0961	0.0100	0.0010	mg/L	0.10000	ND	96	75-125			
Silver	0.105	0.0100	0.0005	mg/L	0.10000	ND	105	75-125			
Thallium	0.102	0.0010	0.0002	mg/L	0.10000	ND	102	75-125			
Vanadium	0.109	0.0100	0.0071	mg/L	0.10000	ND	109	75-125			
Zinc	0.110	0.0100	0.0021	mg/L	0.10000	0.0029	108	75-125			
Lithium	0.101	0.0500	0.0021	mg/L	0.10000	ND	101	75-125			



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Attention: Mr. Joju Abraham

May 10, 2017

Report No.: AZJ0754

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100776 - EPA 3005A											
Matrix Spike Dup (6100776-MSD1)			Source: AZJ0754-04			Prepared: 10/31/16 Analyzed: 11/01/16					
Antimony	0.105	0.0030	0.0008	mg/L	0.10000	ND	105	75-125	0.5	20	
Arsenic	0.103	0.0050	0.0016	mg/L	0.10000	ND	103	75-125	0.4	20	
Barium	0.183	0.0100	0.0004	mg/L	0.10000	0.0876	95	75-125	1	20	
Beryllium	0.0971	0.0030	0.00008	mg/L	0.10000	0.0001	97	75-125	2	20	
Boron	4.08	0.200	0.0321	mg/L	1.0000	3.39	70	75-125	5	20	QM-02
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125	0.9	20	
Calcium	25.6	2.50	0.155	mg/L	1.0000	24.7	81	75-125	2	20	
Chromium	0.105	0.0100	0.0009	mg/L	0.10000	ND	105	75-125	3	20	
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	ND	102	75-125	1	20	
Copper	0.0958	0.0250	0.0005	mg/L	0.10000	ND	96	75-125	4	20	
Lead	0.0988	0.0050	0.0001	mg/L	0.10000	ND	99	75-125	2	20	
Molybdenum	0.105	0.0100	0.0017	mg/L	0.10000	ND	105	75-125	0.7	20	
Nickel	0.0981	0.0100	0.0006	mg/L	0.10000	ND	98	75-125	4	20	
Selenium	0.0917	0.0100	0.0010	mg/L	0.10000	ND	92	75-125	5	20	
Silver	0.0998	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	5	20	
Thallium	0.103	0.0010	0.0002	mg/L	0.10000	ND	103	75-125	0.8	20	
Vanadium	0.105	0.0100	0.0071	mg/L	0.10000	ND	105	75-125	4	20	
Zinc	0.106	0.0100	0.0021	mg/L	0.10000	0.0029	103	75-125	4	20	
Lithium	0.101	0.0500	0.0021	mg/L	0.10000	ND	101	75-125	0.2	20	
Post Spike (6100776-PS1)											
Source: AZJ0754-04			Prepared: 10/31/16 Analyzed: 11/01/16								
Antimony	95.4			ug/L	100.00	0.285	95	80-120			
Arsenic	100			ug/L	100.00	1.52	99	80-120			
Barium	183			ug/L	100.00	87.6	95	80-120			
Beryllium	100			ug/L	100.00	0.122	100	80-120			
Boron	4170			ug/L	1000.0	3390	78	80-120			QM-02
Cadmium	102			ug/L	100.00	0.0002	102	80-120			
Calcium	24400			ug/L	1000.0	24700	NR	80-120			QM-02
Chromium	108			ug/L	100.00	0.787	107	80-120			
Cobalt	106			ug/L	100.00	0.276	105	80-120			
Copper	98.4			ug/L	100.00	0.269	98	80-120			
Lead	96.1			ug/L	100.00	0.0637	96	80-120			
Molybdenum	107			ug/L	100.00	0.493	107	80-120			
Nickel	102			ug/L	100.00	0.157	102	80-120			
Selenium	104			ug/L	100.00	0.280	104	80-120			
Silver	100			ug/L	100.00	0.0089	100	80-120			
Thallium	100			ug/L	100.00	0.0644	100	80-120			
Vanadium	110			ug/L	100.00	2.12	108	80-120			
Zinc	110			ug/L	100.00	2.89	107	80-120			
Lithium	102			ug/L	100.00	0.684	101	80-120			



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Report No.: AZJ0754

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100823 - EPA 7470A											
Blank (6100823-BLK1)											
						Prepared & Analyzed: 11/01/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6100823-BS1)											
						Prepared & Analyzed: 11/01/16					
Mercury	0.00233	0.00050	0.000041	mg/L	2.5000E-3		93	80-120			
Matrix Spike (6100823-MS1)											
						Source: AZJ0760-05			Prepared & Analyzed: 11/01/16		
Mercury	0.00230	0.00050	0.000041	mg/L	2.5000E-3	ND	92	75-125			
Matrix Spike Dup (6100823-MSD1)											
						Source: AZJ0760-05			Prepared & Analyzed: 11/01/16		
Mercury	0.00228	0.00050	0.000041	mg/L	2.5000E-3	ND	91	75-125	0.7	20	
Post Spike (6100823-PS1)											
						Source: AZJ0760-05			Prepared & Analyzed: 11/01/16		
Mercury	1.63			ug/L	1.6667	-0.0558	98	80-120			



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Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

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

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



CHAIN OF CUSTODY RECORD

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

PAGE: 1 OF 1

Form containing client information (Georgia Power), project details (Plant Kraft Grumman Road), analysis requested (Metals, EPA 6020, Radium), and a table of samples with collection dates, times, and matrix codes.

December 05, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Kraft Grumman Road
Pace Project No.: 30200752

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft Grumman Road
Pace Project No.: 30200752

Pennsylvania Certification IDs

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200752

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30200752001	GWA-7	Water	10/25/16 09:57	10/27/16 09:30
30200752002	GWC-20	Water	10/25/16 13:20	10/27/16 09:30
30200752003	GWC-1	Water	10/25/16 14:31	10/27/16 09:30
30200752004	GWC-19	Water	10/25/16 16:11	10/27/16 09:30
30200752005	EB-2-10-25-16	Water	10/25/16 17:10	10/27/16 09:30
30200752006	Dup-1	Water	10/25/16 00:00	10/27/16 09:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft Grumman Road
Pace Project No.: 30200752

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30200752001	GWA-7	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200752002	GWC-20	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200752003	GWC-1	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200752004	GWC-19	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200752005	EB-2-10-25-16	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200752006	Dup-1	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Plant Kraft Grumman Road

Pace Project No.: 30200752

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:

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: Plant Kraft Grumman Road

Pace Project No.: 30200752

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
- GWA-7 (Lab ID: 30200752001)
 - Radium-228
- GWC-1 (Lab ID: 30200752003)
 - Radium-228
- GWC-20 (Lab ID: 30200752002)
 - Radium-228

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Plant Kraft Grumman Road

Pace Project No.: 30200752

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.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
Pace Project No.: 30200752

Sample: GWA-7 Lab ID: 30200752001 Collected: 10/25/16 09:57 Received: 10/27/16 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • Upon receipt at the laboratory, 3 mls of nitric acid were added to the sample to meet the sample preservation requirement of pH <2 for radiological analyses.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	6.42 ± 1.36 (0.575) C:97% T:NA	pCi/L	11/28/16 10:05	13982-63-3	
Radium-228	EPA 9320	4.11 ± 1.06 (0.934) C:73% T:80%	pCi/L	11/29/16 11:51	15262-20-1	1c
Total Radium	Total Radium Calculation	10.5 ± 2.42 (1.51)	pCi/L	11/30/16 09:16	7440-14-4	

Sample: GWC-20 Lab ID: 30200752002 Collected: 10/25/16 13:20 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	0.862 ± 0.503 (0.757) C:97% T:NA	pCi/L	11/17/16 08:56	13982-63-3	
Radium-228	EPA 9320	0.645 ± 0.528 (1.05) C:67% T:82%	pCi/L	11/29/16 11:22	15262-20-1	1c
Total Radium	Total Radium Calculation	1.51 ± 1.03 (1.81)	pCi/L	11/30/16 09:16	7440-14-4	

Sample: GWC-1 Lab ID: 30200752003 Collected: 10/25/16 14:31 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	0.759 ± 0.529 (0.931) C:95% T:NA	pCi/L	11/17/16 08:56	13982-63-3	
Radium-228	EPA 9320	1.26 ± 0.578 (0.966) C:75% T:84%	pCi/L	11/29/16 11:22	15262-20-1	1c
Total Radium	Total Radium Calculation	2.02 ± 1.11 (1.90)	pCi/L	11/30/16 09:16	7440-14-4	

Sample: GWC-19 Lab ID: 30200752004 Collected: 10/25/16 16:11 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	1.69 ± 0.452 (0.281) C:95% T:NA	pCi/L	11/17/16 08:56	13982-63-3	
Radium-228	EPA 9320	1.80 ± 0.580 (0.788) C:73% T:88%	pCi/L	11/29/16 15:00	15262-20-1	
Total Radium	Total Radium Calculation	3.49 ± 1.03 (1.07)	pCi/L	11/30/16 09:16	7440-14-4	

Sample: EB-2-10-25-16 Lab ID: 30200752005 Collected: 10/25/16 17:10 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	0.101 ± 0.141 (0.303) C:94% T:NA	pCi/L	11/17/16 08:56	13982-63-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200752

Sample: EB-2-10-25-16		Lab ID: 30200752005		Collected: 10/25/16 17:10	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-228	EPA 9320	0.592 ± 0.434 (0.850)		pCi/L	11/29/16 15:00	15262-20-1	
		C:73% T:77%					
Total Radium	Total Radium Calculation	0.693 ± 0.575 (1.15)		pCi/L	11/30/16 09:16	7440-14-4	

Sample: Dup-1		Lab ID: 30200752006		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	1.91 ± 0.499 (0.328)		pCi/L	11/17/16 08:56	13982-63-3	
		C:89% T:NA					
Radium-228	EPA 9320	1.82 ± 0.669 (1.03)		pCi/L	11/29/16 15:00	15262-20-1	
		C:66% T:79%					
Total Radium	Total Radium Calculation	3.73 ± 1.17 (1.36)		pCi/L	11/30/16 09:16	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200752

QC Batch: 239634 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Associated Lab Samples: 30200752001, 30200752002, 30200752003, 30200752004, 30200752005, 30200752006

METHOD BLANK: 1177541 Matrix: Water

Associated Lab Samples: 30200752001, 30200752002, 30200752003, 30200752004, 30200752005, 30200752006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00510 ± 0.0867 (0.243) C:98% T:NA	pCi/L	11/17/16 15:50	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200752

QC Batch: 239884 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Associated Lab Samples: 30200752001, 30200752002, 30200752003

METHOD BLANK: 1178563 Matrix: Water

Associated Lab Samples: 30200752001, 30200752002, 30200752003

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200752

QC Batch: 239886

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30200752004, 30200752005, 30200752006

METHOD BLANK: 1178565

Matrix: Water

Associated Lab Samples: 30200752004, 30200752005, 30200752006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.269 ± 0.331 (0.697) C:68% T:83%	pCi/L	11/29/16 15:02	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Kraft Grumman Road

Pace Project No.: 30200752

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.

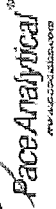
ANALYTE QUALIFIERS

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.

REPORT OF LABORATORY ANALYSIS

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WO#: 30200752



Chain of Custody

Workorder: AZI0754 Workorder Name: Plant Kraft Grumman Road Owner Received Date:

Results Requested By: 11/28/2016

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers			Date/Time	Comments
						30	NH			
1	GWA-7	G	10/25/2016 9:57	AZI0754-01	GW	1			X	
2	GWC-20	G	10/25/2016 13:20	AZI0754-02	GW	1			X	
3	GWC-1	G	10/25/2016 14:31	AZI0754-03	GW	1			X	
4	GWC-19	G	10/25/2016 16:11	AZI0754-04	GW	1			X	
5	EB-2-10-25-16	G	10/25/2016 17:10	AZI0754-05	W	1			X	
6	Dup-1	G	10/25/2016 0:00	AZI0754-06	GW	1			X	
7										
8										
9										
10										
Transfers										
1	Released By: <i>MacLanahan</i>		Date/Time: 10/26/16	Received By: <i>Michael Lambert</i>	Date/Time: 10-27-16					
2										
3										

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

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



CHAIN OF CUSTODY RECORD

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

30200752

PAGE: 1 OF 1

CLIENT NAME:	Georgia Power	CONTAINER TYPE:	P	ANALYSIS REQUESTED:	P	RELINQUISHED BY:	for	DATE/TIME:	10/25/16 1710
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:	241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239	PRESERVATION:	3	CONTAINER TYPE:	3	RELINQUISHED BY:	for	DATE/TIME:	10/26/16 1050
REPORT TO:	Lauren Petty Heath McCorkle laburch@southernco.com	# of CONTAINERS:	3	CONTAINER TYPE:	3	RELINQUISHED BY:	for	DATE/TIME:	10/26/16 1635
PROJECT NAME/STATE:	Plant Kraft Grumman Road Phase 2 CCR & State D&O	CONTAINER TYPE:	3	CONTAINER TYPE:	3	RELINQUISHED BY:	for	DATE/TIME:	10/26/16 1635
Collection DATE	Collection TIME	MATRIX CODE*	SAMPLE IDENTIFICATION	Metals App. III & IV (EPA 6020/7470)	Metals (See attached) (EPA 6020)	CI, T, SO ₄ , & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	DATE/TIME:	DATE/TIME:
10/25/16	0957	GW	Dup-1	1	1	1	1	10/26/16 1050	10/26/16 1050
10/25/16	1320	GW	GWA-7	1	1	1	1		
10/25/16	1431	GW	GWC-20	1	1	1	1		
10/25/16	1611	GW	GWC-1	1	1	1	1		
10/25/16	1710	W	GWC-19	1	1	1	1		
10/25/16		GW	EB-2-10-25-16	1	1	1	1		
10/25/16		GW	Dup-1	1	1	1	1		

CONTAINER TYPE	PRESERVATION	MATRIX CODES:	REMARKS/ADDITIONAL INFORMATION
P - PLASTIC	1 - HCl, ≤6°C	DW - DRINKING WATER	S - SOIL
A - AMBER GLASS	2 - H ₂ SO ₄ , ≤6°C	WW - WASTEWATER	SL - SLUDGE
G - CLEAR GLASS	3 - HNO ₃	GW - GROUNDWATER	SD - SOLID
V - VOA VIAL	4 - NaOH, ≤6°C	SW - SURFACE WATER	A - AIR
S - STERILE	5 - NaOH/ZnAc, ≤6°C	ST - STORM WATER	L - LIQUID
O - OTHER	6 - Na ₂ S ₂ O ₃ , ≤6°C	W - WATER	P - PRODUCT
	7 - ≤6°C not frozen		

LAB # 4320754
 Entered into LIMS
 Tracking #

FOR LAB USE ONLY

Sample Condition Upon Receipt Pittsburgh



Client Name: Pace Georgia

Project # 30200752

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 10812 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: <u>WT</u>				5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used: -Pace Containers Used:	✓		✓	10.
Containers Intact:	✓			11.
Filtered volume received for Dissolved tests All containers needing preservation have been checked.			✓	12.
All containers needing preservation are found to be in compliance with EPA recommendation.	✓			13. <u>PHC2</u> added 3ML HNO ₃ to sample 1
exceptions: VOA, coliform, TOC, O&G, Phenolics	✓			
				Initial when completed: <u>KH</u> Date/time of preservation: <u>10-27-16 930 pm</u>
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	14.
Trip Blank Present:			✓	15.
Trip Blank Custody Seals Present			✓	
Rad Aqueous Samples Screened > 0.5 mrem/hr		✓		Initial when completed: <u>KH</u> Date: <u>10-27-16</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment



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

Test: Ra-228
Analyst: JLW
Date: 11/22/2016
Worklist: 32407
Matrix: DW

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	
LCS (Y or N)?	LCS (Y or N)?
LCS32407	LCS32407
Count Date:	11/29/2016
Spike I.D.:	16-027
Spike Concentration (pCi/mL):	25.955
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.808
Target Conc. (pCi/L, g, F):	6.422
Uncertainty (Calculated):	0.462
Result (pCi/L, g, F):	7.751
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.384
Numerical Performance Indicator:	0.395
Percent Recovery:	-19.46
Status vs Numerical Indicator:	5.97%
Status vs Recovery:	N/A
	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS32407
Duplicate Sample I.D.:	LCS32407
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:	181.42%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

**Batch must be re-prepped due to LCSD failure.

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

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

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

LCS NOT SPIKED - CANNOT ASSESS PRECISION TO CLIENT INFORMED AND GAVE PERMISSION TO REPORT BASED ON ACCEPTABLE LCS and MB

1 of 1

OK 12/5/16

Quality Control Sample Performance Assessment



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Test: Ra-226
Analyst: LAL
Date: 11/15/2016
Worklist: 32363
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1177541
MB Concentration:	0.005
M/B Counting Uncertainty:	0.087
MB MDC:	0.243
MB Numerical Performance Indicator:	0.12
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	11/17/2016
Spike I.D.:	16-026
Spike Concentration (pCi/ml):	44.674
Volume Used (ml):	0.10
Aliquot Volume (L, g, F):	0.500
Target Conc. (pCi/L, g, F):	8.939
Uncertainty (Calculated):	0.420
Result (pCi/L, g, F):	6.836
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.731
Numerical Performance Indicator:	4.89
Percent Recovery:	76.47%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30200847004
Duplicate Sample I.D.:	30200847004DUP
Sample Result (pCi/L, g, F):	0.688
Sample Result Counting Uncertainty (pCi/L, g, F):	0.263
Sample Duplicate Result (pCi/L, g, F):	0.523
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.222
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	0.937
Duplicate RPD:	27.20%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

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

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

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 11/22/2016
Worklist: 32408
Matrix: DW

Method Blank Assessment	
MB Sample ID	1178565
MB concentration:	0.269
M/B Counting Uncertainty:	0.327
MB MDC:	0.697
MB Numerical Performance Indicator:	1.61
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	11/29/2016
Spike I.D.:	16-027
Spike Concentration (pCi/mL):	25.953
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.806
Target Conc. (pCi/L, g, F):	6.441
Uncertainty (Calculated):	0.464
Result (pCi/L, g, F):	8.535
Counting Uncertainty (pCi/L, g, F):	0.881
Numerical Performance Indicator:	4.12
Percent Recovery:	132.52%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30200847004
Duplicate Sample I.D.:	30200847004DUP
Sample Result (pCi/L, g, F):	1.341
Sample Duplicate Result (pCi/L, g, F):	0.458
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.895
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.402
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	1.435
Duplicate RPD:	39.92%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

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

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

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



PACE ANALYTICAL SERVICES, 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: AZJ0755

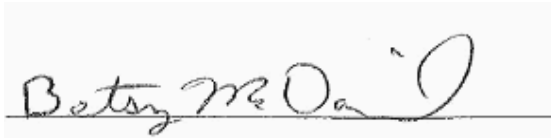
November 07, 2016

Project: CCR Event

Project #: Plant Kraft Grumman Road

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

Approved:



Project Manager

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All test results relate only to the samples analyzed.



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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 07, 2016

ANALYTICAL REPORT FOR SAMPLES

<u>Sample ID</u>	<u>Laboratory ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
GWA-7 Filtered	AZJ0755-01	Ground Water	10/25/16 09:57	10/26/16 16:35



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 07, 2016

Report No.: AZJ0755

Project: CCR Event

Client ID: GWA-7 Filtered

Lab Number ID: AZJ0755-01

Date/Time Sampled: 10/25/2016 9:57:00AM

Date/Time Received: 10/26/2016 4:35:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Metals, Dissolved											
Antimony	ND	0.0150	0.0042	mg/L	EPA 6020B	R-01	5	11/01/16 08:20	11/04/16 13:18	6100818	CSW
Arsenic	ND	0.0250	0.0082	mg/L	EPA 6020B	R-01	5	11/01/16 08:20	11/04/16 13:18	6100818	CSW
Barium	0.162	0.0500	0.0022	mg/L	EPA 6020B		5	11/01/16 08:20	11/04/16 13:18	6100818	CSW
Beryllium	0.0004	0.0150	0.0004	mg/L	EPA 6020B	R-01, J	5	11/01/16 08:20	11/04/16 13:18	6100818	CSW
Boron	17.6	0.500	0.0321	mg/L	EPA 6020B		5	11/01/16 08:20	11/04/16 13:18	6100818	CSW
Cadmium	ND	0.0050	0.0004	mg/L	EPA 6020B	R-01	5	11/01/16 08:20	11/04/16 13:18	6100818	CSW
Calcium	8.04	2.50	0.155	mg/L	EPA 6020B		5	11/01/16 08:20	11/04/16 13:18	6100818	CSW
Chromium	0.0484	0.0500	0.0047	mg/L	EPA 6020B	R-01, J	5	11/01/16 08:20	11/04/16 13:18	6100818	CSW
Cobalt	0.0032	0.0500	0.0026	mg/L	EPA 6020B	R-01, J	5	11/01/16 08:20	11/04/16 13:18	6100818	CSW
Lead	0.0032	0.0250	0.0006	mg/L	EPA 6020B	R-01, J	5	11/01/16 08:20	11/04/16 13:18	6100818	CSW
Molybdenum	ND	0.0500	0.0086	mg/L	EPA 6020B	R-01	5	11/01/16 08:20	11/04/16 13:18	6100818	CSW
Selenium	0.0244	0.0500	0.0050	mg/L	EPA 6020B	R-01, J	5	11/01/16 08:20	11/04/16 13:18	6100818	CSW
Thallium	ND	0.0050	0.0010	mg/L	EPA 6020B	R-01	5	11/01/16 08:20	11/04/16 13:18	6100818	CSW
Lithium	ND	0.250	0.0103	mg/L	EPA 6020B	R-01	5	11/01/16 08:20	11/04/16 13:18	6100818	CSW
Mercury	ND	0.0005	0.00004	mg/L	EPA 7470A		1	11/01/16 10:00	11/01/16 14:12	6110010	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 07, 2016

Report No.: AZJ0755

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100818 - EPA 3005A											
Blank (6100818-BLK1)						Prepared: 11/01/16 Analyzed: 11/04/16					
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							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
LCS (6100818-BS1)						Prepared: 11/01/16 Analyzed: 11/04/16					
Antimony	0.110	0.0030	0.0008	mg/L	0.10000		110	80-120			
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000		101	80-120			
Barium	0.0994	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	1.03	0.100	0.0064	mg/L	1.0000		103	80-120			
Cadmium	0.103	0.0010	0.00007	mg/L	0.10000		103	80-120			
Calcium	0.998	0.500	0.0311	mg/L	1.0000		100	80-120			
Chromium	0.0991	0.0100	0.0009	mg/L	0.10000		99	80-120			
Cobalt	0.0942	0.0100	0.0005	mg/L	0.10000		94	80-120			
Copper	0.0939	0.0050	0.0005	mg/L	0.10000		94	80-120			
Lead	0.0977	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	0.0964	0.0050	0.0006	mg/L	0.10000		96	80-120			
Selenium	0.100	0.0100	0.0010	mg/L	0.10000		100	80-120			
Silver	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Thallium	0.0982	0.0010	0.0002	mg/L	0.10000		98	80-120			
Vanadium	0.0998	0.0100	0.0071	mg/L	0.10000		100	80-120			
Zinc	0.104	0.0100	0.0021	mg/L	0.10000		104	80-120			
Lithium	0.103	0.0500	0.0021	mg/L	0.10000		103	80-120			



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November 07, 2016

Report No.: AZJ0755

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100818 - EPA 3005A											
Matrix Spike (6100818-MS1)			Source: AZJ0762-01			Prepared: 11/01/16 Analyzed: 11/04/16					
Antimony	0.108	0.0030	0.0008	mg/L	0.10000	ND	108	75-125			
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000	ND	101	75-125			
Barium	0.126	0.0100	0.0004	mg/L	0.10000	0.0324	94	75-125			
Beryllium	0.0879	0.0030	0.00008	mg/L	0.10000	ND	88	75-125			
Boron	3.00	0.100	0.0064	mg/L	1.0000	2.18	82	75-125			
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125			
Calcium	43.0	2.50	0.155	mg/L	1.0000	40.9	212	75-125			QM-02
Chromium	0.0973	0.0100	0.0009	mg/L	0.10000	ND	97	75-125			
Cobalt	0.0957	0.0100	0.0005	mg/L	0.10000	0.0012	95	75-125			
Copper	0.0933	0.0050	0.0005	mg/L	0.10000	0.0007	93	75-125			
Lead	0.0957	0.0050	0.0001	mg/L	0.10000	ND	96	75-125			
Molybdenum	0.106	0.0100	0.0017	mg/L	0.10000	ND	106	75-125			
Nickel	0.0965	0.0050	0.0006	mg/L	0.10000	0.0020	94	75-125			
Selenium	0.103	0.0100	0.0010	mg/L	0.10000	ND	103	75-125			
Silver	0.0983	0.0100	0.0005	mg/L	0.10000	ND	98	75-125			
Thallium	0.0959	0.0010	0.0002	mg/L	0.10000	ND	96	75-125			
Vanadium	0.101	0.0100	0.0071	mg/L	0.10000	ND	101	75-125			
Zinc	0.102	0.0100	0.0021	mg/L	0.10000	ND	102	75-125			
Lithium	0.0911	0.0500	0.0021	mg/L	0.10000	0.0035	88	75-125			
Matrix Spike Dup (6100818-MSD1)			Source: AZJ0762-01			Prepared: 11/01/16 Analyzed: 11/04/16					
Antimony	0.110	0.0030	0.0008	mg/L	0.10000	ND	110	75-125	1	20	
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000	ND	101	75-125	0.2	20	
Barium	0.131	0.0100	0.0004	mg/L	0.10000	0.0324	99	75-125	4	20	
Beryllium	0.0897	0.0030	0.00008	mg/L	0.10000	ND	90	75-125	2	20	
Boron	2.99	0.100	0.0064	mg/L	1.0000	2.18	81	75-125	0.3	20	
Cadmium	0.102	0.0010	0.00007	mg/L	0.10000	ND	102	75-125	0.8	20	
Calcium	42.2	2.50	0.155	mg/L	1.0000	40.9	136	75-125	2	20	QM-02
Chromium	0.0953	0.0100	0.0009	mg/L	0.10000	ND	95	75-125	2	20	
Cobalt	0.0938	0.0100	0.0005	mg/L	0.10000	0.0012	93	75-125	2	20	
Copper	0.0931	0.0050	0.0005	mg/L	0.10000	0.0007	92	75-125	0.2	20	
Lead	0.0955	0.0050	0.0001	mg/L	0.10000	ND	95	75-125	0.2	20	
Molybdenum	0.105	0.0100	0.0017	mg/L	0.10000	ND	105	75-125	0.2	20	
Nickel	0.0968	0.0050	0.0006	mg/L	0.10000	0.0020	95	75-125	0.3	20	
Selenium	0.104	0.0100	0.0010	mg/L	0.10000	ND	104	75-125	1	20	
Silver	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	2	20	
Thallium	0.0974	0.0010	0.0002	mg/L	0.10000	ND	97	75-125	2	20	
Vanadium	0.101	0.0100	0.0071	mg/L	0.10000	ND	101	75-125	0.4	20	
Zinc	0.105	0.0100	0.0021	mg/L	0.10000	ND	105	75-125	3	20	
Lithium	0.0942	0.0500	0.0021	mg/L	0.10000	0.0035	91	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 07, 2016

Report No.: AZJ0755

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100818 - EPA 3005A											
Post Spike (6100818-PS1)				Source: AZJ0762-01				Prepared: 11/01/16 Analyzed: 11/04/16			
Antimony	110			ug/L	100.00	0.0545	110	80-120			
Arsenic	102			ug/L	100.00	0.182	102	80-120			
Barium	129			ug/L	100.00	32.4	97	80-120			
Beryllium	89.4			ug/L	100.00	0.0392	89	80-120			
Boron	3050			ug/L	1000.0	2180	88	80-120			
Cadmium	100			ug/L	100.00	0.0471	100	80-120			
Calcium	43200			ug/L	1000.0	40900	237	80-120			QM-02
Chromium	101			ug/L	100.00	0.148	101	80-120			
Cobalt	96.4			ug/L	100.00	1.18	95	80-120			
Copper	97.8			ug/L	100.00	0.694	97	80-120			
Lead	95.2			ug/L	100.00	0.0398	95	80-120			
Molybdenum	105			ug/L	100.00	0.311	105	80-120			
Nickel	101			ug/L	100.00	2.04	99	80-120			
Selenium	104			ug/L	100.00	-0.157	104	80-120			
Silver	98.0			ug/L	100.00	0.0250	98	80-120			
Thallium	96.0			ug/L	100.00	0.155	96	80-120			
Vanadium	104			ug/L	100.00	1.41	103	80-120			
Zinc	103			ug/L	100.00	1.99	101	80-120			
Lithium	90.4			ug/L	100.00	3.50	87	80-120			

Batch 6110010 - EPA 7470A

Blank (6110010-BLK1)											
						Prepared & Analyzed: 11/01/16					
Mercury	ND	0.0005	0.00004	mg/L							
LCS (6110010-BS1)											
						Prepared & Analyzed: 11/01/16					
Mercury	0.0023	0.0005	0.00004	mg/L	2.5000E-3		92	80-120			



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Attention: Mr. Joju Abraham

November 07, 2016

Report No.: AZJ0755

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110010 - EPA 7470A											
Matrix Spike (6110010-MS1)		Source: AZJ0762-02				Prepared & Analyzed: 11/01/16					
Mercury	0.0022	0.0005	0.00004	mg/L	2.5000E-3	ND	87	75-125			
Matrix Spike Dup (6110010-MSD1)		Source: AZJ0762-02				Prepared & Analyzed: 11/01/16					
Mercury	0.0022	0.0005	0.00004	mg/L	2.5000E-3	ND	88	75-125	1	20	
Post Spike (6110010-PS1)		Source: AZJ0762-02				Prepared & Analyzed: 11/01/16					
Mercury	1.50			ug/L	1.6667	-0.0572	93	80-120			



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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

- R-01** Elevated reporting limit due to matrix interference.
QM-02 The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
J Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

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



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

CHAIN OF CUSTODY RECORD

PAGE: 1 OF 1

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B101B5 Atlanta, GA 30308 404-505-7239 REPORT TO: Lauren Petty REQUESTED COMPLETION DATE: Heath McCormle PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase 2 CCR & State D&O		CONTAINER TYPE PRESERVATION: P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION: 1 - HCl, -6°C 2 - H ₂ SO ₄ , -6°C 3 - HNO ₃ 4 - NaOH, -6°C 5 - NaOH/ZnAc, -6°C 6 - Na ₂ S ₂ O ₈ , -6°C 7 - -6°C not frozen MATRIX CODES: DW - DRINKING WATER S - SOIL NW - WASTEWATER SL - SLUDGE GW - GROUNDWATER SD - SOLID SW - SURFACE WATER A - AIR ST - STORM WATER L - LIQUID W - WATER P - PRODUCT REMARKS/ADDITIONAL INFORMATION	
ANALYSIS REQUESTED P 3 P 3 P 7 P 3 Metals (See attached) EPA 6020 Cl, F, SO ₄ & TDS EPA 300.0 & SM 2540C Radium 226 & 228 (5W-846 9315/9320)		CONTAINER PRESERVATION # of CONTAINERS ↓	
RELINQUISHED BY: <i>John D. [Signature]</i> DATE/TIME: 10/25/16 0957		RELINQUISHED BY: <i>John D. [Signature]</i> DATE/TIME: 10/26/16 1030	
RECEIVED BY: <i>Heath McCormle</i> DATE/TIME: 10/26/16 1635		RECEIVED BY: <i>Heath McCormle</i> DATE/TIME: 10/26/16 1635	
SAMPLED BY AND TITLE: O. FINLA (ML) RECEIVED BY: <i>Heath McCormle</i>		SAMPLE SHIPPED VIA: USPS CLIENT: OTHER ES COPIES: <i>(initials)</i> COPIES: <i>(initials)</i>	
LAB #: A230755 Entered into LIMS: Tracking #:		FOR LAB USE ONLY	

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
Plant Kraft - Grumman Rd COC Phase 2 CCR State



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LOG-IN CHECKLIST

Printed: 11/7/2016 3:56:40PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 10/26/16 16:35

Work Order: AZJ0755

Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 1

#Containers: 1

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
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(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: AZJ0785

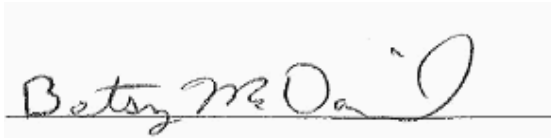
November 08, 2016

Project: CCR Event

Project #: Plant Kraft Grumman Road

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

Approved:



Project Manager

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All test results relate only to the samples analyzed.



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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FB-2-10-26-16	AZJ0785-01	Water	10/26/16 12:00	10/27/16 13:15
GWC-12	AZJ0785-02	Ground Water	10/26/16 11:47	10/27/16 13:15
GWC-13	AZJ0785-03	Ground Water	10/26/16 13:32	10/27/16 13:15
GWC-5	AZJ0785-04	Ground Water	10/26/16 14:41	10/27/16 13:15
Dup-2	AZJ0785-05	Ground Water	10/26/16 00:00	10/27/16 13:15
GWC-4	AZJ0785-06	Ground Water	10/26/16 16:24	10/27/16 13:15
Dup-3	AZJ0785-07	Ground Water	10/26/16 00:00	10/27/16 13:15
GWC-17	AZJ0785-08	Ground Water	10/26/16 10:21	10/27/16 13:15
FB-3-10-26-16	AZJ0785-09	Water	10/26/16 10:00	10/27/16 13:15
GWC-22	AZJ0785-10	Ground Water	10/26/16 12:25	10/27/16 13:15
GWC-6	AZJ0785-11	Ground Water	10/26/16 15:00	10/27/16 13:15
GWC-2	AZJ0785-12	Ground Water	10/26/16 16:20	10/27/16 13:15
EB-3-10-26-16	AZJ0785-13	Water	10/26/16 16:16	10/27/16 13:15
GWC-11	AZJ0785-14	Ground Water	10/26/16 17:45	10/27/16 13:15



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Project: CCR Event

Client ID: FB-2-10-26-16

Lab Number ID: AZJ0785-01

Date/Time Sampled: 10/26/2016 12:00:00PM

Date/Time Received: 10/27/2016 1:15:00PM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	11/01/16 09:35	11/01/16 09:35	6100803	JPT
Inorganic Anions											
Chloride	0.03	0.25	0.01	mg/L	EPA 300.0	J	1	11/01/16 14:01	11/02/16 10:16	6110025	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 10:16	6110025	RNB
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 10:16	6110025	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 11:00	10/31/16 20:23	6100807	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 11:00	10/31/16 20:23	6100807	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 11:00	10/31/16 20:23	6100807	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/31/16 11:00	10/31/16 20:23	6100807	CSW
Boron	ND	0.100	0.0064	mg/L	EPA 6020B		1	10/31/16 11:00	10/31/16 20:23	6100807	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 11:00	10/31/16 20:23	6100807	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	10/31/16 11:00	10/31/16 20:23	6100807	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/31/16 11:00	10/31/16 20:23	6100807	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/16 11:00	10/31/16 20:23	6100807	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/31/16 11:00	10/31/16 20:23	6100807	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 11:00	10/31/16 20:23	6100807	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/16 11:00	10/31/16 20:23	6100807	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 11:00	10/31/16 20:23	6100807	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 11:00	10/31/16 20:23	6100807	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/02/16 10:50	11/02/16 14:21	6110037	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Project: CCR Event

Client ID: GWC-12

Lab Number ID: AZJ0785-02

Date/Time Sampled: 10/26/2016 11:47:00AM

Date/Time Received: 10/27/2016 1:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1520	25	10	mg/L	SM 2540 C		1	11/01/16 09:35	11/01/16 09:35	6100803	JPT
Inorganic Anions											
Chloride	200	12	0.70	mg/L	EPA 300.0		50	11/01/16 14:01	11/04/16 23:44	6110025	RNB
Fluoride	0.91	0.30	0.02	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 10:38	6110025	RNB
Sulfate	900	50	2.6	mg/L	EPA 300.0		50	11/01/16 14:01	11/04/16 23:44	6110025	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:44	6100817	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:44	6100817	CSW
Barium	0.0197	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:44	6100817	CSW
Beryllium	0.0011	0.0030	0.00008	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 18:44	6100817	CSW
Boron	5.74	1.00	0.0642	mg/L	EPA 6020B		10	10/31/16 14:20	11/03/16 17:12	6100817	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:44	6100817	CSW
Calcium	101	25.0	1.55	mg/L	EPA 6020B		50	10/31/16 14:20	11/03/16 17:05	6100817	CSW
Chromium	0.0012	0.0100	0.0009	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 18:44	6100817	CSW
Cobalt	0.0016	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 18:44	6100817	CSW
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 18:44	6100817	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:44	6100817	CSW
Selenium	0.0020	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 18:44	6100817	CSW
Thallium	0.0003	0.0010	0.0002	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 18:44	6100817	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:44	6100817	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/02/16 10:50	11/02/16 14:24	6110037	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Project: CCR Event

Client ID: GWC-13

Lab Number ID: AZJ0785-03

Date/Time Sampled: 10/26/2016 1:32:00PM

Date/Time Received: 10/27/2016 1:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	11/01/16 10:25	11/01/16 10:25	6100804	JPT
Inorganic Anions											
Chloride	4.9	0.25	0.01	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 11:43	6110025	RNB
Fluoride	0.55	0.30	0.02	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 11:43	6110025	RNB
Sulfate	29	5.0	0.26	mg/L	EPA 300.0		5	11/01/16 14:01	11/05/16 00:05	6110025	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:50	6100817	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:50	6100817	CSW
Barium	0.0238	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:50	6100817	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:50	6100817	CSW
Boron	0.211	0.100	0.0064	mg/L	EPA 6020B		1	10/31/16 14:20	11/03/16 19:59	6100817	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:50	6100817	CSW
Calcium	2.25	0.500	0.0311	mg/L	EPA 6020B		1	10/31/16 14:20	11/03/16 19:59	6100817	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:50	6100817	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:50	6100817	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:50	6100817	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:50	6100817	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:50	6100817	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:50	6100817	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:50	6100817	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/02/16 10:50	11/02/16 14:26	6110037	MTC



PACE ANALYTICAL SERVICES, INC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Project: CCR Event

Client ID: GWC-5

Lab Number ID: AZJ0785-04

Date/Time Sampled: 10/26/2016 2:41:00PM

Date/Time Received: 10/27/2016 1:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	297	25	10	mg/L	SM 2540 C		1	11/01/16 10:25	11/01/16 10:25	6100804	JPT
Inorganic Anions											
Chloride	24	0.25	0.01	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 12:05	6110025	RNB
Fluoride	0.05	0.30	0.02	mg/L	EPA 300.0	J	1	11/01/16 14:01	11/02/16 12:05	6110025	RNB
Sulfate	130	5.0	0.26	mg/L	EPA 300.0		5	11/01/16 14:01	11/05/16 00:25	6110025	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:56	6100817	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:56	6100817	CSW
Barium	0.103	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:56	6100817	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 18:56	6100817	CSW
Boron	2.50	0.500	0.0321	mg/L	EPA 6020B		5	10/31/16 14:20	11/03/16 17:20	6100817	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:56	6100817	CSW
Calcium	18.6	2.50	0.155	mg/L	EPA 6020B		5	10/31/16 14:20	11/03/16 17:20	6100817	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:56	6100817	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:56	6100817	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 18:56	6100817	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:56	6100817	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:56	6100817	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:56	6100817	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 18:56	6100817	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/02/16 10:50	11/02/16 14:33	6110037	MTC



PACE ANALYTICAL SERVICES, INC.

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

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Project: CCR Event

Client ID: Dup-2

Lab Number ID: AZJ0785-05

Date/Time Sampled: 10/26/2016 12:00:00AM

Date/Time Received: 10/27/2016 1:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1520	25	10	mg/L	SM 2540 C		1	11/01/16 10:25	11/01/16 10:25	6100804	JPT
Inorganic Anions											
Chloride	210	12	0.70	mg/L	EPA 300.0		50	11/01/16 14:01	11/05/16 00:46	6110025	RNB
Fluoride	0.86	0.30	0.02	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 12:27	6110025	RNB
Sulfate	930	50	2.6	mg/L	EPA 300.0		50	11/01/16 14:01	11/05/16 00:46	6110025	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:02	6100817	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:02	6100817	CSW
Barium	0.0199	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:02	6100817	CSW
Beryllium	0.0011	0.0030	0.00008	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:02	6100817	CSW
Boron	6.40	1.00	0.0642	mg/L	EPA 6020B		10	10/31/16 14:20	11/03/16 17:56	6100817	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:02	6100817	CSW
Calcium	105	25.0	1.55	mg/L	EPA 6020B		50	10/31/16 14:20	11/03/16 17:27	6100817	CSW
Chromium	0.0011	0.0100	0.0009	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:02	6100817	CSW
Cobalt	0.0017	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:02	6100817	CSW
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:02	6100817	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:02	6100817	CSW
Selenium	0.0019	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:02	6100817	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:02	6100817	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:02	6100817	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/02/16 10:50	11/02/16 14:36	6110037	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Project: CCR Event

Client ID: GWC-4

Lab Number ID: AZJ0785-06

Date/Time Sampled: 10/26/2016 4:24:00PM

Date/Time Received: 10/27/2016 1:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1050	25	10	mg/L	SM 2540 C		1	11/01/16 10:25	11/01/16 10:25	6100804	JPT
Inorganic Anions											
Chloride	110	2.5	0.14	mg/L	EPA 300.0		10	11/01/16 14:01	11/05/16 01:07	6110025	RNB
Fluoride	0.05	0.30	0.02	mg/L	EPA 300.0	J	1	11/01/16 14:01	11/02/16 12:49	6110025	RNB
Sulfate	230	10	0.51	mg/L	EPA 300.0		10	11/01/16 14:01	11/05/16 01:07	6110025	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 21:08	6100817	CSW
Arsenic	0.0016	0.0050	0.0016	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 21:08	6100817	CSW
Barium	0.0863	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 21:08	6100817	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 21:08	6100817	CSW
Boron	7.57	1.00	0.0642	mg/L	EPA 6020B		10	10/31/16 14:20	11/03/16 20:29	6100817	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 21:08	6100817	CSW
Calcium	8.56	0.500	0.0311	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 21:08	6100817	CSW
Chromium	0.0106	0.0100	0.0009	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 21:08	6100817	CSW
Cobalt	0.0011	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 21:08	6100817	CSW
Lead	0.0057	0.0050	0.0001	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 21:08	6100817	CSW
Molybdenum	0.0267	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 21:08	6100817	CSW
Selenium	0.0042	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 21:08	6100817	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 21:08	6100817	CSW
Lithium	0.0046	0.0500	0.0021	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 21:08	6100817	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/02/16 10:50	11/02/16 14:38	6110037	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Project: CCR Event

Client ID: Dup-3

Lab Number ID: AZJ0785-07

Date/Time Sampled: 10/26/2016 12:00:00AM

Date/Time Received: 10/27/2016 1:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1810	25	10	mg/L	SM 2540 C		1	11/01/16 10:25	11/01/16 10:25	6100804	JPT
Inorganic Anions											
Chloride	420	12	0.70	mg/L	EPA 300.0		50	11/01/16 14:01	11/05/16 01:27	6110025	RNB
Fluoride	0.12	0.30	0.02	mg/L	EPA 300.0	J	1	11/01/16 14:01	11/02/16 13:10	6110025	RNB
Sulfate	820	50	2.6	mg/L	EPA 300.0		50	11/01/16 14:01	11/05/16 01:27	6110025	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:07	6100817	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:07	6100817	CSW
Barium	0.0940	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:07	6100817	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:07	6100817	CSW
Boron	9.63	1.00	0.0642	mg/L	EPA 6020B		10	10/31/16 14:20	11/03/16 18:11	6100817	CSW
Cadmium	0.00009	0.0010	0.00007	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:07	6100817	CSW
Calcium	124	25.0	1.55	mg/L	EPA 6020B		50	10/31/16 14:20	11/03/16 18:04	6100817	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:07	6100817	CSW
Cobalt	0.0008	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:07	6100817	CSW
Lead	0.0003	0.0050	0.0001	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:07	6100817	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:07	6100817	CSW
Selenium	0.0014	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:07	6100817	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:07	6100817	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:07	6100817	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/02/16 10:50	11/02/16 14:40	6110037	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Project: CCR Event

Client ID: GWC-17

Lab Number ID: AZJ0785-08

Date/Time Sampled: 10/26/2016 10:21:00AM

Date/Time Received: 10/27/2016 1:15:00PM

Matrix: Ground Water

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	11/01/16 10:25	11/01/16 10:25	6100804	JPT
Inorganic Anions											
Chloride	570	5.0	0.28	mg/L	EPA 300.0		20	11/01/16 14:01	11/05/16 01:48	6110025	RNB
Fluoride	0.68	0.30	0.02	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 13:32	6110025	RNB
Sulfate	280	20	1.0	mg/L	EPA 300.0		20	11/01/16 14:01	11/05/16 01:48	6110025	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:25	6100817	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:25	6100817	CSW
Barium	0.177	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:25	6100817	CSW
Beryllium	0.0016	0.0030	0.00008	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:25	6100817	CSW
Boron	0.500	0.100	0.0064	mg/L	EPA 6020B		1	10/31/16 14:20	11/03/16 20:06	6100817	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:25	6100817	CSW
Calcium	80.3	5.00	0.311	mg/L	EPA 6020B		10	10/31/16 14:20	11/03/16 18:19	6100817	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:25	6100817	CSW
Cobalt	0.0046	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:25	6100817	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:25	6100817	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:25	6100817	CSW
Selenium	0.0013	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:25	6100817	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:25	6100817	CSW
Lithium	0.0065	0.0500	0.0021	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:25	6100817	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/02/16 10:50	11/02/16 14:43	6110037	MTC



PACE ANALYTICAL SERVICES, INC.

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 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Project: CCR Event

Client ID: FB-3-10-26-16

Lab Number ID: AZJ0785-09

Date/Time Sampled: 10/26/2016 10:00:00AM

Date/Time Received: 10/27/2016 1:15:00PM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	11/01/16 10:25	11/01/16 10:25	6100804	JPT
Inorganic Anions											
Chloride	ND	0.25	0.01	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 15:40	6110025	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 15:40	6110025	RNB
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 15:40	6110025	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:30	6100817	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:30	6100817	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:30	6100817	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:30	6100817	CSW
Boron	0.0210	0.100	0.0064	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:30	6100817	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:30	6100817	CSW
Calcium	0.0341	0.500	0.0311	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:30	6100817	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:30	6100817	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:30	6100817	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:30	6100817	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:30	6100817	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:30	6100817	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:30	6100817	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:30	6100817	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/02/16 10:50	11/02/16 15:04	6110038	MTC



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Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Project: CCR Event

Client ID: GWC-22

Lab Number ID: AZJ0785-10

Date/Time Sampled: 10/26/2016 12:25:00PM

Date/Time Received: 10/27/2016 1:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1840	25	10	mg/L	SM 2540 C		1	11/01/16 10:25	11/01/16 10:25	6100804	JPT
Inorganic Anions											
Chloride	450	25	1.4	mg/L	EPA 300.0		100	11/01/16 14:01	11/05/16 02:09	6110025	RNB
Fluoride	0.12	0.30	0.02	mg/L	EPA 300.0	J	1	11/01/16 14:01	11/02/16 16:02	6110025	RNB
Sulfate	850	100	5.1	mg/L	EPA 300.0		100	11/01/16 14:01	11/05/16 02:09	6110025	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:36	6100817	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:36	6100817	CSW
Barium	0.0966	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:36	6100817	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:36	6100817	CSW
Boron	9.81	1.00	0.0642	mg/L	EPA 6020B		10	10/31/16 14:20	11/03/16 18:33	6100817	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:36	6100817	CSW
Calcium	127	25.0	1.55	mg/L	EPA 6020B		50	10/31/16 14:20	11/03/16 18:26	6100817	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:36	6100817	CSW
Cobalt	0.0009	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:36	6100817	CSW
Lead	0.0003	0.0050	0.0001	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:36	6100817	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:36	6100817	CSW
Selenium	0.0010	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:36	6100817	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:36	6100817	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:36	6100817	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/02/16 10:50	11/02/16 15:06	6110038	MTC



PACE ANALYTICAL SERVICES, INC.

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

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Project: CCR Event

Client ID: GWC-6

Lab Number ID: AZJ0785-11

Date/Time Sampled: 10/26/2016 3:00:00PM

Date/Time Received: 10/27/2016 1:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	373	25	10	mg/L	SM 2540 C		1	11/01/16 10:25	11/01/16 10:25	6100804	JPT
Inorganic Anions											
Chloride	67	1.2	0.07	mg/L	EPA 300.0		5	11/01/16 14:01	11/05/16 02:29	6110025	RNB
Fluoride	0.24	0.30	0.02	mg/L	EPA 300.0	J	1	11/01/16 14:01	11/02/16 16:24	6110025	RNB
Sulfate	120	5.0	0.26	mg/L	EPA 300.0		5	11/01/16 14:01	11/05/16 02:29	6110025	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:42	6100817	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:42	6100817	CSW
Barium	0.107	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:42	6100817	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:42	6100817	CSW
Boron	1.83	0.500	0.0321	mg/L	EPA 6020B		5	10/31/16 14:20	11/03/16 20:14	6100817	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:42	6100817	CSW
Calcium	5.45	2.50	0.155	mg/L	EPA 6020B		5	10/31/16 14:20	11/03/16 20:14	6100817	CSW
Chromium	0.0014	0.0100	0.0009	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:42	6100817	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:42	6100817	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:42	6100817	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:42	6100817	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:42	6100817	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:42	6100817	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:42	6100817	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/02/16 10:50	11/02/16 15:09	6110038	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Project: CCR Event

Client ID: GWC-2

Lab Number ID: AZJ0785-12

Date/Time Sampled: 10/26/2016 4:20:00PM

Date/Time Received: 10/27/2016 1:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	135	25	10	mg/L	SM 2540 C		1	11/01/16 10:25	11/01/16 10:25	6100804	JPT
Inorganic Anions											
Chloride	12	0.25	0.01	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 16:46	6110025	RNB
Fluoride	0.62	0.30	0.02	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 16:46	6110025	RNB
Sulfate	100	5.0	0.26	mg/L	EPA 300.0		5	11/01/16 14:01	11/07/16 01:03	6110025	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:47	6100817	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:47	6100817	CSW
Barium	0.113	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:47	6100817	CSW
Beryllium	0.0003	0.0030	0.00008	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:47	6100817	CSW
Boron	0.0500	0.100	0.0064	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:47	6100817	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:47	6100817	CSW
Calcium	5.84	0.500	0.0311	mg/L	EPA 6020B		1	10/31/16 14:20	11/03/16 20:21	6100817	CSW
Chromium	0.0010	0.0100	0.0009	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:47	6100817	CSW
Cobalt	0.0011	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:47	6100817	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:47	6100817	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:47	6100817	CSW
Selenium	0.0035	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:47	6100817	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:47	6100817	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:47	6100817	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/02/16 10:50	11/02/16 15:11	6110038	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Project: CCR Event

Client ID: EB-3-10-26-16

Lab Number ID: AZJ0785-13

Date/Time Sampled: 10/26/2016 4:16:00PM

Date/Time Received: 10/27/2016 1:15:00PM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	11/01/16 10:25	11/01/16 10:25	6100804	JPT
Inorganic Anions											
Chloride	ND	0.25	0.01	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 17:07	6110025	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 17:07	6110025	RNB
Sulfate	0.15	1.0	0.05	mg/L	EPA 300.0	J	1	11/01/16 14:01	11/02/16 17:07	6110025	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:53	6100817	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:53	6100817	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:53	6100817	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:53	6100817	CSW
Boron	0.0214	0.100	0.0064	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:53	6100817	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:53	6100817	CSW
Calcium	0.0315	0.500	0.0311	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:53	6100817	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:53	6100817	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:53	6100817	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:53	6100817	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:53	6100817	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:53	6100817	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:53	6100817	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:53	6100817	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/02/16 10:50	11/02/16 15:14	6110038	MTC



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Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Project: CCR Event

Client ID: GWC-11

Lab Number ID: AZJ0785-14

Date/Time Sampled: 10/26/2016 5:45:00PM

Date/Time Received: 10/27/2016 1:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	108	25	10	mg/L	SM 2540 C		1	11/01/16 10:25	11/01/16 10:25	6100804	JPT
Inorganic Anions											
Chloride	2.5	0.25	0.01	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 17:29	6110025	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	11/01/16 14:01	11/02/16 17:29	6110025	RNB
Sulfate	56	5.0	0.26	mg/L	EPA 300.0		5	11/01/16 14:01	11/07/16 00:42	6110025	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:59	6100817	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:59	6100817	CSW
Barium	0.0591	0.0100	0.0004	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:59	6100817	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:59	6100817	CSW
Boron	0.0830	0.100	0.0064	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:59	6100817	CSW
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:59	6100817	CSW
Calcium	16.6	2.50	0.155	mg/L	EPA 6020B		5	10/31/16 14:20	11/03/16 18:51	6100817	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:59	6100817	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:59	6100817	CSW
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:59	6100817	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:59	6100817	CSW
Selenium	0.0052	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/31/16 14:20	11/02/16 19:59	6100817	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:59	6100817	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	10/31/16 14:20	11/02/16 19:59	6100817	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/02/16 10:50	11/02/16 15:21	6110038	MTC



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Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100803 - SM 2540 C											
Blank (6100803-BLK1)						Prepared & Analyzed: 11/01/16					
Total Dissolved Solids	ND	10	10	mg/L							
LCS (6100803-BS1)						Prepared & Analyzed: 11/01/16					
Total Dissolved Solids	397	10	10	mg/L	400.00		99	84-108			
Duplicate (6100803-DUP1)						Source: AZJ0763-08 Prepared & Analyzed: 11/01/16					
Total Dissolved Solids	307	10	10	mg/L		304			1	10	
Duplicate (6100803-DUP2)						Source: AZJ0785-02 Prepared & Analyzed: 11/01/16					
Total Dissolved Solids	1520	10	10	mg/L		1520			0.2	10	
Batch 6100804 - SM 2540 C											
Blank (6100804-BLK1)						Prepared & Analyzed: 11/01/16					
Total Dissolved Solids	ND	10	10	mg/L							
LCS (6100804-BS1)						Prepared & Analyzed: 11/01/16					
Total Dissolved Solids	387	10	10	mg/L	400.00		97	84-108			
Duplicate (6100804-DUP1)						Source: AZJ0785-06 Prepared & Analyzed: 11/01/16					
Total Dissolved Solids	1040	10	10	mg/L		1050			0.9	10	
Duplicate (6100804-DUP2)						Source: AZJ0785-11 Prepared & Analyzed: 11/01/16					
Total Dissolved Solids	362	10	10	mg/L		373			3	10	



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Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110025 - EPA 300.0											
Blank (6110025-BLK1)						Prepared: 11/01/16 Analyzed: 11/02/16					
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 (6110025-BS1)						Prepared: 11/01/16 Analyzed: 11/02/16					
Chloride	10.6	0.25	0.01	mg/L	10.010		106	90-110			
Fluoride	10.7	0.30	0.02	mg/L	10.020		107	90-110			
Sulfate	10.4	1.0	0.05	mg/L	10.020		104	90-110			
Matrix Spike (6110025-MS1)						Source: AZJ0785-02 Prepared: 11/01/16 Analyzed: 11/02/16					
Chloride	106	0.25	0.01	mg/L	10.010	109	NR	90-110			QM-05
Fluoride	12.1	0.30	0.02	mg/L	10.020	0.91	112	90-110			QM-05
Sulfate	408	1.0	0.05	mg/L	10.020	429	NR	90-110			QM-05
Matrix Spike (6110025-MS2)						Source: AZJ0785-14 Prepared: 11/01/16 Analyzed: 11/02/16					
Chloride	12.6	0.25	0.01	mg/L	10.010	2.48	101	90-110			
Fluoride	12.3	0.30	0.02	mg/L	10.020	ND	123	90-110			QM-05
Sulfate	72.4	1.0	0.05	mg/L	10.020	56.0	165	90-110			QM-05
Matrix Spike Dup (6110025-MSD1)						Source: AZJ0785-02 Prepared: 11/01/16 Analyzed: 11/02/16					
Chloride	106	0.25	0.01	mg/L	10.010	109	NR	90-110	0.09	15	QM-05
Fluoride	12.3	0.30	0.02	mg/L	10.020	0.91	114	90-110	2	15	QM-05
Sulfate	408	1.0	0.05	mg/L	10.020	429	NR	90-110	0.09	15	QM-05



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Report No.: AZJ0785

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100807 - EPA 3005A											
Blank (6100807-BLK1)						Prepared & 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	0.0400	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	0.0050	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							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
LCS (6100807-BS1)						Prepared & Analyzed: 10/31/16					
Antimony	0.101	0.0030	0.0008	mg/L	0.10000		101	80-120			
Arsenic	0.0958	0.0050	0.0016	mg/L	0.10000		96	80-120			
Barium	0.0957	0.0100	0.0004	mg/L	0.10000		96	80-120			
Beryllium	0.0966	0.0030	0.00008	mg/L	0.10000		97	80-120			
Boron	1.03	0.0400	0.0064	mg/L	1.0000		103	80-120			
Cadmium	0.0941	0.0010	0.00007	mg/L	0.10000		94	80-120			
Calcium	0.979	0.500	0.0311	mg/L	1.0000		98	80-120			
Chromium	0.0996	0.0100	0.0009	mg/L	0.10000		100	80-120			
Cobalt	0.0971	0.0100	0.0005	mg/L	0.10000		97	80-120			
Copper	0.0952	0.0050	0.0005	mg/L	0.10000		95	80-120			
Lead	0.0951	0.0050	0.0001	mg/L	0.10000		95	80-120			
Molybdenum	0.101	0.0100	0.0017	mg/L	0.10000		101	80-120			
Nickel	0.0965	0.0050	0.0006	mg/L	0.10000		97	80-120			
Selenium	0.102	0.0100	0.0010	mg/L	0.10000		102	80-120			
Silver	0.100	0.0100	0.0005	mg/L	0.10000		100	80-120			
Thallium	0.0974	0.0010	0.0002	mg/L	0.10000		97	80-120			
Vanadium	0.0984	0.0100	0.0071	mg/L	0.10000		98	80-120			
Zinc	0.104	0.0100	0.0021	mg/L	0.10000		104	80-120			
Lithium	0.103	0.0500	0.0021	mg/L	0.10000		103	80-120			



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Report No.: AZJ0785

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100807 - EPA 3005A											
Matrix Spike (6100807-MS1)			Source: AZJ0763-05			Prepared & Analyzed: 10/31/16					
Antimony	0.100	0.0030	0.0008	mg/L	0.10000	0.0013	99	75-125			
Arsenic	0.0969	0.0050	0.0016	mg/L	0.10000	ND	97	75-125			
Barium	0.129	0.0100	0.0004	mg/L	0.10000	0.0317	98	75-125			
Beryllium	0.0834	0.0030	0.00008	mg/L	0.10000	0.0001	83	75-125			
Boron	0.992	0.0400	0.0064	mg/L	1.0000	0.126	87	75-125			
Cadmium	0.0951	0.0010	0.00007	mg/L	0.10000	ND	95	75-125			
Calcium	13.1	2.50	0.155	mg/L	1.0000	10.9	221	75-125			QM-02
Chromium	0.100	0.0100	0.0009	mg/L	0.10000	0.0029	97	75-125			
Cobalt	0.0949	0.0100	0.0005	mg/L	0.10000	ND	95	75-125			
Copper	0.0914	0.0050	0.0005	mg/L	0.10000	ND	91	75-125			
Lead	0.0921	0.0050	0.0001	mg/L	0.10000	ND	92	75-125			
Molybdenum	0.102	0.0100	0.0017	mg/L	0.10000	ND	102	75-125			
Nickel	0.0955	0.0050	0.0006	mg/L	0.10000	0.0031	92	75-125			
Selenium	0.0993	0.0100	0.0010	mg/L	0.10000	ND	99	75-125			
Silver	0.0968	0.0100	0.0005	mg/L	0.10000	ND	97	75-125			
Thallium	0.0961	0.0010	0.0002	mg/L	0.10000	ND	96	75-125			
Vanadium	0.0983	0.0100	0.0071	mg/L	0.10000	ND	98	75-125			
Zinc	0.103	0.0100	0.0021	mg/L	0.10000	0.0044	98	75-125			
Lithium	0.0901	0.0500	0.0021	mg/L	0.10000	0.0024	88	75-125			
Matrix Spike Dup (6100807-MSD1)			Source: AZJ0763-05			Prepared & Analyzed: 10/31/16					
Antimony	0.0988	0.0030	0.0008	mg/L	0.10000	0.0013	97	75-125	1	20	
Arsenic	0.0939	0.0050	0.0016	mg/L	0.10000	ND	94	75-125	3	20	
Barium	0.126	0.0100	0.0004	mg/L	0.10000	0.0317	94	75-125	3	20	
Beryllium	0.0868	0.0030	0.00008	mg/L	0.10000	0.0001	87	75-125	4	20	
Boron	0.993	0.0400	0.0064	mg/L	1.0000	0.126	87	75-125	0.1	20	
Cadmium	0.0957	0.0010	0.00007	mg/L	0.10000	ND	96	75-125	0.6	20	
Calcium	12.2	2.50	0.155	mg/L	1.0000	10.9	130	75-125	7	20	QM-02
Chromium	0.0995	0.0100	0.0009	mg/L	0.10000	0.0029	97	75-125	0.6	20	
Cobalt	0.0947	0.0100	0.0005	mg/L	0.10000	ND	95	75-125	0.2	20	
Copper	0.0917	0.0050	0.0005	mg/L	0.10000	ND	92	75-125	0.3	20	
Lead	0.0939	0.0050	0.0001	mg/L	0.10000	ND	94	75-125	2	20	
Molybdenum	0.0975	0.0100	0.0017	mg/L	0.10000	ND	97	75-125	4	20	
Nickel	0.0951	0.0050	0.0006	mg/L	0.10000	0.0031	92	75-125	0.4	20	
Selenium	0.0980	0.0100	0.0010	mg/L	0.10000	ND	98	75-125	1	20	
Silver	0.0961	0.0100	0.0005	mg/L	0.10000	ND	96	75-125	0.8	20	
Thallium	0.0978	0.0010	0.0002	mg/L	0.10000	ND	98	75-125	2	20	
Vanadium	0.0990	0.0100	0.0071	mg/L	0.10000	ND	99	75-125	0.7	20	
Zinc	0.103	0.0100	0.0021	mg/L	0.10000	0.0044	99	75-125	0.6	20	
Lithium	0.0927	0.0500	0.0021	mg/L	0.10000	0.0024	90	75-125	3	20	



PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100807 - EPA 3005A											
Post Spike (6100807-PS1)			Source: AZJ0763-05			Prepared & Analyzed: 10/31/16					
Antimony	95.7			ug/L	100.00	1.31	94	80-120			
Arsenic	98.4			ug/L	100.00	0.0853	98	80-120			
Barium	128			ug/L	100.00	31.7	96	80-120			
Beryllium	88.2			ug/L	100.00	0.116	88	80-120			
Boron	1030			ug/L	1000.0	126	90	80-120			
Cadmium	97.3			ug/L	100.00	0.0209	97	80-120			
Calcium	12100			ug/L	1000.0	10900	124	80-120			QM-02
Chromium	104			ug/L	100.00	2.88	101	80-120			
Cobalt	98.1			ug/L	100.00	0.0395	98	80-120			
Copper	96.7			ug/L	100.00	0.119	97	80-120			
Lead	97.7			ug/L	100.00	0.0548	98	80-120			
Molybdenum	105			ug/L	100.00	0.225	105	80-120			
Nickel	99.0			ug/L	100.00	3.07	96	80-120			
Selenium	101			ug/L	100.00	-0.0536	101	80-120			
Silver	97.6			ug/L	100.00	0.0383	98	80-120			
Thallium	99.8			ug/L	100.00	0.207	100	80-120			
Vanadium	103			ug/L	100.00	1.79	101	80-120			
Zinc	109			ug/L	100.00	4.45	104	80-120			
Lithium	92.6			ug/L	100.00	2.39	90	80-120			

Batch 6100817 - EPA 3005A

Blank (6100817-BLK1)					Prepared: 10/31/16 Analyzed: 11/02/16						
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							



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November 08, 2016

Report No.: AZJ0785

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100817 - EPA 3005A											
Blank (6100817-BLK1)						Prepared: 10/31/16 Analyzed: 11/02/16					
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
LCS (6100817-BS1)						Prepared: 10/31/16 Analyzed: 11/02/16					
Antimony	0.100	0.0030	0.0008	mg/L	0.10000		100	80-120			
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000		101	80-120			
Barium	0.0988	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	1.00	0.100	0.0064	mg/L	1.0000		100	80-120			
Cadmium	0.104	0.0010	0.00007	mg/L	0.10000		104	80-120			
Calcium	1.04	0.500	0.0311	mg/L	1.0000		104	80-120			
Chromium	0.103	0.0100	0.0009	mg/L	0.10000		103	80-120			
Cobalt	0.0997	0.0100	0.0005	mg/L	0.10000		100	80-120			
Copper	0.0996	0.0050	0.0005	mg/L	0.10000		100	80-120			
Lead	0.0996	0.0050	0.0001	mg/L	0.10000		100	80-120			
Molybdenum	0.105	0.0100	0.0017	mg/L	0.10000		105	80-120			
Nickel	0.102	0.0050	0.0006	mg/L	0.10000		102	80-120			
Selenium	0.101	0.0100	0.0010	mg/L	0.10000		101	80-120			
Silver	0.105	0.0050	0.0005	mg/L	0.10000		105	80-120			
Thallium	0.102	0.0010	0.0002	mg/L	0.10000		102	80-120			
Vanadium	0.105	0.0100	0.0071	mg/L	0.10000		105	80-120			
Zinc	0.105	0.0100	0.0021	mg/L	0.10000		105	80-120			
Lithium	0.105	0.0500	0.0021	mg/L	0.10000		105	80-120			
Matrix Spike (6100817-MS1)						Source: AZJ0785-02 Prepared: 10/31/16 Analyzed: 11/02/16					
Antimony	0.103	0.0030	0.0008	mg/L	0.10000	ND	103	75-125			
Arsenic	0.107	0.0050	0.0016	mg/L	0.10000	ND	107	75-125			
Barium	0.122	0.0100	0.0004	mg/L	0.10000	0.0197	103	75-125			
Beryllium	0.0935	0.0030	0.00008	mg/L	0.10000	0.0011	92	75-125			
Boron	7.10	1.00	0.0642	mg/L	1.0000	5.74	135	75-125			QM-02
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125			
Calcium	101	25.0	1.55	mg/L	1.0000	101	29	75-125			QM-02
Chromium	0.109	0.0100	0.0009	mg/L	0.10000	0.0012	108	75-125			
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000	0.0016	104	75-125			
Copper	0.0943	0.0050	0.0005	mg/L	0.10000	ND	94	75-125			
Lead	0.0950	0.0050	0.0001	mg/L	0.10000	0.0001	95	75-125			
Molybdenum	0.110	0.0100	0.0017	mg/L	0.10000	ND	110	75-125			
Nickel	0.101	0.0050	0.0006	mg/L	0.10000	ND	101	75-125			
Selenium	0.104	0.0100	0.0010	mg/L	0.10000	0.0020	102	75-125			
Silver	0.0975	0.0050	0.0005	mg/L	0.10000	ND	98	75-125			



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100817 - EPA 3005A											
Matrix Spike (6100817-MS1)			Source: AZJ0785-02			Prepared: 10/31/16 Analyzed: 11/02/16					
Thallium	0.0991	0.0010	0.0002	mg/L	0.10000	0.0003	99	75-125			
Vanadium	0.116	0.0100	0.0071	mg/L	0.10000	ND	116	75-125			
Zinc	0.107	0.0100	0.0021	mg/L	0.10000	0.0030	104	75-125			
Lithium	0.0974	0.0500	0.0021	mg/L	0.10000	ND	97	75-125			
Matrix Spike Dup (6100817-MSD1)			Source: AZJ0785-02			Prepared: 10/31/16 Analyzed: 11/02/16					
Antimony	0.104	0.0030	0.0008	mg/L	0.10000	ND	104	75-125	1	20	
Arsenic	0.106	0.0050	0.0016	mg/L	0.10000	ND	106	75-125	0.9	20	
Barium	0.119	0.0100	0.0004	mg/L	0.10000	0.0197	99	75-125	3	20	
Beryllium	0.0942	0.0030	0.00008	mg/L	0.10000	0.0011	93	75-125	0.8	20	
Boron	7.22	1.00	0.0642	mg/L	1.0000	5.74	148	75-125	2	20	QM-02
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125	0.02	20	
Calcium	98.4	25.0	1.55	mg/L	1.0000	101	NR	75-125	3	20	QM-02
Chromium	0.103	0.0100	0.0009	mg/L	0.10000	0.0012	102	75-125	6	20	
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	0.0016	101	75-125	3	20	
Copper	0.0927	0.0050	0.0005	mg/L	0.10000	ND	93	75-125	2	20	
Lead	0.0930	0.0050	0.0001	mg/L	0.10000	0.0001	93	75-125	2	20	
Molybdenum	0.110	0.0100	0.0017	mg/L	0.10000	ND	110	75-125	0.8	20	
Nickel	0.0997	0.0050	0.0006	mg/L	0.10000	ND	100	75-125	0.8	20	
Selenium	0.106	0.0100	0.0010	mg/L	0.10000	0.0020	104	75-125	2	20	
Silver	0.0971	0.0050	0.0005	mg/L	0.10000	ND	97	75-125	0.4	20	
Thallium	0.0970	0.0010	0.0002	mg/L	0.10000	0.0003	97	75-125	2	20	
Vanadium	0.113	0.0100	0.0071	mg/L	0.10000	ND	113	75-125	3	20	
Zinc	0.104	0.0100	0.0021	mg/L	0.10000	0.0030	101	75-125	3	20	
Lithium	0.0965	0.0500	0.0021	mg/L	0.10000	ND	96	75-125	0.9	20	
Post Spike (6100817-PS1)			Source: AZJ0785-02			Prepared: 10/31/16 Analyzed: 11/02/16					
Antimony	100			ug/L	100.00	0.103	100	80-120			
Arsenic	103			ug/L	100.00	1.24	102	80-120			
Barium	116			ug/L	100.00	19.7	96	80-120			
Beryllium	91.9			ug/L	100.00	1.10	91	80-120			
Boron	7050			ug/L	1000.0	5740	131	80-120			QM-02
Cadmium	94.0			ug/L	100.00	-0.0218	94	80-120			
Calcium	95800			ug/L	1000.0	101000	NR	80-120			QM-02
Chromium	100			ug/L	100.00	1.20	99	80-120			
Cobalt	96.8			ug/L	100.00	1.62	95	80-120			
Copper	89.5			ug/L	100.00	0.410	89	80-120			
Lead	90.5			ug/L	100.00	0.147	90	80-120			
Molybdenum	103			ug/L	100.00	0.239	103	80-120			
Nickel	94.3			ug/L	100.00	0.461	94	80-120			



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100817 - EPA 3005A											
Post Spike (6100817-PS1)			Source: AZJ0785-02			Prepared: 10/31/16 Analyzed: 11/02/16					
Selenium	106			ug/L	100.00	1.95	104	80-120			
Silver	91.0			ug/L	100.00	0.0260	91	80-120			
Thallium	93.4			ug/L	100.00	0.347	93	80-120			
Vanadium	106			ug/L	100.00	5.28	101	80-120			
Zinc	104			ug/L	100.00	3.02	101	80-120			
Lithium	96.3			ug/L	100.00	1.41	95	80-120			
Batch 6110037 - EPA 7470A											
Blank (6110037-BLK1)						Prepared & Analyzed: 11/02/16					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6110037-BS1)						Prepared & Analyzed: 11/02/16					
Mercury	0.00255	0.00050	0.000041	mg/L	2.5000E-3		102	80-120			
Matrix Spike (6110037-MS1)			Source: AZJ0785-03			Prepared & Analyzed: 11/02/16					
Mercury	0.00256	0.00050	0.000041	mg/L	2.5000E-3	ND	102	75-125			
Matrix Spike Dup (6110037-MSD1)			Source: AZJ0785-03			Prepared & Analyzed: 11/02/16					
Mercury	0.00250	0.00050	0.000041	mg/L	2.5000E-3	ND	100	75-125	2	20	
Post Spike (6110037-PS1)			Source: AZJ0785-03			Prepared & Analyzed: 11/02/16					
Mercury	1.74			ug/L	1.6667	0.00074	104	80-120			
Batch 6110038 - EPA 7470A											
Blank (6110038-BLK1)						Prepared & Analyzed: 11/02/16					
Mercury	ND	0.00050	0.000041	mg/L							



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Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0785

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110038 - EPA 7470A											
LCS (6110038-BS1)						Prepared & Analyzed: 11/02/16					
Mercury	0.00253	0.00050	0.000041	mg/L	2.5000E-3		101	80-120			
Matrix Spike (6110038-MS1)						Source: AZJ0785-12 Prepared & Analyzed: 11/02/16					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125			
Matrix Spike Dup (6110038-MSD1)						Source: AZJ0785-12 Prepared & Analyzed: 11/02/16					
Mercury	0.00243	0.00050	0.000041	mg/L	2.5000E-3	ND	97	75-125	1	20	
Post Spike (6110038-PS1)						Source: AZJ0785-12 Prepared & Analyzed: 11/02/16					
Mercury	1.77			ug/L	1.6667	0.00273	106	80-120			



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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 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-Nitrosodiphenylamine. Pace is not NELAC certified for N-Nitrosodiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

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

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



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LOG-IN CHECKLIST

Printed: 11/8/2016 2:51:13PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 10/27/16 13:15

Work Order: AZJ0785

Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 14

#Containers: 44

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:

December 01, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Kraft Grumman Road
Pace Project No.: 30200847

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on October 28, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: Plant Kraft Grumman Road

Pace Project No.: 30200847

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft Grumman Road
Pace Project No.: 30200847

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30200847001	FB-2-10-26-16	Water	10/26/16 12:00	10/28/16 10:50
30200847002	GWC-12	Water	10/26/16 11:47	10/28/16 10:50
30200847003	GWC-13	Water	10/26/16 13:32	10/28/16 10:50
30200847004	GWC-5	Water	10/26/16 14:41	10/28/16 10:50
30200847005	Dup-2	Water	10/26/16 00:00	10/28/16 10:50
30200847006	GWC-4	Water	10/26/16 16:24	10/28/16 10:50
30200847007	Dup-3	Water	10/26/16 00:00	10/28/16 10:50
30200847008	GWC-17	Water	10/26/16 10:21	10/28/16 10:50
30200847009	FB-3-10-26-16	Water	10/26/16 10:00	10/28/16 10:50
30200847010	GWC-22	Water	10/26/16 12:25	10/28/16 10:50
30200847011	GWC-6	Water	10/26/16 15:00	10/28/16 10:50
30200847012	GWC-2	Water	10/26/16 16:20	10/28/16 10:50
30200847013	EB-3-10-26-16	Water	10/26/16 16:16	10/28/16 10:50
30200847014	GWC-11	Water	10/26/16 17:45	10/28/16 10:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft Grumman Road
Pace Project No.: 30200847

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30200847001	FB-2-10-26-16	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200847002	GWC-12	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200847003	GWC-13	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200847004	GWC-5	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200847005	Dup-2	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200847006	GWC-4	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200847007	Dup-3	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200847008	GWC-17	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200847009	FB-3-10-26-16	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200847010	GWC-22	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200847011	GWC-6	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200847012	GWC-2	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30200847013	EB-3-10-26-16	EPA 9315	LAL	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft Grumman Road
Pace Project No.: 30200847

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30200847014	GWC-11	EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
		EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200847

Sample: FB-2-10-26-16		Lab ID: 30200847001	Collected: 10/26/16 12:00	Received: 10/28/16 10:50	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.0423 ± 0.119 (0.291) C:95% T:NA	pCi/L	11/17/16 08:50	13982-63-3	
Radium-228	EPA 9320	0.246 ± 0.360 (0.776) C:70% T:89%	pCi/L	11/29/16 15:01	15262-20-1	
Total Radium	Total Radium Calculation	0.288 ± 0.479 (1.07)	pCi/L	11/30/16 09:38	7440-14-4	

Sample: GWC-12		Lab ID: 30200847002	Collected: 10/26/16 11:47	Received: 10/28/16 10:50	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.722 ± 0.297 (0.376) C:96% T:NA	pCi/L	11/17/16 08:50	13982-63-3	
Radium-228	EPA 9320	2.56 ± 0.726 (0.830) C:69% T:82%	pCi/L	11/29/16 15:01	15262-20-1	
Total Radium	Total Radium Calculation	3.28 ± 1.02 (1.21)	pCi/L	11/30/16 09:38	7440-14-4	

Sample: GWC-13		Lab ID: 30200847003	Collected: 10/26/16 13:32	Received: 10/28/16 10:50	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.243 ± 0.175 (0.287) C:91% T:NA	pCi/L	11/17/16 09:42	13982-63-3	
Radium-228	EPA 9320	0.398 ± 0.401 (0.828) C:71% T:82%	pCi/L	11/29/16 15:01	15262-20-1	
Total Radium	Total Radium Calculation	0.641 ± 0.576 (1.12)	pCi/L	11/30/16 09:38	7440-14-4	

Sample: GWC-5		Lab ID: 30200847004	Collected: 10/26/16 14:41	Received: 10/28/16 10:50	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.688 ± 0.281 (0.328) C:91% T:NA	pCi/L	11/17/16 09:02	13982-63-3	
Radium-228	EPA 9320	1.34 ± 0.517 (0.752) C:66% T:77%	pCi/L	11/29/16 15:02	15262-20-1	
Total Radium	Total Radium Calculation	2.03 ± 0.798 (1.08)	pCi/L	11/30/16 09:38	7440-14-4	

Sample: Dup-2		Lab ID: 30200847005	Collected: 10/26/16 00:00	Received: 10/28/16 10:50	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.552 ± 0.255 (0.358) C:97% T:NA	pCi/L	11/17/16 08:51	13982-63-3	
Radium-228	EPA 9320	3.21 ± 0.796 (0.749) C:73% T:91%	pCi/L	11/29/16 15:01	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road
Pace Project No.: 30200847

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: Dup-2 Lab ID: 30200847005 Collected: 10/26/16 00:00 Received: 10/28/16 10:50 Matrix: Water PWS: Site ID: Sample Type:						
Total Radium	Total Radium Calculation	3.76 ± 1.05 (1.11)	pCi/L	11/30/16 09:38	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-4 Lab ID: 30200847006 Collected: 10/26/16 16:24 Received: 10/28/16 10:50 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	1.36 ± 0.549 (0.569) C:97% T:NA	pCi/L	11/21/16 09:26	13982-63-3	
Radium-228	EPA 9320	0.956 ± 0.666 (1.29) C:64% T:80%	pCi/L	11/29/16 15:01	15262-20-1	
Total Radium	Total Radium Calculation	2.32 ± 1.22 (1.86)	pCi/L	11/30/16 09:38	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: Dup-3 Lab ID: 30200847007 Collected: 10/26/16 00:00 Received: 10/28/16 10:50 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	3.20 ± 0.702 (0.432) C:98% T:NA	pCi/L	11/17/16 08:51	13982-63-3	
Radium-228	EPA 9320	3.70 ± 0.903 (0.793) C:70% T:83%	pCi/L	11/29/16 15:01	15262-20-1	
Total Radium	Total Radium Calculation	6.90 ± 1.61 (1.23)	pCi/L	11/30/16 09:38	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-17 Lab ID: 30200847008 Collected: 10/26/16 10:21 Received: 10/28/16 10:50 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	1.67 ± 0.366 (0.149) C:91% T:NA	pCi/L	11/23/16 10:00	13982-63-3	
Radium-228	EPA 9320	2.58 ± 0.744 (0.874) C:64% T:85%	pCi/L	11/29/16 15:01	15262-20-1	
Total Radium	Total Radium Calculation	4.25 ± 1.11 (1.02)	pCi/L	11/30/16 09:38	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FB-3-10-26-16 Lab ID: 30200847009 Collected: 10/26/16 10:00 Received: 10/28/16 10:50 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.00305 ± 0.0566 (0.157) C:91% T:NA	pCi/L	11/23/16 10:00	13982-63-3	
Radium-228	EPA 9320	0.238 ± 0.456 (1.00) C:69% T:77%	pCi/L	11/29/16 15:01	15262-20-1	
Total Radium	Total Radium Calculation	0.241 ± 0.513 (1.16)	pCi/L	11/30/16 09:38	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200847

Sample: GWC-22		Lab ID: 30200847010	Collected: 10/26/16 12:25	Received: 10/28/16 10:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	2.90 ± 0.552 (0.166)		pCi/L	11/23/16 10:00	13982-63-3	
		C:95% T:NA					
Radium-228	EPA 9320	4.52 ± 1.04 (0.761)		pCi/L	11/29/16 15:01	15262-20-1	
		C:69% T:85%					
Total Radium	Total Radium Calculation	7.42 ± 1.59 (0.927)		pCi/L	11/30/16 09:38	7440-14-4	

Sample: GWC-6		Lab ID: 30200847011	Collected: 10/26/16 15:00	Received: 10/28/16 10:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.07 ± 0.272 (0.174)		pCi/L	11/23/16 10:00	13982-63-3	
		C:97% T:NA					
Radium-228	EPA 9320	1.60 ± 0.569 (0.821)		pCi/L	11/29/16 15:01	15262-20-1	
		C:76% T:76%					
Total Radium	Total Radium Calculation	2.67 ± 0.841 (0.995)		pCi/L	11/30/16 09:38	7440-14-4	

Sample: GWC-2		Lab ID: 30200847012	Collected: 10/26/16 16:20	Received: 10/28/16 10:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.405 ± 0.154 (0.159)		pCi/L	11/23/16 10:00	13982-63-3	
		C:93% T:NA					
Radium-228	EPA 9320	0.320 ± 0.340 (0.705)		pCi/L	11/29/16 15:01	15262-20-1	
		C:75% T:83%					
Total Radium	Total Radium Calculation	0.725 ± 0.494 (0.864)		pCi/L	11/30/16 09:38	7440-14-4	

Sample: EB-3-10-26-16		Lab ID: 30200847013	Collected: 10/26/16 16:16	Received: 10/28/16 10:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.0294 ± 0.0782 (0.188)		pCi/L	11/23/16 10:00	13982-63-3	
		C:94% T:NA					
Radium-228	EPA 9320	0.508 ± 0.339 (0.638)		pCi/L	11/29/16 15:02	15262-20-1	
		C:79% T:83%					
Total Radium	Total Radium Calculation	0.537 ± 0.417 (0.826)		pCi/L	11/30/16 09:38	7440-14-4	

Sample: GWC-11		Lab ID: 30200847014	Collected: 10/26/16 17:45	Received: 10/28/16 10:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.726 ± 0.213 (0.155)		pCi/L	11/23/16 10:00	13982-63-3	
		C:93% T:NA					
Radium-228	EPA 9320	1.23 ± 0.456 (0.633)		pCi/L	11/29/16 15:02	15262-20-1	
		C:72% T:79%					

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200847

Sample: GWC-11 **Lab ID: 30200847014** Collected: 10/26/16 17:45 Received: 10/28/16 10:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	1.96 ± 0.669 (0.788)	pCi/L	11/30/16 09:38	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200847

QC Batch: 239634 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Associated Lab Samples: 30200847001, 30200847002, 30200847003, 30200847004, 30200847005, 30200847006, 30200847007

METHOD BLANK: 1177541 Matrix: Water

Associated Lab Samples: 30200847001, 30200847002, 30200847003, 30200847004, 30200847005, 30200847006, 30200847007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00510 ± 0.0867 (0.243) C:98% T:NA	pCi/L	11/17/16 15:50	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200847

QC Batch:	239886	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	30200847001, 30200847002, 30200847003, 30200847004, 30200847005, 30200847006, 30200847007, 30200847008, 30200847009, 30200847010, 30200847011, 30200847012, 30200847013, 30200847014		

METHOD BLANK:	1178565	Matrix:	Water
Associated Lab Samples:	30200847001, 30200847002, 30200847003, 30200847004, 30200847005, 30200847006, 30200847007, 30200847008, 30200847009, 30200847010, 30200847011, 30200847012, 30200847013, 30200847014		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.269 ± 0.331 (0.697) C:68% T:83%	pCi/L	11/29/16 15:02	

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.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30200847

QC Batch:	239635	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	30200847008, 30200847009, 30200847010, 30200847011, 30200847012, 30200847013, 30200847014		

METHOD BLANK:	1177542	Matrix:	Water
Associated Lab Samples:	30200847008, 30200847009, 30200847010, 30200847011, 30200847012, 30200847013, 30200847014		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0142 ± 0.0608 (0.157) C:97% T:NA	pCi/L	11/23/16 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

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QUALIFIERS

Project: Plant Kraft Grumman Road

Pace Project No.: 30200847

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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WO# : 30200847



Chain of Custody



Results Requested By: 11/28/2016

Owner Received Date:

Workorder Name: Plant Kraft Grumman Road

Workorder: AZJ0785

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers			Date/Time	Comments
						NO	HS	ES		
1	FB-2-10-26-16	G	10/26/2016 12:00	AZJ0785-01	W	1			X	
2	GWC-12	G	10/26/2016 11:47	AZJ0785-02	GW	1			X	
3	GWC-13	G	10/26/2016 13:32	AZJ0785-03	GW	1			X	
4	GWC-5	G	10/26/2016 14:41	AZJ0785-04	GW	2			X	
5	Dup-2	G	10/26/2016 0:00	AZJ0785-05	GW	1			X	
6	GWC-4	G	10/26/2016 16:24	AZJ0785-06	GW	1			X	
7	Dup-3	G	10/26/2016 0:00	AZJ0785-07	GW	1			X	
8	GWC-17	G	10/26/2016 10:21	AZJ0785-08	GW	1			X	
9	FB-3-10-26-16	G	10/26/2016 10:00	AZJ0785-09	W	1			X	
10	GWC-22	G	10/26/2016 12:25	AZJ0785-10	GW	1			X	
Transfers Released By										
1									Received By	
2									<i>Karen Hill</i>	
3										
										Radium 226, 228, Total

Subcontract To:
 Pace - Pittsburgh
 1638 Roseytown Road
 Stes. 2,3,4
 Greensburg, PA 15601
 Phone (724) 850-5600

Report To:
 Betsy McDaniel
 Pace Analytical Atlanta
 110 Technology Parkway
 Peachtree Corners, GA 30092
 Phone (770)-734-4200

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

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

Friday, June 17, 2016 11:01:34 AM

FMT-ALL-C-002 rev.00 24March2009

Page 1 of 2

30200847

Chain of Custody



Workorder: AZJ0785

Owner Received Date:

Workorder Name: Plant Kraft Grumman Road

Results Requested By: 11/28/2016

Report To:		Subcontract To:		Requested Analysis			
Betsy McDaniel Pace Analytical Atlanta 110 Technology Parkway Peachtree Corners, GA 30092 Phone (770)-734-4200		Pace - Pittsburgh 1638 Roseytown Road Stes. 2,3,4 Greensburg, PA 15601 Phone (724) 850-5600		Radium 226, 228, Total			
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	LAB USE ONLY
11	GWC-6	G	10/26/2016 15:00	AZJ0785-11	GW	2	011
12	GWC-2	G	10/26/2016 16:20	AZJ0785-12	GW	1	012
13	EB-3-10-26-16	G	10/26/2016 16:16	AZJ0785-13	W	1	013
14	GWC-11	G	10/26/2016 17:45	AZJ0785-14	GW	1	014
15							
16							
17							
18							
19							
20							
Transfers	Released By	Date/Time	Received By	Date/Time	Comments		
1			Karen Hill	10-28-16 10:50			
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.



30200847

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

PAGE: 1 OF 1

CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE 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 Kraft Grumman Road
PROJECT #: Phase 2 CCR & State D&O

ANALYSIS REQUESTED

CONTAINER TYPE:	P	P	P	P	P	P
CONTAINER TYPE:	3	3	7	3		
PRESERVATION:						
# of CONTAINERS →	3	3	3	1	1	1
		(EPA 6020/7470) Metals App. III & IV	(EPA 6020) Metals (See attached)	(EPA 300.0 & SM 2540C) Cl, T, SO ₄ & TDS	Radium 226 & 228 (SW-846 9315/9320)	

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

PRESERVATION: 1 - HCl, ≤6°C
 2 - H₂SO₄, ≤6°C
 3 - HNO₃
 4 - NaOH, ≤6°C
 5 - NaOH/NaAc, ≤6°C
 6 - Na₂S₂O₃, ≤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

L A B I D N U M B E R	DATE/TIME	RELINQUISHED BY	DATE/TIME
1315	10/26/16 1745	J. Bersford (ACC)	10/26/16 1745
1316	10/26/16 1745		10/26/16 1745
1317	10/26/16 1745		10/26/16 1745

LAB #: A270785
Entered into LIMS: baf
Tracking #:

FOR LAB USE ONLY

RELINQUISHED BY: [Signature]
DATE/TIME: 10/26/16 1745

RECEIVED BY: [Signature]
DATE/TIME: 10/26/16 1745

REMOVED BY LAB: [Signature]
DATE/TIME: 10/26/16 1745

PH CHECKED: [Signature]
DATE: 10/26/16

SAMPLE SHIPPED VIA: UPS
CARRIER: [Signature]
DATE/TIME: 10/26/16 1745

OTHER INFO:

Plant Kraft Grumman Road State constituents As Ba Cr Pb Sb Se V Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR State

Sample Condition Upon Receipt Pittsburgh



Client Name: Pace Georgia

Project # 30200847

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 6812 51001025

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 10-28-16

Comments:

	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: <u>W+</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. <u>Time on main bottle label is 13:45</u>
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used: -Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10.
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13. <u>PHC2</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>KH</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rad Aqueous Samples Screened > 0.5 mrem/hr	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>KH</u> Date: <u>10-28-16</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 11/15/2016
Worklist: 32363
Matrix: DW

Method Blank Assessment	
MB Sample ID	1177541
MB concentration:	0.005
MB Counting Uncertainty:	0.087
MB MDC:	0.243
MB Numerical Performance Indicator:	0.12
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	11/17/2016
Spike I.D.:	16-026
Spike Concentration (pCi/mL):	44.674
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.500
Target Conc. (pCi/L, g, F):	8.939
Uncertainty (Calculated):	0.420
Result (pCi/L, g, F):	6.836
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.731
Numerical Performance Indicator:	-4.89
Percent Recovery:	76.47%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30200847004
Duplicate Sample I.D.:	30200847004DUP
Sample Result (pCi/L, g, F):	0.688
Sample Duplicate Result (pCi/L, g, F):	0.263
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.523
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.222
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	0.937
Duplicate RPD:	27.20%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

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

Handwritten signature: LAL

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

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 11/15/2016
Worklist: 32364
Matrix: DW

Method Blank Assessment	
MB Sample ID	1177542
MB concentration:	0.014
M/B Counting Uncertainty:	0.061
MB MDC:	0.157
MB Numerical Performance Indicator:	0.46
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	11/23/2016
Spike I.D.:	LC32364
Spike Concentration (pCi/mL):	16-026
Volume Used (mL):	44.674
Aliquot Volume (L, g, F):	0.10
Target Conc. (pCi/L, g, F):	0.504
Uncertainty (Calculated):	8.872
Result (pCi/L, g, F):	0.417
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	8.377
Numerical Performance Indicator:	0.659
Percent Recovery:	-1.24
Status vs Numerical Indicator:	94.42%
Status vs Recovery:	N/A
	Pass

Duplicate Sample Assessment	
Sample I.D.:	30200847011
Duplicate Sample I.D.:	30200847011DUP
Sample Result (pCi/L, g, F):	1.070
Sample Duplicate Result (pCi/L, g, F):	0.224
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.868
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.217
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	1.270
Duplicate RPD:	20.84%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

Quality

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

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 11/22/2016
Worklist: 32408
Matrix: DW

Method Blank Assessment	
MB Sample ID	1178565
MB concentration:	0.269
M/B Counting Uncertainty:	0.327
MB MDC:	0.697
MB Numerical Performance Indicator:	1.61
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS (Y or N)?	N
LCS#	LCS032408
Count Date:	11/29/2016
Spike I.D.:	16-027
Spike Concentration (pCi/mL):	25.953
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.806
Target Conc. (pCi/L, g, F):	6.441
Uncertainty (Calculated):	0.464
Result (pCi/L, g, F):	8.535
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.881
Numerical Performance Indicator:	4.12
Percent Recovery:	132.52%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30200847004
Duplicate Sample I.D.:	30200847004DUP
Sample Result (pCi/L, g, F):	1.341
Sample Result Counting Uncertainty (pCi/L, g, F):	0.458
Sample Duplicate Result (pCi/L, g, F):	0.895
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.402
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	1.435
Duplicate RPD:	39.92%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

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

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

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



PACE ANALYTICAL SERVICES, INC.

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

Laboratory Report

Prepared For:

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

Attention: Mr. Joju Abraham

Report Number: AZJ0795

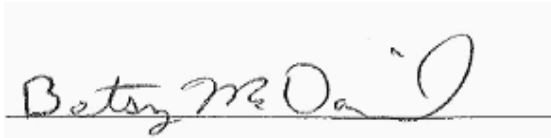
November 07, 2016

Project: CCR Event

Project #: Plant Kraft Grumman Rd

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

Approved:



Project Manager

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All test results relate only to the samples analyzed.



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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 07, 2016

ANALYTICAL REPORT FOR SAMPLES

<u>Sample ID</u>	<u>Laboratory ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
GWC-4 Filtered	AZJ0795-01	Ground Water	10/26/16 16:24	10/27/16 13:15



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 07, 2016

Report No.: AZJ0795

Project: CCR Event

Client ID: GWC-4 Filtered

Lab Number ID: AZJ0795-01

Date/Time Sampled: 10/26/2016 4:24:00PM

Date/Time Received: 10/27/2016 1:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Metals, Dissolved											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	11/01/16 08:20	11/04/16 13:01	6100818	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/01/16 08:20	11/04/16 13:01	6100818	CSW
Barium	0.0618	0.0100	0.0004	mg/L	EPA 6020B		1	11/01/16 08:20	11/04/16 13:01	6100818	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	11/01/16 08:20	11/04/16 13:01	6100818	CSW
Boron	7.44	0.500	0.0321	mg/L	EPA 6020B		5	11/01/16 08:20	11/04/16 13:52	6100818	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/01/16 08:20	11/04/16 13:01	6100818	CSW
Calcium	8.25	0.500	0.0311	mg/L	EPA 6020B		1	11/01/16 08:20	11/04/16 13:01	6100818	CSW
Chromium	0.0081	0.0100	0.0009	mg/L	EPA 6020B	J	1	11/01/16 08:20	11/04/16 13:01	6100818	CSW
Cobalt	0.0009	0.0100	0.0005	mg/L	EPA 6020B	J	1	11/01/16 08:20	11/04/16 13:01	6100818	CSW
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	11/01/16 08:20	11/04/16 13:01	6100818	CSW
Molybdenum	0.0100	0.0100	0.0017	mg/L	EPA 6020B		1	11/01/16 08:20	11/04/16 13:01	6100818	CSW
Selenium	0.0023	0.0100	0.0010	mg/L	EPA 6020B	J	1	11/01/16 08:20	11/04/16 13:01	6100818	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/01/16 08:20	11/04/16 13:01	6100818	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	11/01/16 08:20	11/04/16 13:01	6100818	CSW
Mercury	ND	0.0005	0.00004	mg/L	EPA 7470A		1	11/01/16 10:00	11/01/16 14:19	6110010	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 07, 2016

Report No.: AZJ0795

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100818 - EPA 3005A											
Blank (6100818-BLK1)						Prepared: 11/01/16 Analyzed: 11/04/16					
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							
Zinc	ND	0.0100	0.0021	mg/L							
Lithium	ND	0.0500	0.0021	mg/L							
LCS (6100818-BS1)						Prepared: 11/01/16 Analyzed: 11/04/16					
Antimony	0.110	0.0030	0.0008	mg/L	0.10000		110	80-120			
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000		101	80-120			
Barium	0.0994	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	1.03	0.100	0.0064	mg/L	1.0000		103	80-120			
Cadmium	0.103	0.0010	0.00007	mg/L	0.10000		103	80-120			
Calcium	0.998	0.500	0.0311	mg/L	1.0000		100	80-120			
Chromium	0.0991	0.0100	0.0009	mg/L	0.10000		99	80-120			
Cobalt	0.0942	0.0100	0.0005	mg/L	0.10000		94	80-120			
Copper	0.0939	0.0050	0.0005	mg/L	0.10000		94	80-120			
Lead	0.0977	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	0.0964	0.0050	0.0006	mg/L	0.10000		96	80-120			
Selenium	0.100	0.0100	0.0010	mg/L	0.10000		100	80-120			
Silver	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Thallium	0.0982	0.0010	0.0002	mg/L	0.10000		98	80-120			
Vanadium	0.0998	0.0100	0.0071	mg/L	0.10000		100	80-120			
Zinc	0.104	0.0100	0.0021	mg/L	0.10000		104	80-120			
Lithium	0.103	0.0500	0.0021	mg/L	0.10000		103	80-120			



PACE ANALYTICAL SERVICES, INC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 07, 2016

Report No.: AZJ0795

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100818 - EPA 3005A											
Matrix Spike (6100818-MS1)			Source: AZJ0762-01			Prepared: 11/01/16 Analyzed: 11/04/16					
Antimony	0.108	0.0030	0.0008	mg/L	0.10000	ND	108	75-125			
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000	ND	101	75-125			
Barium	0.126	0.0100	0.0004	mg/L	0.10000	0.0324	94	75-125			
Beryllium	0.0879	0.0030	0.00008	mg/L	0.10000	ND	88	75-125			
Boron	3.00	0.100	0.0064	mg/L	1.0000	2.18	82	75-125			
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	ND	101	75-125			
Calcium	43.0	2.50	0.155	mg/L	1.0000	40.9	212	75-125			QM-02
Chromium	0.0973	0.0100	0.0009	mg/L	0.10000	ND	97	75-125			
Cobalt	0.0957	0.0100	0.0005	mg/L	0.10000	0.0012	95	75-125			
Copper	0.0933	0.0050	0.0005	mg/L	0.10000	0.0007	93	75-125			
Lead	0.0957	0.0050	0.0001	mg/L	0.10000	ND	96	75-125			
Molybdenum	0.106	0.0100	0.0017	mg/L	0.10000	ND	106	75-125			
Nickel	0.0965	0.0050	0.0006	mg/L	0.10000	0.0020	94	75-125			
Selenium	0.103	0.0100	0.0010	mg/L	0.10000	ND	103	75-125			
Silver	0.0983	0.0100	0.0005	mg/L	0.10000	ND	98	75-125			
Thallium	0.0959	0.0010	0.0002	mg/L	0.10000	ND	96	75-125			
Vanadium	0.101	0.0100	0.0071	mg/L	0.10000	ND	101	75-125			
Zinc	0.102	0.0100	0.0021	mg/L	0.10000	ND	102	75-125			
Lithium	0.0911	0.0500	0.0021	mg/L	0.10000	0.0035	88	75-125			
Matrix Spike Dup (6100818-MSD1)			Source: AZJ0762-01			Prepared: 11/01/16 Analyzed: 11/04/16					
Antimony	0.110	0.0030	0.0008	mg/L	0.10000	ND	110	75-125	1	20	
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000	ND	101	75-125	0.2	20	
Barium	0.131	0.0100	0.0004	mg/L	0.10000	0.0324	99	75-125	4	20	
Beryllium	0.0897	0.0030	0.00008	mg/L	0.10000	ND	90	75-125	2	20	
Boron	2.99	0.100	0.0064	mg/L	1.0000	2.18	81	75-125	0.3	20	
Cadmium	0.102	0.0010	0.00007	mg/L	0.10000	ND	102	75-125	0.8	20	
Calcium	42.2	2.50	0.155	mg/L	1.0000	40.9	136	75-125	2	20	QM-02
Chromium	0.0953	0.0100	0.0009	mg/L	0.10000	ND	95	75-125	2	20	
Cobalt	0.0938	0.0100	0.0005	mg/L	0.10000	0.0012	93	75-125	2	20	
Copper	0.0931	0.0050	0.0005	mg/L	0.10000	0.0007	92	75-125	0.2	20	
Lead	0.0955	0.0050	0.0001	mg/L	0.10000	ND	95	75-125	0.2	20	
Molybdenum	0.105	0.0100	0.0017	mg/L	0.10000	ND	105	75-125	0.2	20	
Nickel	0.0968	0.0050	0.0006	mg/L	0.10000	0.0020	95	75-125	0.3	20	
Selenium	0.104	0.0100	0.0010	mg/L	0.10000	ND	104	75-125	1	20	
Silver	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	2	20	
Thallium	0.0974	0.0010	0.0002	mg/L	0.10000	ND	97	75-125	2	20	
Vanadium	0.101	0.0100	0.0071	mg/L	0.10000	ND	101	75-125	0.4	20	
Zinc	0.105	0.0100	0.0021	mg/L	0.10000	ND	105	75-125	3	20	
Lithium	0.0942	0.0500	0.0021	mg/L	0.10000	0.0035	91	75-125	3	20	



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 07, 2016

Report No.: AZJ0795

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100818 - EPA 3005A											
Post Spike (6100818-PS1)				Source: AZJ0762-01				Prepared: 11/01/16 Analyzed: 11/04/16			
Antimony	110			ug/L	100.00	0.0545	110	80-120			
Arsenic	102			ug/L	100.00	0.182	102	80-120			
Barium	129			ug/L	100.00	32.4	97	80-120			
Beryllium	89.4			ug/L	100.00	0.0392	89	80-120			
Boron	3050			ug/L	1000.0	2180	88	80-120			
Cadmium	100			ug/L	100.00	0.0471	100	80-120			
Calcium	43200			ug/L	1000.0	40900	237	80-120			QM-02
Chromium	101			ug/L	100.00	0.148	101	80-120			
Cobalt	96.4			ug/L	100.00	1.18	95	80-120			
Copper	97.8			ug/L	100.00	0.694	97	80-120			
Lead	95.2			ug/L	100.00	0.0398	95	80-120			
Molybdenum	105			ug/L	100.00	0.311	105	80-120			
Nickel	101			ug/L	100.00	2.04	99	80-120			
Selenium	104			ug/L	100.00	-0.157	104	80-120			
Silver	98.0			ug/L	100.00	0.0250	98	80-120			
Thallium	96.0			ug/L	100.00	0.155	96	80-120			
Vanadium	104			ug/L	100.00	1.41	103	80-120			
Zinc	103			ug/L	100.00	1.99	101	80-120			
Lithium	90.4			ug/L	100.00	3.50	87	80-120			

Batch 6110010 - EPA 7470A

Blank (6110010-BLK1)											
						Prepared & Analyzed: 11/01/16					
Mercury	ND	0.0005	0.00004	mg/L							
LCS (6110010-BS1)											
						Prepared & Analyzed: 11/01/16					
Mercury	0.0023	0.0005	0.00004	mg/L	2.5000E-3		92	80-120			



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November 07, 2016

Report No.: AZJ0795

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110010 - EPA 7470A											
Matrix Spike (6110010-MS1)			Source: AZJ0762-02			Prepared & Analyzed: 11/01/16					
Mercury	0.0022	0.0005	0.00004	mg/L	2.5000E-3	ND	87	75-125			
Matrix Spike Dup (6110010-MSD1)			Source: AZJ0762-02			Prepared & Analyzed: 11/01/16					
Mercury	0.0022	0.0005	0.00004	mg/L	2.5000E-3	ND	88	75-125	1	20	
Post Spike (6110010-PS1)			Source: AZJ0762-02			Prepared & Analyzed: 11/01/16					
Mercury	1.50			ug/L	1.6667	-0.0572	93	80-120			



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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

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

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

CHAIN OF CUSTODY RECORD

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 51085 Atlanta, Ga 30338 404-506-7239 REPORT TO: Lauren Petty REQUESTED COMPLETION DATE: PROJECT NAME/STATE: Plant Kraft Gwinnett PA PROJECT #: Phase Z CCR + State D+D		ANALYSIS REQUESTED CONTAINER TYPE: Field Filtered (EPA 820/7470) PRESERVATION: MAK HP II + 14 # of CONTAINERS: 1		CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION 1 - HCl, 56°C 2 - H ₂ SO ₄ , 58°C 3 - HNO ₃ 4 - NaOH, 56°C 5 - NaOH/ZnAc, 58°C 6 - Na ₂ S ₂ O ₃ , 58°C 7 - 58°C not frozen MATRIX CODES: DW - DRINKING WATER S - SOIL MW - WASTEWATER SL - SLUDGE GW - GROUNDWATER SD - SOLID SW - SURFACE WATER A - AIR ST - STORM WATER L - LIQUID W - WATER P - PRODUCT REMARKS/ADDITIONAL INFORMATION	
COLLECTION DATE 10/26/16 COLLECTION TIME 1624 MATRIX CODE GW SAMPLE IDENTIFICATION GWC-4	C O R M A P B X	DATE/TIME 10/26/16 1624 RECEIVED BY A. FUGERA (MS)	DATE/TIME 10/27/16 1315 RELINQUISHED BY [Signature]	DATE/TIME 10/27/16 1315 DATE/TIME 10/27/16 1315	FOR LAB USE ONLY LAB #: A 250795 ENTERED INTO LIMS: [Signature] TRACKING #:
PROJECT NAME/STATE: Plant Kraft Gwinnett PA PROJECT #: Phase Z CCR + State D+D		SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS Custody Seal: Intact Broken Not Sealed # of Coolers Cooler ID:		RECEIVED BY LAB: Lauren Petty NO. NA YES NO NA [Signature]	



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
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LOG-IN CHECKLIST

Printed: 11/7/2016 4:01:08PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 10/27/16 13:15

Work Order: AZJ0795

Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 1

#Containers: 1

Minimum Temp(C): 1.0

Maximum Temp(C): 1.0

Custody Seal(s) Used: N/A

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	NO
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
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Laboratory Report

Prepared For:

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

Attention: Mr. Joju Abraham

Report Number: AZJ0806

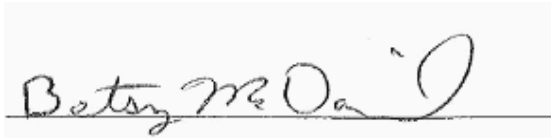
November 08, 2016

Project: CCR Event

Project #: Plant Kraft Grumman Road

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

Approved:



Project Manager

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All test results relate only to the samples analyzed.



PACE ANALYTICAL SERVICES, INC.

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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

ANALYTICAL REPORT FOR SAMPLES

<u>Sample ID</u>	<u>Laboratory ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
GWC-9	AZJ0806-01	Ground Water	10/27/16 08:49	10/28/16 08:20



PACE ANALYTICAL SERVICES, INC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0806

Project: CCR Event

Client ID: GWC-9

Lab Number ID: AZJ0806-01

Date/Time Sampled: 10/27/2016 8:49:00AM

Date/Time Received: 10/28/2016 8:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	221	25	10	mg/L	SM 2540 C		1	11/01/16 16:00	11/01/16 16:00	6110015	JPT
Inorganic Anions											
Chloride	17	0.25	0.01	mg/L	EPA 300.0	B-01	1	10/31/16 16:40	11/02/16 00:38	6100828	RNB
Fluoride	0.26	0.30	0.02	mg/L	EPA 300.0	J	1	10/31/16 16:40	11/02/16 00:38	6100828	RNB
Sulfate	76	5.0	0.26	mg/L	EPA 300.0		5	10/31/16 16:40	11/07/16 06:39	6100828	RLC
Metals, Total											
Antimony	0.0016	0.0030	0.0008	mg/L	EPA 6020B	J	1	11/02/16 08:00	11/02/16 23:02	6110033	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	11/02/16 08:00	11/02/16 23:02	6110033	CSW
Barium	0.244	0.0100	0.0004	mg/L	EPA 6020B		1	11/02/16 08:00	11/04/16 12:24	6110033	CSW
Beryllium	0.0003	0.0030	0.00008	mg/L	EPA 6020B	J	1	11/02/16 08:00	11/02/16 23:02	6110033	CSW
Boron	0.0281	0.100	0.0064	mg/L	EPA 6020B	J	1	11/02/16 08:00	11/02/16 23:02	6110033	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	11/02/16 08:00	11/02/16 23:02	6110033	CSW
Calcium	8.20	0.500	0.0311	mg/L	EPA 6020B		1	11/02/16 08:00	11/02/16 23:02	6110033	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	11/02/16 08:00	11/02/16 23:02	6110033	CSW
Cobalt	0.0017	0.0100	0.0005	mg/L	EPA 6020B	J	1	11/02/16 08:00	11/02/16 23:02	6110033	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	11/02/16 08:00	11/02/16 23:02	6110033	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	11/02/16 08:00	11/02/16 23:02	6110033	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	11/02/16 08:00	11/02/16 23:02	6110033	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	11/02/16 08:00	11/02/16 23:02	6110033	CSW
Lithium	0.0023	0.0500	0.0021	mg/L	EPA 6020B	J	1	11/02/16 08:00	11/02/16 23:02	6110033	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	11/02/16 10:50	11/02/16 15:40	6110038	MTC



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November 08, 2016

Report No.: AZJ0806

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110015 - SM 2540 C											
Blank (6110015-BLK1)						Prepared & Analyzed: 11/01/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6110015-BS1)						Prepared & Analyzed: 11/01/16					
Total Dissolved Solids	399	25	10	mg/L	400.00		100	84-108			
Duplicate (6110015-DUP1)						Prepared & Analyzed: 11/01/16					
						Source: AZJ0840-01					
Total Dissolved Solids	325	25	10	mg/L		330			2	10	



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Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0806

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6100828 - EPA 300.0											
Blank (6100828-BLK1)						Prepared: 10/31/16 Analyzed: 11/01/16					
Chloride	0.02	0.25	0.01	mg/L							J
Fluoride	ND	0.10	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6100828-BS1)						Prepared: 10/31/16 Analyzed: 11/01/16					
Chloride	10.6	1.0	0.01	mg/L	10.010		106	90-110			
Fluoride	10.6	0.10	0.02	mg/L	10.020		106	90-110			
Sulfate	10.4	5.0	0.05	mg/L	10.020		104	90-110			
Matrix Spike (6100828-MS1)						Source: AZJ0763-01 Prepared: 10/31/16 Analyzed: 11/01/16					
Chloride	13.5	1.0	0.01	mg/L	10.010	3.13	103	90-110			
Fluoride	11.2	0.10	0.02	mg/L	10.020	0.14	110	90-110			QM-05
Sulfate	11.4	5.0	0.05	mg/L	10.020	0.30	110	90-110			QM-05
Matrix Spike Dup (6100828-MSD1)						Source: AZJ0763-01 Prepared: 10/31/16 Analyzed: 11/01/16					
Chloride	13.3	1.0	0.01	mg/L	10.010	3.13	101	90-110	1	15	
Fluoride	11.2	0.10	0.02	mg/L	10.020	0.14	111	90-110	0.2	15	QM-05
Sulfate	11.3	5.0	0.05	mg/L	10.020	0.30	110	90-110	0.4	15	



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0806

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110033 - EPA 3005A											
Blank (6110033-BLK1)						Prepared & Analyzed: 11/02/16					
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 (6110033-BS1)						Prepared & Analyzed: 11/02/16					
Antimony	0.0993	0.0030	0.0008	mg/L	0.10000		99	80-120			
Arsenic	0.0991	0.0050	0.0016	mg/L	0.10000		99	80-120			
Barium	0.0996	0.0100	0.0004	mg/L	0.10000		100	80-120			
Beryllium	0.107	0.0030	0.00008	mg/L	0.10000		107	80-120			
Boron	1.09	0.100	0.0064	mg/L	1.0000		109	80-120			
Cadmium	0.0997	0.0010	0.00007	mg/L	0.10000		100	80-120			
Calcium	1.04	0.500	0.0311	mg/L	1.0000		104	80-120			
Chromium	0.0982	0.0100	0.0009	mg/L	0.10000		98	80-120			
Cobalt	0.0959	0.0100	0.0005	mg/L	0.10000		96	80-120			
Copper	0.0951	0.0050	0.0005	mg/L	0.10000		95	80-120			
Lead	0.0955	0.0050	0.0001	mg/L	0.10000		96	80-120			
Molybdenum	0.101	0.0100	0.0017	mg/L	0.10000		101	80-120			
Nickel	0.0964	0.0050	0.0006	mg/L	0.10000		96	80-120			
Selenium	0.100	0.0100	0.0010	mg/L	0.10000		100	80-120			
Silver	0.103	0.0050	0.0005	mg/L	0.10000		103	80-120			
Thallium	0.0985	0.0010	0.0002	mg/L	0.10000		99	80-120			
Vanadium	0.0992	0.0100	0.0071	mg/L	0.10000		99	80-120			
Zinc	0.102	0.0100	0.0021	mg/L	0.10000		102	80-120			
Lithium	0.111	0.0500	0.0021	mg/L	0.10000		111	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 08, 2016

Report No.: AZJ0806

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110033 - EPA 3005A											
Matrix Spike (6110033-MS1)			Source: AZK0001-01			Prepared & Analyzed: 11/02/16					
Antimony	0.0995	0.0030	0.0008	mg/L	0.10000	ND	99	75-125			
Arsenic	0.0988	0.0050	0.0016	mg/L	0.10000	ND	99	75-125			
Barium	0.126	0.0100	0.0004	mg/L	0.10000	0.0277	98	75-125			
Beryllium	0.101	0.0030	0.00008	mg/L	0.10000	ND	101	75-125			
Boron	1.02	0.100	0.0064	mg/L	1.0000	0.0111	101	75-125			
Cadmium	0.0988	0.0010	0.00007	mg/L	0.10000	0.00008	99	75-125			
Calcium	7.87	0.500	0.0311	mg/L	1.0000	6.22	165	75-125			QM-02
Chromium	0.102	0.0100	0.0009	mg/L	0.10000	0.0017	101	75-125			
Cobalt	0.0982	0.0100	0.0005	mg/L	0.10000	ND	98	75-125			
Copper	0.0957	0.0050	0.0005	mg/L	0.10000	ND	96	75-125			
Lead	0.0969	0.0050	0.0001	mg/L	0.10000	ND	97	75-125			
Molybdenum	0.105	0.0100	0.0017	mg/L	0.10000	ND	105	75-125			
Nickel	0.0996	0.0050	0.0006	mg/L	0.10000	0.0015	98	75-125			
Selenium	0.0976	0.0100	0.0010	mg/L	0.10000	ND	98	75-125			
Silver	0.103	0.0050	0.0005	mg/L	0.10000	ND	103	75-125			
Thallium	0.100	0.0010	0.0002	mg/L	0.10000	ND	100	75-125			
Vanadium	0.103	0.0100	0.0071	mg/L	0.10000	ND	103	75-125			
Zinc	0.105	0.0100	0.0021	mg/L	0.10000	0.0039	101	75-125			
Lithium	0.104	0.0500	0.0021	mg/L	0.10000	ND	104	75-125			
Matrix Spike Dup (6110033-MSD1)			Source: AZK0001-01			Prepared & Analyzed: 11/02/16					
Antimony	0.101	0.0030	0.0008	mg/L	0.10000	ND	101	75-125	1	20	
Arsenic	0.100	0.0050	0.0016	mg/L	0.10000	ND	100	75-125	2	20	
Barium	0.127	0.0100	0.0004	mg/L	0.10000	0.0277	100	75-125	0.9	20	
Beryllium	0.101	0.0030	0.00008	mg/L	0.10000	ND	101	75-125	0.2	20	
Boron	1.03	0.100	0.0064	mg/L	1.0000	0.0111	101	75-125	0.1	20	
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000	0.00008	101	75-125	2	20	
Calcium	7.22	0.500	0.0311	mg/L	1.0000	6.22	100	75-125	9	20	
Chromium	0.101	0.0100	0.0009	mg/L	0.10000	0.0017	99	75-125	1	20	
Cobalt	0.0959	0.0100	0.0005	mg/L	0.10000	ND	96	75-125	2	20	
Copper	0.0978	0.0050	0.0005	mg/L	0.10000	ND	98	75-125	2	20	
Lead	0.0948	0.0050	0.0001	mg/L	0.10000	ND	95	75-125	2	20	
Molybdenum	0.102	0.0100	0.0017	mg/L	0.10000	ND	102	75-125	3	20	
Nickel	0.0999	0.0050	0.0006	mg/L	0.10000	0.0015	98	75-125	0.4	20	
Selenium	0.103	0.0100	0.0010	mg/L	0.10000	ND	103	75-125	5	20	
Silver	0.104	0.0050	0.0005	mg/L	0.10000	ND	104	75-125	0.4	20	
Thallium	0.0988	0.0010	0.0002	mg/L	0.10000	ND	99	75-125	2	20	
Vanadium	0.101	0.0100	0.0071	mg/L	0.10000	ND	101	75-125	2	20	
Zinc	0.106	0.0100	0.0021	mg/L	0.10000	0.0039	103	75-125	1	20	
Lithium	0.106	0.0500	0.0021	mg/L	0.10000	ND	106	75-125	1	20	



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0806

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110033 - EPA 3005A											
Post Spike (6110033-PS1)				Source: AZK0001-01			Prepared & Analyzed: 11/02/16				
Antimony	89.5			ug/L	100.00	0.161	89	80-120			
Arsenic	99.9			ug/L	100.00	-0.108	100	80-120			
Barium	125			ug/L	100.00	27.7	97	80-120			
Beryllium	101			ug/L	100.00	0.0513	101	80-120			
Boron	1000			ug/L	1000.0	11.1	99	80-120			
Cadmium	97.0			ug/L	100.00	0.0791	97	80-120			
Calcium	6790			ug/L	1000.0	6220	58	80-120			QM-02
Chromium	104			ug/L	100.00	1.69	102	80-120			
Cobalt	96.4			ug/L	100.00	0.0819	96	80-120			
Copper	95.9			ug/L	100.00	0.0641	96	80-120			
Lead	96.3			ug/L	100.00	0.0601	96	80-120			
Molybdenum	103			ug/L	100.00	0.390	102	80-120			
Nickel	99.1			ug/L	100.00	1.55	98	80-120			
Selenium	102			ug/L	100.00	-0.317	102	80-120			
Silver	103			ug/L	100.00	0.0076	103	80-120			
Thallium	97.6			ug/L	100.00	0.210	97	80-120			
Vanadium	103			ug/L	100.00	-0.156	103	80-120			
Zinc	103			ug/L	100.00	3.91	99	80-120			
Lithium	103			ug/L	100.00	0.699	102	80-120			

Batch 6110038 - EPA 7470A

Blank (6110038-BLK1)				Prepared & Analyzed: 11/02/16							
Mercury	ND	0.00050	0.000041	mg/L							
LCS (6110038-BS1)				Prepared & Analyzed: 11/02/16							
Mercury	0.00253	0.00050	0.000041	mg/L	2.5000E-3		101	80-120			



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Attention: Mr. Joju Abraham

November 08, 2016

Report No.: AZJ0806

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6110038 - EPA 7470A											
Matrix Spike (6110038-MS1)			Source: AZJ0785-12			Prepared & Analyzed: 11/02/16					
Mercury	0.00239	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125			
Matrix Spike Dup (6110038-MSD1)			Source: AZJ0785-12			Prepared & Analyzed: 11/02/16					
Mercury	0.00243	0.00050	0.000041	mg/L	2.5000E-3	ND	97	75-125	1	20	
Post Spike (6110038-PS1)			Source: AZJ0785-12			Prepared & Analyzed: 11/02/16					
Mercury	1.77			ug/L	1.6667	0.00273	106	80-120			



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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 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-Nitrosodiphenylamine. Pace is not NELAC certified for N-Nitrosodiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

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

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

CHAIN OF CUSTODY RECORD

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

PAGE: / OF /



CLIENT NAME: <i>Georgia Power</i>		CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: <i>241 E. 19th McGill Blvd SE Bldg 1815 Atlanta, Ga. 30339 404-526-7239</i>		REPORT TO: <i>Laurea Raby</i>		CC: <i>Mary Patricia Health McLeble</i>	
REQUESTED COMPLETION DATE:		PROJECT NAME/STATE: <i>Plant Kraft Brunswick Blvd</i>		PO #:		LABORER: <i>laborsch@southface.com</i>	
PROJECT #:		PROJECT #:		PROJECT #:		PROJECT #:	
Collection DATE	Collection TIME	MATRIX CODE	OR	OR	OR	OR	OR
<i>10/27/16</i>	<i>0849</i>	<i>CW</i>	<i>X</i>				
SAMPLED BY AND TITLE: <i>D. Frazier (ACC)</i>		DATE/TIME: <i>10/27/16 0849</i>	DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:
RECEIVED BY: <i>[Signature]</i>		RELINQUISHED BY: <i>[Signature]</i>	RELINQUISHED BY: <i>[Signature]</i>	RELINQUISHED BY: <i>[Signature]</i>	RELINQUISHED BY: <i>[Signature]</i>	RELINQUISHED BY: <i>[Signature]</i>	RELINQUISHED BY: <i>[Signature]</i>
TEMPERATURE: <i>10/27/16 0820</i>	TEMPERATURE: <i>10/27/16 0820</i>	TEMPERATURE: <i>10/27/16 0820</i>	TEMPERATURE: <i>10/27/16 0820</i>	TEMPERATURE: <i>10/27/16 0820</i>	TEMPERATURE: <i>10/27/16 0820</i>	TEMPERATURE: <i>10/27/16 0820</i>	TEMPERATURE: <i>10/27/16 0820</i>
NO. NA	NO. NA	NO. NA	NO. NA	NO. NA	NO. NA	NO. NA	NO. NA
MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN
MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX
SAMPLE SHIPPED VIA: <i>CLIENT</i>		UPS	FED-EX	USPS	COURIER	OTHER	FS
Custody Seal: <i>Intact</i>		Broken	Not Broken	# of Coolers	Cooler ID:		
LAB #:		LAB #:		LAB #:		LAB #:	
Entered into LIMS:		Entered into LIMS:		Entered into LIMS:		Entered into LIMS:	
Tracking #:		Tracking #:		Tracking #:		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: 11/8/2016 2:40:40PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 10/28/16 08:20

Work Order: AZJ0806

Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 1

#Containers: 3

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:

December 05, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Kraft Grumman Road
Pace Project No.: 30201009

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on October 31, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: Plant Kraft Grumman Road

Pace Project No.: 30201009

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft Grumman Road

Pace Project No.: 30201009

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30201009001	GWC-9	Water	10/27/16 08:49	10/31/16 09:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft Grumman Road
Pace Project No.: 30201009

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30201009001	GWC-9	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30201009

Sample: GWC-9 **Lab ID: 30201009001** Collected: 10/27/16 08:49 Received: 10/31/16 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	1.27 ± 0.302 (0.146) C:89% T:NA	pCi/L	11/25/16 10:11	13982-63-3	
Radium-228	EPA 9320	1.43 ± 0.652 (1.09) C:57% T:74%	pCi/L	12/01/16 15:30	15262-20-1	
Total Radium	Total Radium Calculation	2.70 ± 0.954 (1.24)	pCi/L	12/02/16 16:14	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30201009

QC Batch: 239888

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30201009001

METHOD BLANK: 1178568

Matrix: Water

Associated Lab Samples: 30201009001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.494 ± 0.321 (0.600) C:92% T:73%	pCi/L	12/01/16 15:31	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft Grumman Road

Pace Project No.: 30201009

QC Batch: 239637

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30201009001

METHOD BLANK: 1177546

Matrix: Water

Associated Lab Samples: 30201009001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.00688 ± 0.0448 (0.138) C:97% T:NA	pCi/L	11/25/16 10:11	

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

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QUALIFIERS

Project: Plant Kraft Grumman Road

Pace Project No.: 30201009

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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WO#: 30201009



Chain of Custody



Workorder: AZI0806

Workorder Name: Plant Kraft Grumman Road

Results Requested By: 11/29/2016

Owner Received Date:

Report To:		Subcontract To:				Requested Analysis	
Betsy McDaniel Pace Analytical Atlanta 110 Technology Parkway Peachtree Corners, GA 30092 Phone (770)-734-4200		Pace - Pittsburgh 1638 Roseytown Road Stes. 2,3,4 Greensburg, PA 15601 Phone (724) 850-5600				Radium 226, 228, Total	
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Matrix	LAB USE ONLY
1	GWC-9	G	10/27/2016 8:49	AZI0806-01	GW	1	001
2							
3							
4							
5							
6							
7							
8							
9							
10							
Transfers	Released By	Date/Time	Received By	Date/Time	Comments		
1	McDaniel	10/28/16	Karen Liu	10-31-16 09:30			
2							
3							

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

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

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



CHAIN OF CUSTODY RECORD

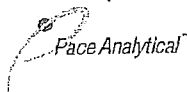
CLIENT NAME: <i>Georgia Power</i>	CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: <i>241 Ralph McGill Blvd SE 30135 Atlanta, GA 30333 404-526-7259</i>	REPORT TO: <i>Laurel Peffly</i>	CC: <i>Oliver Smith Health Mobile</i>	PO #: <i>labtech@bioethurance.com</i>	PROJECT NAME/STATE: <i>Plant Kraft Brunswick Road</i>	PROJECT #: <i>Phase Z CEC & State DFO</i>	Collection DATE <i>10/27/16</i>	Collection TIME <i>0849</i>	MATRIX CODE* <i>GW</i>	GRA B <i>X</i>	SAMPLE IDENTIFICATION <i>GW-9</i>	CONTAINER TYPE: PRESERVATION <i># of</i>	ANALYSIS REQUESTED <i>Netals App. 11+14 (EPA 60121370) Cl, F, SO₄ + TDS (EPA 300.015m 290C) Radium 226+ 228 (Sw-806 4315/192e)</i>	CONTAINER TYPE PRESERVATION <i>P - PLASTIC 1 - HCl, ≤6°C A - AMBER GLASS 2 - H₂SO₄, ≤6°C G - CLEAR GLASS 3 - HNO₃ V - VOA VIAL 4 - NaOH, ≤6°C S - STERILE 5 - NaOH/ZnAc, ≤6°C O - OTHER 6 - Na₂S₂O₃, ≤6°C 7 - ≤6°C not frozen</i>	L A B I D N U M B E R →	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	LAB #: <i>AZJ0866</i>	FOR LAB USE ONLY Entered into LIMS: Tracking #: <i>604</i>
--------------------------------------	---	------------------------------------	--	--	--	--	------------------------------------	--------------------------------	---------------------------	-------------------	--------------------------------------	--	--	---	----------------------------	---	--------------------------------	--------------------------	---

RELINQUISHED BY:	DATE/TIME:	RELINQUISHED BY:	DATE/TIME:	SAMPLE SHIPPED VIA:	CUSTOMER ID:
<i>[Signature]</i>	<i>10/23/16 0829</i>	<i>[Signature]</i>	<i>10/23/16 0829</i>	UPS	CLIENT
				FED-EX	COURIER
				USPS	OTHER FS
				# of Coolers	Cooler ID:

SAMPLED BY AND TITLE: <i>O. FOUER (As)</i>	DATE/TIME: <i>10/27/16 0849</i>	DATE/TIME: <i>10/23/16 0820</i>
RECEIVED BY:	DATE/TIME:	DATE/TIME:
<i>[Signature]</i>		
TEMPERATURE: <i>10°C</i>	Min:	Max:
Checked: <i>[Signature]</i>	NA	NA
Yes	No	NA

COC Revised 2016-05-17 .xlsx

Sample Condition Upon Receipt Pittsburgh



Client Name: Pace Georgia

Project # 30201009

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 6812 5100 1150

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 10-31-14

Comments:

	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
-Includes date/time/ID/Analysis Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
-Pace Containers Used:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13. <u>pH < 2</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>KH</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rad Aqueous Samples Screened > 0.5 mrem/hr	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>KH</u> Date: <u>10-31-14</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 11/28/2016
Worklist: 32410
Matrix: DW

Method Blank Assessment	
MB Sample ID	1178568
MB concentration:	0.494
M/B Counting Uncertainty:	0.308
MB MDC:	0.600
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)?	N
		LCSD32410	LCSD32410
Count Date:	12/1/2016		
Spike I.D.:	16-027		
Spike Concentration (pCi/mL):	25.936		
Volume Used (mL):	0.20		
Aliquot Volume (L, g, F):	0.806		
Target Conc. (pCi/L, g, F):	6.434		
Uncertainty (Calculated):	0.463		
Result (pCi/L, g, F):	6.760		
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.777		
Numerical Performance Indicator:	0.71		
Percent Recovery:	105.08%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		

Duplicate Sample Assessment	
Sample I.D.:	30201007002
Duplicate Sample I.D.:	30201007002DUP
Sample Result (pCi/L, g, F):	0.528
Sample Duplicate Result (pCi/L, g, F):	0.409
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.557
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.411
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-0.097
Duplicate RPD:	5.29%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

*12/3/16
DW*

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

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 11/16/2016
Worklist: 32366
Matrix: DW

Method Blank Assessment	
MB Sample ID	1177546
MB Concentration:	-0.007
M/B Counting Uncertainty:	0.045
MB MDC:	0.138
MB Numerical Performance Indicator:	-0.30
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	11/25/2016
Spike I.D.:	16-026
Spike Concentration (pCi/mL):	44.674
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.498
Target Conc. (pCi/L, g, F):	8.965
Uncertainty (Calculated):	0.422
Result (pCi/L, g, F):	6.785
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.516
Numerical Performance Indicator:	-6.41
Percent Recovery:	75.69%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30201555003
Duplicate Sample I.D.:	30201555003DUP
Sample Result (pCi/L, g, F):	0.119
Sample Result Counting Uncertainty (pCi/L, g, F):	0.107
Sample Duplicate Result (pCi/L, g, F):	0.043
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.073
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	1.147
Duplicate RPD:	94.26%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

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

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
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:	

Product Name: Low-Flow System

Date: 2017-01-06 07:51:34

Project Information:

Operator Name O Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 35.55"
Longitude -81° -10' -59.67"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 20 ft

Pump placement from TOC 19 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 21.1 ft
Screen Length 5 ft
Depth to Water 5.01 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1792685 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5 in
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	07:29:07	600.00	19.59	6.15	3433.03	248.00	5.50	0.06	-29.81
Last 5	07:34:07	900.00	19.90	6.16	3433.46	375.00	5.50	0.04	-39.18
Last 5	07:39:07	1199.98	19.94	6.17	3437.80	456.00	5.50	0.02	-45.32
Last 5	07:44:07	1499.98	20.12	6.16	3453.99	501.00	5.50	0.01	-49.65
Last 5	07:49:07	1799.99	20.13	6.16	3460.26	--	--	0.01	-52.44
Variance 0			0.04	0.01	4.33			-0.02	-6.14
Variance 1			0.18	-0.01	16.20			-0.01	-4.33
Variance 2			0.00	0.00	6.27			-0.01	-2.80

Notes

Cloudy 49F. Sampled at 0749 1-6-17.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-03 16:40:30

Project Information:

Operator Name R Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 44.05"
Longitude -81° -10' -43.01"
Sonde SN 407447
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type Tubing poly
Diameter Tubing .17 in
Length 19 ft

Pump placement from TOC 18.85 ft

Well Information:

Well ID GWA-8
Well diameter Well 2 in
Total Depth 20.85 ft
Screen Length 5 ft
Depth to Water 7.51 ft

Pumping Information:

Final Pumping Rate Total 150 mL/min
System Volume Calculated 0.1748051 L
Sample Rate 300 sec
Stabilization Drawdown 2.88 in
Total Volume Pumped 12.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	16:20:30	4199.95	22.00	4.27	344.28	5.49	8.81	0.14	136.56
Last 5	16:25:30	4499.95	21.87	4.29	341.04	5.47	8.81	0.16	140.19
Last 5	16:30:30	4799.95	21.91	4.28	343.86	6.92	8.81	0.15	136.27
Last 5	16:35:30	5099.95	21.75	4.28	340.65	5.85	8.81	0.15	135.04
Last 5	16:40:30	5399.96	21.75	4.28	343.91	4.78	8.81	0.16	135.22
Variance 0			-0.13	0.02	-3.24			0.02	3.63
Variance 1			-0.16	0.00	-3.21			0.00	-1.23
Variance 2			0.00	0.00	3.26			0.01	0.18

Notes

Grab Samples
GWA-8
GWA-8

Product Name: Low-Flow System

Date: 2017-01-04 09:14:39

Project Information:

Operator Name O Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 22.46"
Longitude -81° -10' -55.96"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25.2 ft

Pump placement from TOC 25.2 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.2 ft
Screen Length 5 ft
Depth to Water 18.48 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2024783 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	08:51:42	300.03	19.54	5.46	469.72	3.14	18.50	0.27	43.41
Last 5	09:01:42	900.00	20.57	5.46	461.74	1.70	18.60	0.15	32.82
Last 5	09:06:43	1201.00	20.70	5.46	460.29	1.65	18.60	0.12	30.06
Last 5	09:11:43	1500.99	20.78	5.46	460.15	1.37	18.60	0.11	27.66
Last 5									
Variance 0			1.04	-0.00	-7.98			-0.12	-10.59
Variance 1			0.13	0.00	-1.44			-0.03	-2.76
Variance 2			0.08	0.00	-0.14			-0.01	-2.41

Notes

Cloudy 57F. Sampled at 0911 on 1/4/17. 2nd Radiological collected.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-05 15:36:19

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 21.14"
Longitude -81° -11' -1.74"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 36 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 31.35 ft
Screen Length 5 ft
Depth to Water 15.8 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.2506832 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 13.13 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	15:13:03	3299.97	21.14	4.87	74.75	6.76	15.80	0.11	90.07
Last 5	15:18:03	3599.97	21.00	4.83	77.01	7.41	15.80	0.16	91.36
Last 5	15:23:03	3899.97	20.96	4.85	72.45	3.53	15.80	0.14	90.75
Last 5	15:28:03	4199.96	20.88	4.85	73.26	3.90	15.80	0.13	90.57
Last 5	15:33:03	4499.96	20.92	4.85	74.20	3.21	15.80	0.14	90.23
Variance 0			-0.04	0.02	-4.56			-0.02	-0.61
Variance 1			-0.07	0.00	0.81			-0.01	-0.18
Variance 2			0.04	-0.00	0.93			0.01	-0.34

Notes

Sunny 60's. sample collected at 1535.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-03 17:29:35

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 20.19"
Longitude -81° -10' -55.26"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 22.9 ft
Screen Length 5 ft
Depth to Water 19.87 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.09 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 100	pH +/- 0.1	SpCond µS/cm +/- 5%	Turb NTU +/- 10	DTW ft	RDO mg/L +/- 0.5	ORP mV +/- 10
Stabilization									
Last 5	17:07:09	1799.98	22.45	6.13	473.87	1.91	20.10	0.61	-102.30
Last 5	17:12:09	2099.98	22.44	6.16	490.61	2.04	20.10	0.61	-104.10
Last 5	17:17:09	2399.98	22.40	6.15	505.16	2.53	20.10	0.62	-106.54
Last 5	17:22:09	2699.96	22.37	6.17	517.64	1.87	20.10	0.60	-107.13
Last 5	17:27:09	2999.96	22.38	6.19	530.67	1.43	20.10	0.61	-106.57
Variance 0			-0.04	-0.02	14.55			0.00	-2.43
Variance 1			-0.04	0.02	12.48			-0.01	-0.59
Variance 2			0.02	0.02	13.03			0.00	0.56

Notes

Cloudy 72F Sampled @ 1727

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-06 08:27:53

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 26.3"
Longitude -81° -10' -56.87"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 31 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-4
Well diameter 2 in
Well Total Depth 26.35 ft
Screen Length 5 ft
Depth to Water 14.36 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.2283661 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 18.48 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	08:05:08	1500.00	20.40	6.10	1306.23	123.00	16.00	0.73	21.09
Last 5	08:10:08	1800.00	20.24	6.08	1367.69	152.00	16.00	0.67	19.71
Last 5	08:15:08	2100.00	20.12	6.07	1376.20	189.00	15.90	0.57	17.68
Last 5	08:20:08	2399.98	20.21	6.02	1379.55	160.00	15.90	0.56	19.17
Last 5	08:25:08	2699.98	20.24	6.02	1402.06	180.00	15.90	0.53	18.13
Variance 0			-0.12	-0.01	8.52			-0.11	-2.03
Variance 1			0.09	-0.05	3.35			-0.01	1.49
Variance 2			0.03	-0.00	22.51			-0.03	-1.04

Notes

Cloudy 50's. sample collected at 0825.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-03 16:03:43

Project Information:

Operator Name OF
Company Name ACC
Project Name SA/BG#3
Site Name Grumman Rd.
Latitude 32° 8' 29.55"
Longitude -81° -10' -57.8"
Sonde SN 466058
Turbidity Make/Model Hach 2100

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 26 ft

Pump placement from TOC 23.4 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 26.4 ft
Screen Length 5 ft
Depth to Water 9.85 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.206049 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.02 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 0.5	+/- 10
Last 5	15:40:00	1200.00	22.20	5.10	475.34	11.90	10.40	0.10	-116.16
Last 5	15:45:00	1499.99	22.21	5.09	471.64	8.16	10.40	0.09	-115.70
Last 5	15:50:00	1799.99	22.19	5.08	451.77	7.26	10.40	0.09	-114.79
Last 5	15:55:00	2099.98	22.18	5.07	447.87	7.63	10.40	0.08	-113.95
Last 5	16:00:00	2399.98	22.18	5.09	460.59	4.71	10.40	0.07	-113.39
Variance 0			-0.02	-0.02	-19.88			-0.01	0.90
Variance 1			-0.01	-0.00	-3.90			-0.01	0.85
Variance 2			-0.00	0.02	12.72			-0.01	0.56

Notes

Cloudy 75F

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-05 11:31:16

Project Information:

Operator Name OF
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 32.32"
Longitude -81° -10' -58.64"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 22.65 ft

Pump placement from TOC 20.65 ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 22.65 ft
Screen Length 5 ft
Depth to Water 7.03 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1910965 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 24 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	11:10:03	8402.88	20.95	5.20	719.06	6.51	7.50	0.04	-6.15
Last 5	11:15:03	8702.86	20.97	5.20	692.42	6.43	7.50	0.05	-5.19
Last 5	11:20:03	9002.86	20.89	5.20	698.71	5.55	7.50	0.04	-5.39
Last 5	11:25:03	9302.86	20.83	5.20	702.05	6.10	7.50	0.04	-4.77
Last 5	11:30:03	9602.85	20.84	5.20	685.55	4.71	7.50	0.04	-5.22
Variance 0			-0.08	0.00	6.29			-0.00	-0.20
Variance 1			-0.06	-0.00	3.34			-0.00	0.62
Variance 2			0.01	-0.00	-16.50			0.00	-0.45

Notes

Cloudy 60F. Sampled 1130 on 1-5-17.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-05 17:30:09

Project Information:

Operator Name O Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 36.73"
Longitude -81° -11' -6.34"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 25.4 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 27.4 ft
Screen Length 5 ft
Depth to Water 8.06 ft

Pumping Information:

Final Pumping Rate 0 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 300 in
Total Volume Pumped 3.1 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	17:07:39	2999.96	20.48	3.77	278.29	10.60	19.30	1.82	254.96
Last 5	17:12:39	3299.97	20.50	3.77	278.72	9.21	20.70	1.86	264.43
Last 5	17:17:39	3599.95	20.53	3.77	277.51	9.30	22.20	1.87	264.84
Last 5	17:22:39	3899.95	20.62	3.85	269.57	8.96	23.50	1.84	230.34
Last 5	17:27:39	4199.95	20.60	3.91	264.60	9.35	25.10	2.20	207.24
Variance 0			0.02	0.01	-1.21			0.01	0.40
Variance 1			0.09	0.07	-7.93			-0.03	-34.50
Variance 2			-0.02	0.06	-4.98			0.36	-23.10

Notes

Well purged dry @ 1730 on 1-5-17.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-04 14:52:02

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 33.65"
Longitude -81° -11' -5.52"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-10
Well diameter 2 in
Well Total Depth 20.6 ft
Screen Length 5 ft
Depth to Water 7.87 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 27.96 in
Total Volume Pumped 31.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	14:27:13	11399.87	20.91	4.73	4708.35	16.30	10.20	0.09	89.98
Last 5	14:32:13	11699.85	20.89	4.73	4712.10	13.50	10.20	0.09	89.82
Last 5	14:37:13	11999.85	20.86	4.73	4706.94	12.80	10.20	0.09	89.73
Last 5	14:42:13	12299.84	20.79	4.73	4710.28	10.30	10.20	0.09	89.39
Last 5	14:47:13	12599.84	20.81	4.73	4714.29	9.02	10.20	0.09	89.14
Variance 0			-0.03	0.00	-5.15			-0.00	-0.09
Variance 1			-0.07	0.00	3.34			0.00	-0.34
Variance 2			0.02	-0.00	4.01			0.00	-0.25

Notes

Sunny 60's. sampled at 1455.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-04 10:24:17

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 30.31"
Longitude -81° -11' -4.62"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 22.6 ft
Screen Length 5 ft
Depth to Water 11.33 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 46.44 in
Total Volume Pumped 5.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	10:01:32	900.02	21.19	5.10	162.83	5.73	14.20	1.48	115.13
Last 5	10:06:32	1200.02	21.22	5.08	166.85	29.00	14.50	1.34	113.31
Last 5	10:11:32	1500.02	21.24	5.07	174.75	29.00	14.80	1.18	111.27
Last 5	10:16:32	1800.02	21.11	5.07	176.77	4.94	15.10	1.02	110.10
Last 5	10:21:32	2100.02	21.03	5.06	179.05	4.17	15.20	0.98	109.52
Variance 0			0.02	-0.01	7.90			-0.16	-2.04
Variance 1			-0.13	-0.01	2.02			-0.16	-1.17
Variance 2			-0.07	-0.01	2.28			-0.04	-0.58

Notes

Cloudy, 60's. sample taken at 10:25.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-04 08:52:16

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 27.68"
Longitude -81° -11' -3.97"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 31 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 5 ft
Depth to Water 11.55 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2283661 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.72 in
Total Volume Pumped 3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	08:27:49	300.06	18.97	3.94	1916.63	7.70	11.90	2.47	283.55
Last 5	08:32:49	600.01	19.05	3.99	1927.79	8.91	11.86	0.46	195.94
Last 5	08:37:49	900.01	19.11	4.00	1927.30	6.28	11.86	0.26	167.70
Last 5	08:42:49	1200.01	19.55	4.00	1913.29	4.03	11.86	0.18	156.17
Last 5	08:47:49	1500.01	19.62	4.01	1915.60	3.54	11.86	0.16	149.85
Variance 0			0.06	0.00	-0.49			-0.20	-28.24
Variance 1			0.43	0.01	-14.01			-0.08	-11.54
Variance 2			0.08	0.01	2.31			-0.02	-6.32

Notes

Sample collected at 08:55. Sunny 50's. Dup-1 taken here.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-05 10:08:11

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 24.19"
Longitude -81° -11' -2.93"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-13
Well diameter 2 in
Well Total Depth 23.8 ft
Screen Length 5 ft
Depth to Water 13.17 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7.56 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	09:44:33	3899.96	20.23	4.95	99.40	5.65	13.80	0.15	107.55
Last 5	09:49:33	4199.95	20.39	4.96	97.02	5.40	13.80	0.15	106.87
Last 5	09:54:33	4499.94	20.05	4.95	97.11	5.31	13.70	0.16	107.15
Last 5	09:59:33	4799.94	20.05	4.96	97.01	5.03	13.70	0.16	106.58
Last 5	10:04:33	5099.94	20.23	4.97	96.29	4.94	13.70	0.14	105.02
Variance 0			-0.34	-0.00	0.08			0.01	0.28
Variance 1			-0.00	0.00	-0.10			-0.00	-0.57
Variance 2			0.17	0.02	-0.72			-0.02	-1.57

Notes

Sunny 50's. sampled at 10:10. Dup-3 here.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-05 14:38:14

Project Information:

Operator Name O Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 18.04"
Longitude -81° -11' -0.98"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 26 ft

Pump placement from TOC 25 ft

Well Information:

Well ID GEC-14
Well diameter 2 in
Well Total Depth 27.0 ft
Screen Length 5 ft
Depth to Water 18.62 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.206049 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	14:17:00	300.02	21.42	4.75	950.79	1.34	19.00	0.37	45.76
Last 5	14:22:00	600.05	21.02	4.74	940.20	2.78	19.00	0.26	44.86
Last 5	14:27:00	900.01	20.88	4.73	948.17	3.11	19.00	0.21	44.38
Last 5	14:32:00	1200.00	20.77	4.73	951.86	2.29	19.00	0.19	43.82
Last 5	14:37:00	1499.99	20.71	4.73	959.64	1.83	19.00	0.19	43.12
Variance 0			-0.14	-0.01	7.97			-0.05	-0.48
Variance 1			-0.11	-0.00	3.69			-0.02	-0.56
Variance 2			-0.07	-0.00	7.78			-0.01	-0.70

Notes

61F Cloudy. Sampled 1437 1-5-17.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-05 13:17:06

Project Information:

Operator Name O Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 16.24"
Longitude -81° -10' -58.58"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 24.8 ft

Pump placement from TOC 24.8 ft

Well Information:

Well ID GWC-15
Well diameter 2 in
Well Total Depth 26.80 ft
Screen Length 5 ft
Depth to Water 18.75 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.2006929 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 6.875 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	12:54:59	2099.98	22.18	6.29	995.27	0.96	19.10	0.12	31.82
Last 5	12:59:59	2399.98	22.14	6.26	958.41	0.88	19.10	0.11	30.69
Last 5	13:04:59	2699.98	22.16	6.23	910.53	1.09	19.10	0.11	29.86
Last 5	13:09:59	2999.97	22.13	6.24	888.87	0.82	19.10	0.10	29.11
Last 5	13:14:59	3299.97	21.97	6.25	903.40	0.68	19.10	0.11	29.89
Variance 0			0.02	-0.03	-47.88			-0.01	-0.82
Variance 1			-0.02	0.01	-21.66			-0.00	-0.75
Variance 2			-0.17	0.01	14.52			0.00	0.77

Notes

Cloudy 66F. Sampled 1315 1-5-17.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-04 14:21:03

Project Information:

Operator Name O Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 17.15"
Longitude -81° -10' -55.02"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 26.2 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-15
Well diameter 2 in
Well Total Depth 28.20 ft
Screen Length 5 ft
Depth to Water 20.13 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.2069417 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6 in
Total Volume Pumped 14.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	13:58:33	5400.93	23.21	5.47	918.19	10.10	20.60	0.45	1.06
Last 5	14:03:33	5700.92	23.24	5.48	917.05	8.63	20.70	0.46	0.61
Last 5	14:08:33	6000.93	23.30	5.48	920.27	7.75	20.70	0.46	0.92
Last 5	14:13:33	6300.91	23.37	5.49	913.43	5.80	20.70	0.46	0.75
Last 5	14:18:33	6600.91	23.09	5.51	917.42	4.65	20.70	0.47	-0.00
Variance 0			0.06	-0.00	3.21			0.00	0.31
Variance 1			0.07	0.01	-6.84			0.00	-0.18
Variance 2			-0.28	0.02	3.99			0.00	-0.75

Notes

Cloudy 69F. Sampled @ 1418 on 1-4-17.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-05 12:46:25

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 40.81"
Longitude -81° -11' -5.29"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 23.20 ft
Screen Length 5 ft
Depth to Water 5.18 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 30.24 in
Total Volume Pumped 10.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 100	pH +/- 0.1	SpCond µS/cm +/- 5%	Turb NTU +/- 10	DTW ft	RDO mg/L +/- 0.5	ORP mV +/- 10
Stabilization									
Last 5	12:22:14	3299.98	21.46	4.52	3057.35	6.82	7.80	0.06	96.67
Last 5	12:27:14	3599.98	21.46	4.51	3031.25	7.38	7.80	0.06	96.48
Last 5	12:32:14	3900.00	21.51	4.52	3027.40	6.81	7.80	0.05	95.92
Last 5	12:37:14	4199.97	21.30	4.44	3158.02	6.47	7.70	0.06	97.10
Last 5	12:42:14	4499.96	21.11	4.45	3118.14	4.08	7.70	0.06	95.94
Variance 0			0.05	0.00	-3.85			-0.00	-0.56
Variance 1			-0.21	-0.08	130.62			0.01	1.19
Variance 2			-0.19	0.01	-39.88			0.00	-1.16

Notes

Sunny 60's. sampled at 1245. FB-2 poured here.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-05 15:43:23

Project Information:

Operator Name O Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 30.46"
Longitude -81° -10' -58.96"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 24.9 ft

Pump placement from TOC 22.9 ft

Well Information:

Well ID GWC-19
Well diameter 2 in
Well Total Depth 25.9 ft
Screen Length 5 ft
Depth to Water 7.95 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.2011392 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7 in
Total Volume Pumped 3.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 100	pH +/- 0.1	SpCond µS/cm +/- 5%	Turb NTU +/- 10	DTW ft	RDO mg/L +/- 0.5	ORP mV +/- 10
Stabilization									
Last 5	15:22:00	600.00	22.88	4.64	614.71	4.76	8.70	0.28	32.61
Last 5	15:27:00	900.00	22.67	4.63	613.43	4.38	8.70	0.24	28.80
Last 5	15:32:00	1200.01	22.87	4.64	608.79	2.43	8.70	0.22	26.72
Last 5	15:37:00	1499.99	22.71	4.65	607.44	3.41	8.70	0.22	25.68
Last 5	15:42:00	1799.99	22.64	4.64	609.71	2.79	8.70	0.23	24.70
Variance 0			0.20	0.00	-4.64			-0.02	-2.08
Variance 1			-0.16	0.01	-1.35			0.00	-1.04
Variance 2			-0.07	-0.01	2.27			0.01	-0.98

Notes

67F Cloudy. Sampled 1542 1-5-17.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-04 11:25:06

Project Information:

Operator Name O Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 19.7"
Longitude -81° -10' -55.34"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 22.95 ft

Pump placement from TOC 22.95 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 24.95 ft
Screen Length 5 ft
Depth to Water 20.54 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.1924356 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6 in
Total Volume Pumped 8.12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	11:02:35	2699.98	21.55	6.05	755.62	1.83	21.00	0.12	-58.86
Last 5	11:07:35	2999.96	21.60	6.05	757.08	1.46	21.00	0.11	-58.44
Last 5	11:12:35	3299.96	21.66	6.05	755.53	1.60	21.00	0.11	-57.46
Last 5	11:17:35	3599.95	21.76	6.05	756.62	1.47	21.00	0.11	-56.00
Last 5	11:22:35	3899.95	21.91	6.05	753.38	1.60	21.00	0.10	-55.29
Variance 0			0.06	-0.01	-1.55			-0.01	0.98
Variance 1			0.10	0.00	1.09			-0.00	1.46
Variance 2			0.15	-0.00	-3.24			-0.01	0.71

Notes

Cloudy 57F. Sampled 1-4-17 @ 1127. Three well volumes purged, WL below top of screen.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-04 16:54:23

Project Information:

Operator Name O Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 17.06"
Longitude -81° -10' -55.18"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 23 ft

Pump placement from TOC 21 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 23.8 ft
Screen Length 5 ft
Depth to Water 20.01 ft

Pumping Information:

Final Pumping Rate 110 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 8.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	16:32:28	4799.93	21.65	5.46	175.51	4.52	20.30	3.43	16.37
Last 5	16:37:28	5099.93	21.73	5.51	186.18	3.42	20.30	3.14	16.56
Last 5	16:42:28	5399.92	21.42	5.56	199.11	2.89	20.30	2.71	16.55
Last 5	16:47:28	5699.92	21.31	5.58	199.94	2.33	20.30	3.02	15.66
Last 5	16:52:28	5999.92	21.02	5.60	205.70	2.42	20.30	2.87	15.34
Variance 0			-0.31	0.05	12.93			-0.43	-0.00
Variance 1			-0.11	0.02	0.83			0.31	-0.90
Variance 2			-0.29	0.03	5.76			-0.15	-0.32

Notes

Cloudy 64F. Sampled at 1642 on 1-4-17

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-04 17:11:29

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 33.79"
Longitude -81° -11' -5.69"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 23 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-22
Well diameter 2 in
Well Total Depth 18.6 ft
Screen Length 5 ft
Depth to Water 7.18 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.84 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	16:49:06	3899.96	20.11	4.65	1955.41	1.44	7.50	0.08	111.04
Last 5	16:54:06	4199.96	20.09	4.65	2009.00	1.19	7.50	0.08	110.12
Last 5	16:59:06	4499.96	20.09	4.64	2130.19	1.09	7.50	0.08	110.26
Last 5	17:04:06	4799.97	20.04	4.64	2178.52	0.80	7.50	0.08	109.71
Last 5	17:09:06	5099.96	20.04	4.63	2219.92	0.97	7.50	0.08	109.38
Variance 0			0.01	-0.01	121.18			-0.00	0.15
Variance 1			-0.06	-0.00	48.33			-0.00	-0.55
Variance 2			-0.00	-0.01	41.40			-0.00	-0.33

Notes

Sampled at 17:15

Grab Samples



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: AAA0135

January 13, 2017

Project: CCR Event

Project #:Plant Kraft

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

Approved:

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

Project Manager

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All test results relate only to the samples analyzed.



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 13, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-1	AAA0135-01	Ground Water	01/04/17 09:11	01/05/17 13:00
GWC-3	AAA0135-02	Ground Water	01/03/17 17:27	01/05/17 13:00
GWC-5	AAA0135-03	Ground Water	01/03/17 16:00	01/05/17 13:00
GWA-8	AAA0135-04	Ground Water	01/03/17 16:55	01/05/17 13:00
GWC-10	AAA0135-05	Ground Water	01/04/17 14:50	01/05/17 13:00
GWC-11	AAA0135-06	Ground Water	01/04/17 10:25	01/05/17 13:00
GWC-12	AAA0135-07	Ground Water	01/04/17 08:55	01/05/17 13:00
GWC-16	AAA0135-08	Ground Water	01/04/17 14:18	01/05/17 13:00
GWC-20	AAA0135-09	Ground Water	01/04/17 11:27	01/05/17 13:00
GWC-21	AAA0135-10	Ground Water	01/04/17 16:42	01/05/17 13:00
GWC-22	AAA0135-11	Ground Water	01/04/17 17:15	01/05/17 13:00
EB-2-1-4-17	AAA0135-12	Water	01/04/17 17:10	01/05/17 13:00
FB-1-1-3-17	AAA0135-13	Water	01/03/17 15:55	01/05/17 13:00
Dup-1-1-4-17	AAA0135-14	Ground Water	01/04/17 00:00	01/05/17 13:00



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

Attention: Mr. Joju Abraham

January 13, 2017

Report No.: AAA0135

Project: CCR Event

Client ID: GWC-1

Lab Number ID: AAA0135-01

Date/Time Sampled: 1/4/2017 9:11:00AM

Date/Time Received: 1/5/2017 1:00:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	349	25	10	mg/L	SM 2540 C		1	01/06/17 13:20	01/06/17 13:20	7010121	JPT
Inorganic Anions											
Chloride	6.9	0.25	0.01	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 15:18	7010191	RNB
Fluoride	0.18	0.30	0.02	mg/L	EPA 300.0	J	1	01/10/17 09:32	01/10/17 15:18	7010191	RNB
Sulfate	99	5.0	0.26	mg/L	EPA 300.0		5	01/10/17 09:32	01/11/17 14:58	7010191	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 12:37	7010125	CSW
Arsenic	0.0018	0.0050	0.0016	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 12:37	7010125	CSW
Barium	0.0534	0.0100	0.0004	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 12:37	7010125	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 12:37	7010125	CSW
Boron	1.30	0.0400	0.0064	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 12:37	7010125	CSW
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 12:37	7010125	CSW
Calcium	33.4	25.0	1.55	mg/L	EPA 6020B		50	01/06/17 11:30	01/09/17 12:43	7010125	CSW
Chromium	0.0021	0.0100	0.0009	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 12:37	7010125	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 12:37	7010125	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 12:37	7010125	CSW
Molybdenum	0.167	0.0100	0.0017	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 12:37	7010125	CSW
Selenium	0.0016	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 12:37	7010125	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 12:37	7010125	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 12:37	7010125	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 12:37	7010125	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 12:37	7010125	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/09/17 10:10	01/09/17 14:03	7010153	MTC



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 13, 2017

Report No.: AAA0135

Project: CCR Event

Client ID: GWC-3

Lab Number ID: AAA0135-02

Date/Time Sampled: 1/3/2017 5:27:00PM

Date/Time Received: 1/5/2017 1:00:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	422	25	10	mg/L	SM 2540 C		1	01/06/17 13:20	01/06/17 13:20	7010121	JPT
Inorganic Anions											
Chloride	2.0	0.25	0.01	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 17:43	7010191	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 17:43	7010191	RNB
Sulfate	14	1.0	0.05	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 17:43	7010191	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:00	7010125	CSW
Arsenic	0.281	0.0050	0.0016	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:00	7010125	CSW
Barium	0.0569	0.0100	0.0004	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:00	7010125	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:00	7010125	CSW
Boron	0.684	0.0400	0.0064	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:00	7010125	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:00	7010125	CSW
Calcium	67.6	25.0	1.55	mg/L	EPA 6020B		50	01/06/17 11:30	01/09/17 13:06	7010125	CSW
Chromium	0.0014	0.0100	0.0009	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 13:00	7010125	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:00	7010125	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:00	7010125	CSW
Molybdenum	0.0644	0.0100	0.0017	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:00	7010125	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:00	7010125	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:00	7010125	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:00	7010125	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:00	7010125	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:00	7010125	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/09/17 10:10	01/09/17 14:10	7010153	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 13, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0135

Project: CCR Event

Client ID: GWC-5

Lab Number ID: AAA0135-03

Date/Time Sampled: 1/3/2017 4:00:00PM

Date/Time Received: 1/5/2017 1:00:00PM

Matrix: Ground Water

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	01/06/17 13:20	01/06/17 13:20	7010121	JPT
Inorganic Anions											
Chloride	29	0.25	0.01	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 18:04	7010191	RNB
Fluoride	0.08	0.30	0.02	mg/L	EPA 300.0	J	1	01/10/17 09:32	01/10/17 18:04	7010191	RNB
Sulfate	120	20	1.0	mg/L	EPA 300.0		20	01/10/17 09:32	01/12/17 05:29	7010191	RLC
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:12	7010125	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:12	7010125	CSW
Barium	0.118	0.0100	0.0004	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:12	7010125	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 13:12	7010125	CSW
Boron	3.39	2.00	0.321	mg/L	EPA 6020B		50	01/06/17 11:30	01/09/17 13:17	7010125	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:12	7010125	CSW
Calcium	18.1	5.00	0.311	mg/L	EPA 6020B		10	01/06/17 11:30	01/11/17 14:39	7010125	CSW
Chromium	0.0010	0.0100	0.0009	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 13:12	7010125	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:12	7010125	CSW
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 13:12	7010125	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:12	7010125	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:12	7010125	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:12	7010125	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:12	7010125	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:12	7010125	CSW
Lithium	0.0024	0.0500	0.0021	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 13:12	7010125	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/09/17 10:10	01/09/17 14:13	7010153	MTC



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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 13, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0135

Project: CCR Event

Client ID: GWA-8

Lab Number ID: AAA0135-04

Date/Time Sampled: 1/3/2017 4:55:00PM

Date/Time Received: 1/5/2017 1:00:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	333	25	10	mg/L	SM 2540 C		1	01/06/17 13:20	01/06/17 13:20	7010121	JPT
Inorganic Anions											
Chloride	13	0.25	0.01	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 18:25	7010191	RNB
Fluoride	0.18	0.30	0.02	mg/L	EPA 300.0	J	1	01/10/17 09:32	01/10/17 18:25	7010191	RNB
Sulfate	140	10	0.51	mg/L	EPA 300.0		10	01/10/17 09:32	01/11/17 17:02	7010191	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:23	7010125	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:23	7010125	CSW
Barium	0.0610	0.0100	0.0004	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:23	7010125	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 13:23	7010125	CSW
Boron	0.124	0.0400	0.0064	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:23	7010125	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:23	7010125	CSW
Calcium	22.1	5.00	0.311	mg/L	EPA 6020B		10	01/06/17 11:30	01/11/17 14:45	7010125	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:23	7010125	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:23	7010125	CSW
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 13:23	7010125	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:23	7010125	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:23	7010125	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:23	7010125	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:23	7010125	CSW
Zinc	0.0035	0.0100	0.0021	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 13:23	7010125	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:23	7010125	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/09/17 10:10	01/09/17 14:15	7010153	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

January 13, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0135

Project: CCR Event

Client ID: GWC-10

Lab Number ID: AAA0135-05

Date/Time Sampled: 1/4/2017 2:50:00PM

Date/Time Received: 1/5/2017 1:00:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	3620	25	10	mg/L	SM 2540 C		1	01/06/17 13:20	01/06/17 13:20	7010121	JPT
Inorganic Anions											
Chloride	860	25	1.4	mg/L	EPA 300.0		100	01/10/17 09:32	01/11/17 17:22	7010191	RNB
Fluoride	0.21	0.30	0.02	mg/L	EPA 300.0	J	1	01/10/17 09:32	01/10/17 18:45	7010191	RNB
Sulfate	1700	100	5.1	mg/L	EPA 300.0		100	01/10/17 09:32	01/11/17 17:22	7010191	RNB
Metals, Total											
Antimony	0.0023	0.0030	0.0008	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 13:34	7010125	CSW
Arsenic	0.0134	0.0050	0.0016	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:34	7010125	CSW
Barium	0.0574	0.0100	0.0004	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:34	7010125	CSW
Beryllium	0.0004	0.0030	0.00008	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 13:34	7010125	CSW
Boron	24.5	2.00	0.321	mg/L	EPA 6020B		50	01/06/17 11:30	01/09/17 13:40	7010125	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:34	7010125	CSW
Calcium	260	25.0	1.55	mg/L	EPA 6020B		50	01/06/17 11:30	01/09/17 13:40	7010125	CSW
Chromium	0.0020	0.0100	0.0009	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 13:34	7010125	CSW
Cobalt	0.0072	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 13:34	7010125	CSW
Lead	0.0117	0.0050	0.0001	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:34	7010125	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:34	7010125	CSW
Selenium	0.0026	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 13:34	7010125	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:34	7010125	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:34	7010125	CSW
Zinc	4.25	0.500	0.105	mg/L	EPA 6020B		50	01/06/17 11:30	01/09/17 13:40	7010125	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:34	7010125	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/09/17 10:10	01/09/17 14:18	7010153	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 13, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0135

Project: CCR Event

Client ID: GWC-11

Lab Number ID: AAA0135-06

Date/Time Sampled: 1/4/2017 10:25:00AM

Date/Time Received: 1/5/2017 1:00:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	182	25	10	mg/L	SM 2540 C		1	01/06/17 13:20	01/06/17 13:20	7010121	JPT
Inorganic Anions											
Chloride	3.8	0.25	0.01	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 19:06	7010191	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 19:06	7010191	RNB
Sulfate	65	2.0	0.10	mg/L	EPA 300.0		2	01/10/17 09:32	01/11/17 17:43	7010191	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:46	7010125	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:46	7010125	CSW
Barium	0.0598	0.0100	0.0004	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:46	7010125	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:46	7010125	CSW
Boron	0.0738	0.0400	0.0064	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:46	7010125	CSW
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 13:46	7010125	CSW
Calcium	17.6	5.00	0.311	mg/L	EPA 6020B		10	01/06/17 11:30	01/11/17 14:51	7010125	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:46	7010125	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:46	7010125	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 13:46	7010125	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:46	7010125	CSW
Selenium	0.0062	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 13:46	7010125	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:46	7010125	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:46	7010125	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:46	7010125	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 13:46	7010125	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/09/17 10:10	01/09/17 14:20	7010153	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 13, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0135
Client ID: GWC-12
Date/Time Sampled: 1/4/2017 8:55:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0135-07
Date/Time Received: 1/5/2017 1:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1430	25	10	mg/L	SM 2540 C		1	01/06/17 13:20	01/06/17 13:20	7010121	JPT
Inorganic Anions											
Chloride	160	12	0.70	mg/L	EPA 300.0		50	01/10/17 09:32	01/11/17 18:04	7010191	RNB
Fluoride	0.51	0.30	0.02	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 19:27	7010191	RNB
Sulfate	880	50	2.6	mg/L	EPA 300.0		50	01/10/17 09:32	01/11/17 18:04	7010191	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:24	7010125	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:24	7010125	CSW
Barium	0.0174	0.0100	0.0004	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:24	7010125	CSW
Beryllium	0.0009	0.0030	0.00008	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 14:24	7010125	CSW
Boron	6.56	2.00	0.321	mg/L	EPA 6020B		50	01/06/17 11:30	01/09/17 14:29	7010125	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:24	7010125	CSW
Calcium	94.9	25.0	1.55	mg/L	EPA 6020B		50	01/06/17 11:30	01/09/17 14:29	7010125	CSW
Chromium	0.0012	0.0100	0.0009	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 14:24	7010125	CSW
Cobalt	0.0014	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 14:24	7010125	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:24	7010125	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:24	7010125	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:24	7010125	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:24	7010125	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:24	7010125	CSW
Zinc	0.0025	0.0100	0.0021	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 14:24	7010125	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:24	7010125	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/09/17 10:10	01/09/17 14:22	7010153	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 13, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0135

Project: CCR Event

Client ID: GWC-16

Lab Number ID: AAA0135-08

Date/Time Sampled: 1/4/2017 2:18:00PM

Date/Time Received: 1/5/2017 1:00:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	783	25	10	mg/L	SM 2540 C		1	01/06/17 13:20	01/06/17 13:20	7010121	JPT
Inorganic Anions											
Chloride	29	0.25	0.01	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 19:47	7010191	RNB
Fluoride	0.10	0.30	0.02	mg/L	EPA 300.0	J	1	01/10/17 09:32	01/10/17 19:47	7010191	RNB
Sulfate	360	10	0.51	mg/L	EPA 300.0		10	01/10/17 09:32	01/11/17 18:24	7010191	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:35	7010125	CSW
Arsenic	0.0444	0.0050	0.0016	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:35	7010125	CSW
Barium	0.0379	0.0100	0.0004	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:35	7010125	CSW
Beryllium	0.00009	0.0030	0.00008	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 14:35	7010125	CSW
Boron	1.46	0.0400	0.0064	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:35	7010125	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:35	7010125	CSW
Calcium	88.2	25.0	1.55	mg/L	EPA 6020B		50	01/06/17 11:30	01/09/17 14:41	7010125	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:35	7010125	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:35	7010125	CSW
Lead	0.0001	0.0050	0.0001	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 14:35	7010125	CSW
Molybdenum	0.0786	0.0100	0.0017	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:35	7010125	CSW
Selenium	0.0048	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 14:35	7010125	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:35	7010125	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:35	7010125	CSW
Zinc	0.0025	0.0100	0.0021	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 14:35	7010125	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:35	7010125	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/09/17 10:10	01/09/17 14:25	7010153	MTC



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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 13, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0135

Project: CCR Event

Client ID: GWC-20

Lab Number ID: AAA0135-09

Date/Time Sampled: 1/4/2017 11:27:00AM

Date/Time Received: 1/5/2017 1:00:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	639	25	10	mg/L	SM 2540 C		1	01/06/17 13:20	01/06/17 13:20	7010121	JPT
Inorganic Anions											
Chloride	13	0.25	0.01	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 20:08	7010191	RNB
Fluoride	0.04	0.30	0.02	mg/L	EPA 300.0	J	1	01/10/17 09:32	01/10/17 20:08	7010191	RNB
Sulfate	170	10	0.51	mg/L	EPA 300.0		10	01/10/17 09:32	01/11/17 18:45	7010191	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:47	7010125	CSW
Arsenic	0.311	0.0050	0.0016	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:47	7010125	CSW
Barium	0.0999	0.0100	0.0004	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:47	7010125	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:47	7010125	CSW
Boron	1.91	0.0400	0.0064	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:47	7010125	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:47	7010125	CSW
Calcium	80.4	25.0	1.55	mg/L	EPA 6020B		50	01/06/17 11:30	01/09/17 14:52	7010125	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:47	7010125	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:47	7010125	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:47	7010125	CSW
Molybdenum	0.229	0.0100	0.0017	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:47	7010125	CSW
Selenium	0.0014	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 14:47	7010125	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:47	7010125	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:47	7010125	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:47	7010125	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:47	7010125	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/09/17 10:10	01/09/17 14:27	7010153	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 13, 2017

Report No.: AAA0135

Project: CCR Event

Client ID: GWC-21

Lab Number ID: AAA0135-10

Date/Time Sampled: 1/4/2017 4:42:00PM

Date/Time Received: 1/5/2017 1:00:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	242	25	10	mg/L	SM 2540 C		1	01/06/17 13:20	01/06/17 13:20	7010121	JPT
Inorganic Anions											
Chloride	7.7	0.25	0.01	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 20:29	7010191	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 20:29	7010191	RNB
Sulfate	45	1.0	0.05	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 20:29	7010191	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:58	7010125	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:58	7010125	CSW
Barium	0.0617	0.0100	0.0004	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:58	7010125	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:02	7010125	CSW
Boron	0.360	0.0400	0.0064	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:02	7010125	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:58	7010125	CSW
Calcium	15.2	5.00	0.311	mg/L	EPA 6020B		10	01/06/17 11:30	01/11/17 14:57	7010125	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:58	7010125	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:58	7010125	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:58	7010125	CSW
Molybdenum	0.0222	0.0100	0.0017	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:58	7010125	CSW
Selenium	0.0220	0.0100	0.0010	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:58	7010125	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:58	7010125	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:58	7010125	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 14:58	7010125	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:02	7010125	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/09/17 10:10	01/09/17 14:29	7010153	MTC



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
 110 Technology Parkway, Peachtree Corners, GA 30092
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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 13, 2017

Report No.: AAA0135

Project: CCR Event

Client ID: GWC-22

Lab Number ID: AAA0135-11

Date/Time Sampled: 1/4/2017 5:15:00PM

Date/Time Received: 1/5/2017 1:00:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1560	25	10	mg/L	SM 2540 C		1	01/06/17 13:20	01/06/17 13:20	7010121	JPT
Inorganic Anions											
Chloride	330	12	0.70	mg/L	EPA 300.0		50	01/10/17 09:32	01/11/17 19:06	7010191	RNB
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	01/10/17 09:32	01/10/17 20:49	7010191	RNB
Sulfate	680	50	2.6	mg/L	EPA 300.0		50	01/10/17 09:32	01/11/17 19:06	7010191	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:10	7010125	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:10	7010125	CSW
Barium	0.0975	0.0100	0.0004	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:10	7010125	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 15:10	7010125	CSW
Boron	8.94	2.00	0.321	mg/L	EPA 6020B		50	01/06/17 11:30	01/09/17 15:15	7010125	CSW
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 15:10	7010125	CSW
Calcium	113	25.0	1.55	mg/L	EPA 6020B		50	01/06/17 11:30	01/09/17 15:15	7010125	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:10	7010125	CSW
Cobalt	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 15:10	7010125	CSW
Lead	0.0003	0.0050	0.0001	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 15:10	7010125	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:10	7010125	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:10	7010125	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:10	7010125	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:10	7010125	CSW
Zinc	0.0060	0.0100	0.0021	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 15:10	7010125	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:10	7010125	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/09/17 10:10	01/09/17 14:32	7010153	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 13, 2017

Report No.: AAA0135

Project: CCR Event

Client ID: EB-2-1-4-17

Lab Number ID: AAA0135-12

Date/Time Sampled: 1/4/2017 5:10:00PM

Date/Time Received: 1/5/2017 1:00:00PM

Matrix: Water

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	01/11/17 18:05	01/11/17 18:05	7010256	JPT
Inorganic Anions											
Chloride	0.09	0.25	0.01	mg/L	EPA 300.0	J	1	01/10/17 09:32	01/10/17 22:33	7010191	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 22:33	7010191	RNB
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 22:33	7010191	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:36	7010125	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:36	7010125	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:36	7010125	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:36	7010125	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:36	7010125	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:36	7010125	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:36	7010125	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:36	7010125	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:36	7010125	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:36	7010125	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:36	7010125	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:36	7010125	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:36	7010125	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:36	7010125	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:36	7010125	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:36	7010125	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/09/17 10:10	01/09/17 14:39	7010153	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 13, 2017

Report No.: AAA0135

Project: CCR Event

Client ID: FB-1-1-3-17

Lab Number ID: AAA0135-13

Date/Time Sampled: 1/3/2017 3:55:00PM

Date/Time Received: 1/5/2017 1:00:00PM

Matrix: Water

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	01/09/17 18:25	01/09/17 18:25	7010181	JPT
Inorganic Anions											
Chloride	0.06	0.25	0.01	mg/L	EPA 300.0	J	1	01/10/17 09:32	01/10/17 22:53	7010191	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 22:53	7010191	RNB
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 22:53	7010191	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Copper	ND	0.0250	0.0005	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Nickel	ND	0.0100	0.0006	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Silver	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Zinc	0.0022	0.0100	0.0021	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/11/17 15:08	7010125	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/09/17 10:10	01/09/17 14:41	7010153	MTC



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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 13, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0135
Client ID: Dup-1-1-4-17
Date/Time Sampled: 1/4/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAA0135-14
Date/Time Received: 1/5/2017 1:00:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1410	25	10	mg/L	SM 2540 C		1	01/06/17 13:20	01/06/17 13:20	7010121	JPT
Inorganic Anions											
Chloride	140	12	0.70	mg/L	EPA 300.0		50	01/10/17 09:32	01/11/17 19:26	7010191	RNB
Fluoride	0.56	0.30	0.02	mg/L	EPA 300.0		1	01/10/17 09:32	01/10/17 23:14	7010191	RNB
Sulfate	790	50	2.6	mg/L	EPA 300.0		50	01/10/17 09:32	01/11/17 19:26	7010191	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:48	7010125	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:48	7010125	CSW
Barium	0.0177	0.0100	0.0004	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:48	7010125	CSW
Beryllium	0.0009	0.0030	0.00008	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 15:48	7010125	CSW
Boron	5.47	0.200	0.0321	mg/L	EPA 6020B		5	01/06/17 11:30	01/09/17 15:53	7010125	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:48	7010125	CSW
Calcium	87.9	5.00	0.311	mg/L	EPA 6020B		10	01/06/17 11:30	01/11/17 15:14	7010125	CSW
Chromium	0.0012	0.0100	0.0009	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 15:48	7010125	CSW
Cobalt	0.0014	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 15:48	7010125	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:48	7010125	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:48	7010125	CSW
Selenium	0.0016	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 15:48	7010125	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:48	7010125	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:48	7010125	CSW
Zinc	0.0035	0.0100	0.0021	mg/L	EPA 6020B	J	1	01/06/17 11:30	01/09/17 15:48	7010125	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/06/17 11:30	01/09/17 15:48	7010125	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/09/17 10:10	01/09/17 14:44	7010153	MTC



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 13, 2017

Report No.: AAA0135

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010121 - SM 2540 C											
Blank (7010121-BLK1)						Prepared & Analyzed: 01/06/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7010121-BS1)						Prepared & Analyzed: 01/06/17					
Total Dissolved Solids	394	25	10	mg/L	400.00		98	84-108			
Duplicate (7010121-DUP1)						Source: AAA0135-01 Prepared & Analyzed: 01/06/17					
Total Dissolved Solids	352	25	10	mg/L		349			0.9	10	
Duplicate (7010121-DUP2)						Source: AAA0135-13 Prepared & Analyzed: 01/06/17					
Total Dissolved Solids	106	25	10	mg/L		97			9	10	
Batch 7010181 - SM 2540 C											
Blank (7010181-BLK1)						Prepared & Analyzed: 01/09/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7010181-BS1)						Prepared & Analyzed: 01/09/17					
Total Dissolved Solids	390	25	10	mg/L	400.00		98	84-108			
Duplicate (7010181-DUP1)						Source: AAA0135-12RE1 Prepared & Analyzed: 01/09/17					
Total Dissolved Solids	149	25	10	mg/L		153			3	10	
Duplicate (7010181-DUP2)						Source: AAA0135-13RE1 Prepared & Analyzed: 01/09/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Batch 7010256 - SM 2540 C											
Blank (7010256-BLK1)						Prepared & Analyzed: 01/11/17					
Total Dissolved Solids	ND	25	10	mg/L							



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Attention: Mr. Joju Abraham

January 13, 2017

Report No.: AAA0135

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010256 - SM 2540 C											
LCS (7010256-BS1)						Prepared & Analyzed: 01/11/17					
Total Dissolved Solids	392	25	10	mg/L	400.00		98	84-108			
Duplicate (7010256-DUP1)						Source: AAA0135-12RE2 Prepared & Analyzed: 01/11/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7010256-DUP2)						Source: AAA0135-13RE2 Prepared & Analyzed: 01/11/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	



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Attention: Mr. Joju Abraham

January 13, 2017

Report No.: AAA0135

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010191 - EPA 300.0											
Blank (7010191-BLK1)						Prepared & Analyzed: 01/10/17					
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 (7010191-BS1)						Prepared & Analyzed: 01/10/17					
Chloride	10.3	0.25	0.01	mg/L	10.010		102	90-110			
Fluoride	10.8	0.30	0.02	mg/L	10.020		108	90-110			
Sulfate	10.4	1.0	0.05	mg/L	10.020		104	90-110			
Matrix Spike (7010191-MS1)						Source: AAA0135-01 Prepared & Analyzed: 01/10/17					
Chloride	14.3	0.25	0.01	mg/L	10.010	6.92	74	90-110			QM-05
Fluoride	8.96	0.30	0.02	mg/L	10.020	0.18	88	90-110			QM-05
Sulfate	94.4	1.0	0.05	mg/L	10.020	94.4	NR	90-110			QM-02
Matrix Spike (7010191-MS2)						Source: AAA0192-01 Prepared & Analyzed: 01/10/17					
Chloride	9.94	0.25	0.01	mg/L	10.010	2.47	75	90-110			QM-05
Fluoride	8.25	0.30	0.02	mg/L	10.020	ND	82	90-110			QM-05
Sulfate	9.53	1.0	0.05	mg/L	10.020	1.92	76	90-110			QM-05
Matrix Spike Dup (7010191-MSD1)						Source: AAA0135-01 Prepared & Analyzed: 01/10/17					
Chloride	15.9	0.25	0.01	mg/L	10.010	6.92	90	90-110	10	15	
Fluoride	10.5	0.30	0.02	mg/L	10.020	0.18	103	90-110	16	15	QR-03
Sulfate	94.5	1.0	0.05	mg/L	10.020	94.4	1	90-110	0.2	15	QM-02



PACE ANALYTICAL SERVICES, LLC.

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Attention: Mr. Joju Abraham

January 13, 2017

Report No.: AAA0135

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7010125 - EPA 3005A

Blank (7010125-BLK1)

Prepared: 01/06/17 Analyzed: 01/09/17

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 (7010125-BS1)

Prepared: 01/06/17 Analyzed: 01/09/17

Antimony	0.102	0.0030	0.0008	mg/L	0.10000		102	80-120			
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000		101	80-120			
Barium	0.100	0.0100	0.0004	mg/L	0.10000		100	80-120			
Beryllium	0.102	0.0030	0.00008	mg/L	0.10000		102	80-120			
Boron	1.06	0.0400	0.0064	mg/L	1.0000		106	80-120			
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000		101	80-120			
Calcium	1.01	0.500	0.0311	mg/L	1.0000		101	80-120			
Chromium	0.105	0.0100	0.0009	mg/L	0.10000		105	80-120			
Cobalt	0.0985	0.0100	0.0005	mg/L	0.10000		98	80-120			
Copper	0.0995	0.0250	0.0005	mg/L	0.10000		100	80-120			
Lead	0.0989	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	0.100	0.0100	0.0006	mg/L	0.10000		100	80-120			
Selenium	0.102	0.0100	0.0010	mg/L	0.10000		102	80-120			
Silver	0.102	0.0100	0.0005	mg/L	0.10000		102	80-120			
Thallium	0.0984	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	0.0996	0.0100	0.0021	mg/L	0.10000		100	80-120			
Lithium	0.101	0.0500	0.0021	mg/L	0.10000		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

January 13, 2017

Report No.: AAA0135

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010125 - EPA 3005A											
Matrix Spike (7010125-MS1)			Source: AAA0135-01				Prepared: 01/06/17 Analyzed: 01/09/17				
Antimony	0.100	0.0030	0.0008	mg/L	0.10000	ND	100	75-125			
Arsenic	0.103	0.0050	0.0016	mg/L	0.10000	0.0018	102	75-125			
Barium	0.149	0.0100	0.0004	mg/L	0.10000	0.0534	96	75-125			
Beryllium	0.101	0.0030	0.00008	mg/L	0.10000	ND	101	75-125			
Boron	1.97	0.0400	0.0064	mg/L	1.0000	1.30	67	75-125			QM-02
Cadmium	0.0988	0.0010	0.00007	mg/L	0.10000	0.0001	99	75-125			
Calcium	34.3	25.0	1.55	mg/L	1.0000	33.4	91	75-125			
Chromium	0.109	0.0100	0.0009	mg/L	0.10000	0.0021	107	75-125			
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000	ND	103	75-125			
Copper	0.101	0.0250	0.0005	mg/L	0.10000	ND	101	75-125			
Lead	0.0958	0.0050	0.0001	mg/L	0.10000	ND	96	75-125			
Molybdenum	0.269	0.0100	0.0017	mg/L	0.10000	0.167	102	75-125			
Nickel	0.104	0.0100	0.0006	mg/L	0.10000	0.0010	103	75-125			
Selenium	0.100	0.0100	0.0010	mg/L	0.10000	0.0016	99	75-125			
Silver	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125			
Thallium	0.0963	0.0010	0.0002	mg/L	0.10000	ND	96	75-125			
Vanadium	0.118	0.0100	0.0071	mg/L	0.10000	ND	118	75-125			
Zinc	0.104	0.0100	0.0021	mg/L	0.10000	ND	104	75-125			
Lithium	0.101	0.0500	0.0021	mg/L	0.10000	ND	101	75-125			
Matrix Spike Dup (7010125-MSD1)			Source: AAA0135-01				Prepared: 01/06/17 Analyzed: 01/09/17				
Antimony	0.101	0.0030	0.0008	mg/L	0.10000	ND	101	75-125	1	20	
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000	0.0018	101	75-125	1	20	
Barium	0.150	0.0100	0.0004	mg/L	0.10000	0.0534	97	75-125	0.7	20	
Beryllium	0.0980	0.0030	0.00008	mg/L	0.10000	ND	98	75-125	3	20	
Boron	2.00	0.0400	0.0064	mg/L	1.0000	1.30	70	75-125	2	20	QM-02
Cadmium	0.0982	0.0010	0.00007	mg/L	0.10000	0.0001	98	75-125	0.5	20	
Calcium	34.9	25.0	1.55	mg/L	1.0000	33.4	148	75-125	2	20	QM-02
Chromium	0.105	0.0100	0.0009	mg/L	0.10000	0.0021	103	75-125	4	20	
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	3	20	
Copper	0.0998	0.0250	0.0005	mg/L	0.10000	ND	100	75-125	1	20	
Lead	0.0952	0.0050	0.0001	mg/L	0.10000	ND	95	75-125	0.6	20	
Molybdenum	0.264	0.0100	0.0017	mg/L	0.10000	0.167	97	75-125	2	20	
Nickel	0.102	0.0100	0.0006	mg/L	0.10000	0.0010	101	75-125	2	20	
Selenium	0.101	0.0100	0.0010	mg/L	0.10000	0.0016	99	75-125	0.5	20	
Silver	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	1	20	
Thallium	0.0944	0.0010	0.0002	mg/L	0.10000	ND	94	75-125	2	20	
Vanadium	0.115	0.0100	0.0071	mg/L	0.10000	ND	115	75-125	3	20	
Zinc	0.101	0.0100	0.0021	mg/L	0.10000	ND	101	75-125	3	20	
Lithium	0.0998	0.0500	0.0021	mg/L	0.10000	ND	100	75-125	0.8	20	



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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 13, 2017

Report No.: AAA0135

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010125 - EPA 3005A											
Post Spike (7010125-PS1)			Source: AAA0135-01			Prepared: 01/06/17 Analyzed: 01/09/17					
Antimony	96.6			ug/L	100.00	0.553	96	80-120			
Arsenic	101			ug/L	100.00	1.77	99	80-120			
Barium	151			ug/L	100.00	53.4	98	80-120			
Beryllium	99.6			ug/L	100.00	0.0180	100	80-120			
Boron	2690			ug/L	1000.0	1300	139	80-120			QM-02
Cadmium	98.8			ug/L	100.00	0.144	99	80-120			
Calcium	34700			ug/L	1000.0	33400	132	80-120			QM-02
Chromium	105			ug/L	100.00	2.12	103	80-120			
Cobalt	98.5			ug/L	100.00	0.136	98	80-120			
Copper	97.2			ug/L	100.00	0.152	97	80-120			
Lead	95.6			ug/L	100.00	0.0264	96	80-120			
Molybdenum	262			ug/L	100.00	167	94	80-120			
Nickel	99.0			ug/L	100.00	1.02	98	80-120			
Selenium	103			ug/L	100.00	1.61	102	80-120			
Silver	98.6			ug/L	100.00	0.0055	99	80-120			
Thallium	94.7			ug/L	100.00	0.0702	95	80-120			
Vanadium	116			ug/L	100.00	6.90	109	80-120			
Zinc	98.9			ug/L	100.00	0.772	98	80-120			
Lithium	99.0			ug/L	100.00	0.505	99	80-120			

Batch 7010153 - EPA 7470A

Blank (7010153-BLK1)					Prepared & Analyzed: 01/09/17						
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7010153-BS1)					Prepared & Analyzed: 01/09/17						
Mercury	0.00233	0.00050	0.000041	mg/L	2.5000E-3		93	80-120			



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 13, 2017

Report No.: AAA0135

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010153 - EPA 7470A											
Duplicate (7010153-DUP1)			Source: AZL0814-25RE1			Prepared & Analyzed: 01/09/17					
Mercury	0.00196	0.00050	0.000041	mg/L		0.00197			0.6	20	
Duplicate (7010153-DUP2)			Source: AZL0814-28RE1			Prepared & Analyzed: 01/09/17					
Mercury	0.00192	0.00050	0.000041	mg/L		0.00185			4	20	
Matrix Spike (7010153-MS1)			Source: AAA0135-05			Prepared & Analyzed: 01/09/17					
Mercury	0.00163	0.00050	0.000041	mg/L	2.5000E-3	ND	65	75-125			QM-05
Matrix Spike Dup (7010153-MSD1)			Source: AAA0135-05			Prepared & Analyzed: 01/09/17					
Mercury	0.00182	0.00050	0.000041	mg/L	2.5000E-3	ND	73	75-125	11	20	QM-05
Post Spike (7010153-PS1)			Source: AAA0135-05			Prepared & Analyzed: 01/09/17					
Mercury	1.34			ug/L	1.6667	-0.0192	80	80-120			



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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 13, 2017

Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

- 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



CLIENT NAME: Atlantic Coast Consulting, Inc.
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
 630 Colonial Park Dr. #110
 Roswell, GA 30075

REPORT TO: L. Petty
CC: M. Petlik, H. McCoble
REQUESTED COMPLETION DATE:

PROJECT NAME/STATE: Phase 2 CCR + State (A+D)
 Plant Kraft Greenway Bk

Collection DATE	Collection TIME	MATRIX CODE*	COM P	G R A B	SAMPLE IDENTIFICATION
1-4-17	0911	GW	X		GW-C-1
1-3-17	1727	GW	X		GW-C-3
1-3-17	1600	GW	X		GW-C-5
1-3-17	1655	GW	X		GWA-8
1-4-17	1450	GW	X		GW-C-10
1-4-17	1025	GW	X		GW-C-11
1-4-17	0855	GW	X		GW-C-12
1-4-17	1418	GW	X		GW-C-16
1-4-17	1127	GW	X		GW-C-20
1-4-17	1642	GW	X		GW-C-21
1-4-17	1715	GW	X		GW-C-22

SAMPLED BY AND TITLE: D. FLORESA, R. JALIKER (Lab)
RECEIVED BY: X. ...
DATE/TIME: 1-4-17 1715
DATE/TIME: 1/5/17 0810

TEMPERATURE: 16°C
DATE/TIME: 2/10/17 1300
RECEIVED BY: D. ...

CONTAINER TYPE	ANALYSIS REQUESTED		DATE/TIME
	CONTAINER TYPE	ANALYSIS REQUESTED	
5	App III + App II Metals	1/5/17 0810	
4	Metals Vanadium + Zinc		
4	Cl, F, SO ₄ , + TDS		
4	Radium 226 + 228		

L A B N U M B E R	CONTAINER TYPE	PRESERVATION	REMARKS/ADDITIONAL INFORMATION
1	P - PLASTIC	1 - HCl, 56°C	
2	A - AMBER GLASS	2 - H ₂ SO ₄ , 56°C	
3	G - CLEAR GLASS	3 - HNO ₃	
4	V - VOA VIAL	4 - NaOH, 56°C	
5	S - STERILE	5 - NaOH/ZnAg, 56°C	
6	O - OTHER	6 - Na ₂ S ₂ O ₃ , 56°C	
7		7 - 56°C not frozen	

FOR LAB USE ONLY

LAB #: AAAA0135
Entered into LIMS:
Tracking #:

RELINQUISHED BY: [Signature]
DATE/TIME: 1/5/17 0810

SAMPLE SHIPPED VIA: COURIER
 UPS FED-EX USPS # of Coolers

CLIENT: OTHER FS
Cooler ID:

TEMPERATURE: 16°C
DATE/TIME: 2/10/17 1300

RECEIVED BY: D. ...

CHAIN OF CUSTODY RECORD

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

PAGE: 1 OF 1



CLIENT NAME: Atlantic Coast Consulting, Inc.
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
 630 Colonial Park Dr. #110
 Roswell, GA 30075

REPORT TO: L. Petty
CC: M. Padilla, H. McCamble
PO #:

PROJECT NAME/STATE:
 Phase 2 CCR + State D+O
PROJECT #:

Collection DATE	Collection TIME	MATRIX CODE*	SAMPLE IDENTIFICATION	GRA B	CONTAINER TYPE	ANALYSIS REQUESTED	RELINQUISHED BY:	DATE/TIME:
1-4-17	1710	W	EB-2-1-4-17	X	4	App III + App II Metals Metals Vanadium + Zinc Cl, F, SO ₄ , + TDS Radium 226 + 228	[Signature]	1/17 0810
1-3-17	1555	W	FB-1-1-3-17	X	4			
1-4-17	-	GW	Dup-1-1-4-17	Y	4			

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

PRESERVATION: 1 - HCl, 56°C, 2 - H₂SO₄, 56°C, 3 - HNO₃, 4 - NaOH, 56°C, 5 - NaOH/ZnAc, 56°C, 6 - Na₂S₂O₃, 56°C, 7 - 56°C not frozen

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

REMARKS/ADDITIONAL INFORMATION

LAB #: AAA0135
Entered into LIMS:
Tracking #:

FOR LAB USE ONLY

SAMPLE SHIPPED VIA: UPS, FED-EX, USPS, COURIER, OTHER FS
 Intact, Broken, Not Present

CLIENT: Courier
COOLER ID:

DATE/TIME: 1-4-17 1710
DATE/TIME: 1/17 0810

SAMPLED BY AND TITLE: O. Fuchs, R. H. Per, (ARC)
RECEIVED BY: [Signature]
DATE/TIME: 1/17 0810

RECEIVED BY: [Signature]
DATE/TIME: 01/05/17 1300
 Temperature: 10C Min: 10C Max: 10C



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: 1/6/2017 9:55:19AM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 01/05/17 13:00

Work Order: AAA0135

Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 14

#Containers: 57

Minimum Temp(C): 1.0

Maximum Temp(C): 1.0

Custody Seal(s) Used: 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:

February 02, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Kraft
Pace Project No.: 30207369

Dear Maria Padilla:

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



REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: Plant Kraft
Pace Project No.: 30207369

Pennsylvania Certification IDs

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft

Pace Project No.: 30207369

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30207369001	GWC-1	Water	01/04/17 09:11	01/06/17 10:45
30207369002	GWC-3	Water	01/03/17 17:27	01/06/17 10:45
30207369003	GWC-5	Water	01/03/17 16:00	01/06/17 10:45
30207369004	GWA-8	Water	01/03/17 16:55	01/06/17 10:45
30207369005	GWC-10	Water	01/04/17 14:50	01/06/17 10:45
30207369006	GWC-11	Water	01/04/17 10:25	01/06/17 10:45
30207369007	GWC-12	Water	01/04/17 08:55	01/06/17 10:45
30207369008	GWC-16	Water	01/04/17 14:18	01/06/17 10:45
30207369009	GWC-20	Water	01/04/17 11:27	01/06/17 10:45
30207369010	GWC-21	Water	01/04/17 16:42	01/06/17 10:45
30207369011	GWC-22	Water	01/04/17 17:15	01/06/17 10:45
30207369012	EB-2-1-4-17	Water	01/04/17 17:10	01/06/17 10:45
30207369013	FB-1-1-3-17	Water	01/03/17 15:55	01/06/17 10:45
30207369014	Dup-1-1-4-17	Water	01/04/17 00:00	01/06/17 10:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft
Pace Project No.: 30207369

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30207369001	GWC-1	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30207369002	GWC-3	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30207369003	GWC-5	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30207369004	GWA-8	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30207369005	GWC-10	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30207369006	GWC-11	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30207369007	GWC-12	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30207369008	GWC-16	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30207369009	GWC-20	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30207369010	GWC-21	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30207369011	GWC-22	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30207369012	EB-2-1-4-17	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30207369013	FB-1-1-3-17	EPA 9315	LAL	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft
Pace Project No.: 30207369

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30207369014	Dup-1-1-4-17	EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
		EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft
Pace Project No.: 30207369

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-1 Lab ID: 30207369001 Collected: 01/04/17 09:11 Received: 01/06/17 10:45 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	0.882 ± 0.348 (0.322) C:83% T:NA	pCi/L	01/20/17 10:09	13982-63-3	
Radium-228		EPA 9320	1.22 ± 0.352 (0.427) C:98% T:84%	pCi/L	01/25/17 19:25	15262-20-1	
Total Radium		Total Radium Calculation	2.10 ± 0.700 (0.749)	pCi/L	02/01/17 10:37	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-3 Lab ID: 30207369002 Collected: 01/03/17 17:27 Received: 01/06/17 10:45 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	0.572 ± 0.279 (0.339) C:89% T:NA	pCi/L	01/20/17 10:09	13982-63-3	
Radium-228		EPA 9320	0.912 ± 0.378 (0.581) C:70% T:75%	pCi/L	01/25/17 19:25	15262-20-1	
Total Radium		Total Radium Calculation	1.48 ± 0.657 (0.920)	pCi/L	02/01/17 10:37	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-5 Lab ID: 30207369003 Collected: 01/03/17 16:00 Received: 01/06/17 10:45 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	0.932 ± 0.361 (0.323) C:81% T:NA	pCi/L	01/20/17 10:09	13982-63-3	
Radium-228		EPA 9320	0.916 ± 0.450 (0.758) C:58% T:76%	pCi/L	01/25/17 19:25	15262-20-1	
Total Radium		Total Radium Calculation	1.85 ± 0.811 (1.08)	pCi/L	02/01/17 10:37	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWA-8 Lab ID: 30207369004 Collected: 01/03/17 16:55 Received: 01/06/17 10:45 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	1.16 ± 0.395 (0.295) C:84% T:NA	pCi/L	01/20/17 10:09	13982-63-3	
Radium-228		EPA 9320	1.60 ± 0.565 (0.829) C:63% T:73%	pCi/L	01/25/17 19:25	15262-20-1	
Total Radium		Total Radium Calculation	2.76 ± 0.960 (1.12)	pCi/L	02/01/17 10:37	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-10 Lab ID: 30207369005 Collected: 01/04/17 14:50 Received: 01/06/17 10:45 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	1.29 ± 0.429 (0.422) C:91% T:NA	pCi/L	01/20/17 10:09	13982-63-3	
Radium-228		EPA 9320	2.07 ± 0.574 (0.669) C:65% T:84%	pCi/L	01/25/17 19:25	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft
Pace Project No.: 30207369

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-10 Lab ID: 30207369005 Collected: 01/04/17 14:50 Received: 01/06/17 10:45 Matrix: Water						
PWS: Site ID: Sample Type:						
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	3.36 ± 1.00 (1.09)	pCi/L	02/01/17 10:37	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-11 Lab ID: 30207369006 Collected: 01/04/17 10:25 Received: 01/06/17 10:45 Matrix: Water						
PWS: Site ID: Sample Type:						
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.644 ± 0.319 (0.369) C:72% T:NA	pCi/L	01/20/17 10:09	13982-63-3	
Radium-228	EPA 9320	1.24 ± 0.367 (0.455) C:87% T:88%	pCi/L	01/25/17 19:25	15262-20-1	
Total Radium	Total Radium Calculation	1.88 ± 0.686 (0.824)	pCi/L	02/01/17 10:37	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-12 Lab ID: 30207369007 Collected: 01/04/17 08:55 Received: 01/06/17 10:45 Matrix: Water						
PWS: Site ID: Sample Type:						
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.949 ± 0.354 (0.342) C:93% T:NA	pCi/L	01/20/17 10:09	13982-63-3	
Radium-228	EPA 9320	2.82 ± 0.664 (0.564) C:78% T:78%	pCi/L	01/25/17 19:25	15262-20-1	
Total Radium	Total Radium Calculation	3.77 ± 1.02 (0.906)	pCi/L	02/01/17 10:37	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-16 Lab ID: 30207369008 Collected: 01/04/17 14:18 Received: 01/06/17 10:45 Matrix: Water						
PWS: Site ID: Sample Type:						
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.883 ± 0.339 (0.305) C:89% T:NA	pCi/L	01/20/17 10:09	13982-63-3	
Radium-228	EPA 9320	0.833 ± 0.391 (0.659) C:69% T:86%	pCi/L	01/25/17 19:25	15262-20-1	
Total Radium	Total Radium Calculation	1.72 ± 0.730 (0.964)	pCi/L	02/01/17 10:37	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-20 Lab ID: 30207369009 Collected: 01/04/17 11:27 Received: 01/06/17 10:45 Matrix: Water						
PWS: Site ID: Sample Type:						
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.17 ± 0.405 (0.321) C:84% T:NA	pCi/L	01/20/17 09:56	13982-63-3	
Radium-228	EPA 9320	1.39 ± 0.500 (0.736) C:64% T:78%	pCi/L	01/25/17 19:25	15262-20-1	
Total Radium	Total Radium Calculation	2.56 ± 0.905 (1.06)	pCi/L	02/01/17 10:37	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft
Pace Project No.: 30207369

Sample: GWC-21		Lab ID: 30207369010	Collected: 01/04/17 16:42	Received: 01/06/17 10:45	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Radium-226	EPA 9315	0.982 ± 0.379 (0.436) C:92% T:NA	pCi/L	01/20/17 09:56	13982-63-3		
Radium-228	EPA 9320	1.13 ± 0.509 (0.824) C:63% T:78%	pCi/L	01/27/17 15:52	15262-20-1		
Total Radium	Total Radium Calculation	2.11 ± 0.888 (1.26)	pCi/L	02/01/17 10:37	7440-14-4		

Sample: GWC-22		Lab ID: 30207369011	Collected: 01/04/17 17:15	Received: 01/06/17 10:45	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Radium-226	EPA 9315	2.99 ± 0.717 (0.422) C:90% T:NA	pCi/L	01/20/17 09:56	13982-63-3		
Radium-228	EPA 9320	3.08 ± 0.789 (0.715) C:61% T:89%	pCi/L	01/27/17 15:05	15262-20-1		
Total Radium	Total Radium Calculation	6.07 ± 1.51 (1.14)	pCi/L	02/01/17 10:37	7440-14-4		

Sample: EB-2-1-4-17		Lab ID: 30207369012	Collected: 01/04/17 17:10	Received: 01/06/17 10:45	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Radium-226	EPA 9315	0.00182 ± 0.141 (0.389) C:90% T:NA	pCi/L	01/20/17 09:56	13982-63-3		
Radium-228	EPA 9320	0.0792 ± 0.331 (0.755) C:63% T:84%	pCi/L	01/27/17 15:05	15262-20-1		
Total Radium	Total Radium Calculation	0.0810 ± 0.472 (1.14)	pCi/L	02/01/17 10:37	7440-14-4		

Sample: FB-1-1-3-17		Lab ID: 30207369013	Collected: 01/03/17 15:55	Received: 01/06/17 10:45	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Radium-226	EPA 9315	0.139 ± 0.179 (0.375) C:91% T:NA	pCi/L	01/20/17 09:56	13982-63-3		
Radium-228	EPA 9320	0.511 ± 0.444 (0.892) C:63% T:75%	pCi/L	01/27/17 15:07	15262-20-1		
Total Radium	Total Radium Calculation	0.650 ± 0.623 (1.27)	pCi/L	02/01/17 10:37	7440-14-4		

Sample: Dup-1-1-4-17		Lab ID: 30207369014	Collected: 01/04/17 00:00	Received: 01/06/17 10:45	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Radium-226	EPA 9315	1.09 ± 0.393 (0.381) C:87% T:NA	pCi/L	01/20/17 09:57	13982-63-3		
Radium-228	EPA 9320	1.86 ± 0.563 (0.659) C:64% T:91%	pCi/L	01/27/17 15:07	15262-20-1		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft

Pace Project No.: 30207369

Sample: Dup-1-1-4-17 **Lab ID: 30207369014** Collected: 01/04/17 00:00 Received: 01/06/17 10:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	2.95 ± 0.956 (1.04)	pCi/L	02/01/17 10:37	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft

Pace Project No.: 30207369

QC Batch:	246698	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	30207369001, 30207369002, 30207369003, 30207369004, 30207369005, 30207369006, 30207369007, 30207369008, 30207369009, 30207369010, 30207369011, 30207369012, 30207369013, 30207369014		

METHOD BLANK:	1213121	Matrix:	Water
Associated Lab Samples:	30207369001, 30207369002, 30207369003, 30207369004, 30207369005, 30207369006, 30207369007, 30207369008, 30207369009, 30207369010, 30207369011, 30207369012, 30207369013, 30207369014		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.181 ± 0.312 (0.785) C:66% T:77%	pCi/L	01/25/17 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.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft

Pace Project No.: 30207369

QC Batch:	246693	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	30207369001, 30207369002, 30207369003, 30207369004, 30207369005, 30207369006, 30207369007, 30207369008, 30207369009, 30207369010, 30207369011, 30207369012, 30207369013, 30207369014		

METHOD BLANK:	1213109	Matrix:	Water
Associated Lab Samples:	30207369001, 30207369002, 30207369003, 30207369004, 30207369005, 30207369006, 30207369007, 30207369008, 30207369009, 30207369010, 30207369011, 30207369012, 30207369013, 30207369014		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.233 ± 0.182 (0.280) C:90% T:NA	pCi/L	01/20/17 10:09	

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

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QUALIFIERS

Project: Plant Kraft
Pace Project No.: 30207369

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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WO#: 30207369



30207369

Chain of Custody



Workorder: AAA0135

Workorder Name: Plant Kraft

Owner Received Date:

Results Requested By: 1/27/2017

Report To:

Subcontract To:

Pace - Pittsburgh
1638 Roseytown Road
Stes. 2,3,4
Greensburg, PA 15601
Phone (724) 850-5600

Betsy McDaniel
Pace Analytical Atlanta
110 Technology Parkway
Peachtree Corners, GA 30092
Phone (770)-734-4200

Requested Analysis

Radium 226, 228, Total

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		Date/Time	Comments
						NO	HI		
1	GWC-1	G	1/4/2017 9:11	AAA0135-01	GW	3			
2	GWC-3	G	1/3/2017 17:27	AAA0135-02	GW	2			
3	GWC-5	G	1/3/2017 16:00	AAA0135-03	GW	2			
4	GWA-8	G	1/3/2017 16:55	AAA0135-04	GW	2			
5	GWC-10	G	1/4/2017 14:50	AAA0135-05	GW	2			
6	GWC-11	G	1/4/2017 10:25	AAA0135-06	GW	2			
7	GWC-12	G	1/4/2017 8:55	AAA0135-07	GW	2			
8	GWC-16	G	1/4/2017 14:18	AAA0135-08	GW	2			
9	GWC-20	G	1/4/2017 11:27	AAA0135-09	GW	2			
10	GWC-21	G	1/4/2017 16:42	AAA0135-10	GW	2			
Transfers Released By		Date/Time		Received By		Date/Time		Comments	
1									
2									
3									

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

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

Friday, June 17, 2016 11:01:34 AM

FMT-ALL-C-002rev.00 24March2009

30 207369



Chain of Custody

Results Requested By: 1/27/2017

Owner Received Date:

Workorder Name: Plant Kraft

Workorder: AAA0135

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers			Date/Time	Comments
						NO	3	5		
11	GWC-22	G	1/4/2017 17:15	AAA0135-11	GW	2				
12	EB-2-1-4-17	G	1/4/2017 17:10	AAA0135-12	W	2				
13	FB-1-1-3-17	G	1/3/2017 15:55	AAA0135-13	W	2				
14	Dup-1-1-4-17	G	1/4/2017 0:00	AAA0135-14	GW	2				
15										
16										
17										
18										
19										
20										
Transfers Released By						Received By		Date/Time	Comments	
1										
2										
3										

Report To:
Betsy McDaniel
Pace Analytical Atlanta
110 Technology Parkway
Peachtree Corners, GA 30092
Phone (770)-734-4200

Subcontract To:
Pace - Pittsburgh
1638 Roseytown Road
Stes. 2,3,4
Greensburg, PA 15601
Phone (724) 850-5600

Requested Analysis
Radium 226, 228, Total

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

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

Friday, June 17, 2016 11:01:34 AM

FMT-ALL-C-002rev.00 24March2009

Page 2 of 2

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



CHAIN OF CUSTODY RECORD

CLIENT NAME: Atlantic Coast Consulting, Inc.
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
630 Colonial Park Dr. #110
Roswell, GA 30075

REPORT TO: L. Petty CC: M. Pothila, H. McCable
 REQUESTED COMPLETION DATE: _____ PO #: _____

PROJECT NAME/STATE: (Phase 2 CCR + Site D+D)
Plant Kraft Superphosphate

Collection DATE	Collection TIME	MATRIX CODE*	GRA B COMP	SAMPLE IDENTIFICATION	CONTAINER TYPE	ANALYSIS REQUESTED	RELINQUISHED BY:	DATE/TIME	REMARKS/ADDITIONAL INFORMATION
1-4-17	0911	GW	X	GWC-1	5	1	<i>[Signature]</i>	1/5/17 0810	
1-3-17	1727	GW	X	GWC-3	4	1			
1-3-17	1600	GW	Y	GWC-5	4	1			
1-3-17	1655	GW	X	GWA-8	4	1			
1-4-17	1450	GW	X	GWC-10	4	1			
1-4-17	1025	GW	X	GWC-11	4	1			
1-4-17	0855	GW	X	GWC-12	4	1			
1-4-17	1418	GW	X	GWL-16	4	1			
1-4-17	1127	GW	Y	GWC-20	4	1			
1-4-17	1642	GW	X	GWC-21	4	1			
1-4-17	1715	GW	X	GWC-22	4	1			

CONTAINER TYPE: P- PLASTIC, A- AMBER GLASS, G- CLEAR GLASS, V- VOA VIAL, S- STERILE, O- OTHER
 PRESERVATION: 1- HCl, 56°C, 2- H2SO4, 58°C, 3- HNO3, 4- NaOH, 56°C, 5- NaOH/2%Ac, 56°C, 6- Na2S2O8, 56°C, 7- 56°C not frozen

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

LAB #: AAA0105
 Entered into LIMS: [Signature]
 Tracking #: _____

RELINQUISHED BY: [Signature] DATE/TIME: 1/5/17 0810

SAMPLE SHIPPED VIA: COURIER CLIENT: OTHER FS: FS
 UPS: UPS FED-EX: FED-EX USPS: USPS # of Coolers: 1
 Primary Seal: Intact Broken: Not Present

SAMPLED BY AND TITLE: D. Walker
 RECEIVED BY: [Signature] DATE/TIME: 1/5/17 0810
 RECEIVED BY LAB: [Signature] DATE/TIME: 1/5/17 1300
 Temperature: 1°C Moist: 1°C Misc: 1°C

CHAIN OF CUSTODY RECORD



CLIENT NAME: Atlantic Coast Consulting, Inc.
CLIENT ADDRESS: 630 Colonial Park Dr. #110
 Roswell, GA 30075

REPORT TO: L. Petty
 CC: M. Pettile, H. McCamble
 PO #:

PROJECT NAME/STATE: Phase 2 CCR + State D+O
 Plant Kraft
 Grinnell Rd
 PROJECT #:

Collection DATE	Collection TIME	MATRIX CODE*	SAMPLE IDENTIFICATION	ANALYSIS REQUESTED				CONTAINER TYPE	PRESERVATION
				APP III + APP III Metals	Metals Vanadium + Zinc	Cl, F, SO ₄ , + TDS	Radium 226 + 228		
1-4-17	1710	W	EB-2-1-4-17	1	1	1	2	P-PLASTIC	1 - HCl, 56°C
1-3-17	1555	W	FB-1-1-3-17	1	1	1	2	A-AMBER GLASS	2 - H ₂ SO ₄ , 56°C
1-4-17	-	GW	DUP-1-1-4-17	1	1	1	2	G-CLEAR GLASS	3 - HNO ₃
								V-VOA VIAL	4 - NaOH, 56°C
								S-STERILE	5 - NaOH/ZnAg, 56°C
								O-OTHER	6 - Na ₂ S ₂ O ₃ , 56°C
									7 - 56°C not frozen

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

CONTAINERS →

CONTAINER TYPE	PRESERVATION	DATE/TIME	DATE/TIME	RELINQUISHED BY:	RELINQUISHED BY:	SAMPLE SHIPPED VIA:	COURIER	CLIENT	OTHER FS
		1-4-17 1710	1-4-17 1710	[Signature]	[Signature]	UPS	[Signature]		
		1-4-17 1555	1-4-17 1555			FED-EX			
		1-4-17 -	1-4-17 0514			Intact			

RECEIVED BY: D. Evers, K. Walker (Rec)
 RECEIVED BY: [Signature]
 RECEIVED BY: [Signature]

DATE/TIME: 1-4-17 1710
 DATE/TIME: 1-4-17 1555
 DATE/TIME: 1-4-17 0514

LAB #: AAA 0135
 Entered into LIMS: [Signature]

Sample Condition Upon Receipt Pittsburgh



Client Name: Pace GA

Project # 30207369

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 08125104757

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 1/16/17

Comments:	Yes	No	N/A	
Chain of Custody Present:	/			1.
Chain of Custody Filled Out:	/			2.
Chain of Custody Relinquished:	/	/		3. <u>ARM 1/16/17</u>
Sampler Name & Signature on COC:	/	/		4.
Sample Labels match COC:	/	/		5.
-Includes date/time/ID Matrix: <u>N/A</u>				
Samples Arrived within Hold Time:		/		6.
Short Hold Time Analysis (<72hr remaining):		/	/	7.
Rush Turn Around Time Requested:		/	/	8.
Sufficient Volume:	/	/		9.
Correct Containers Used:	/	/		10.
-Pace Containers Used:		/	/	
Containers Intact:	/	/	/	11. <u>ARM 1/16/17</u>
Orthophosphate field filtered			/	12.
Organic Samples checked for dechlorination:		/	/	13.
Filtered volume received for Dissolved tests		/	/	14.
All containers have been checked for preservation.	/	/		15.
All containers needing preservation are found to be in compliance with EPA recommendation.				<u>PHL2</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>ARM</u> 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: <u>ARM</u> Date: <u>1/16/17</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

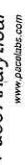
Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment



www.paceanalytical.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 1/19/2017
Worklist: 33557
Matrix: DW

Method Blank Assessment	
MB Sample ID	1213121
MB concentration:	-0.181
M/B Counting Uncertainty:	0.310
MB MDC:	0.785
MB Numerical Performance Indicator:	-1.14
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	1/25/2017
Spike I.D.:	16-027
Spike Concentration (pCi/mL):	25.471
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.802
Target Conc. (pCi/L, g, F):	6.352
Uncertainty (Calculated):	0.457
Result (pCi/L, g, F):	7.485
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.739
Numerical Performance Indicator:	2.55
Percent Recovery:	117.83%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30207573004
Duplicate Sample I.D.:	30207573004DUP
Sample Result (pCi/L, g, F):	0.484
Sample Result Counting Uncertainty (pCi/L, g, F):	0.408
Sample Duplicate Result (pCi/L, g, F):	1.198
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.366
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-2.553
Duplicate RPD:	84.92%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

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

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

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

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Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 1/19/2017
Worklist: 33555
Matrix: DW

Method Blank Assessment

MB Sample ID: 1213109
MB concentration: 0.233
M/B Counting Uncertainty: 0.179
MB MDC: 0.280
MB Numerical Performance Indicator: 2.55
MB Status vs Numerical Indicator: N/A
MB Status vs. MDC: Pass

Laboratory Control Sample Assessment

Count: LCS33555 N LCS33555
Date: 1/20/2017
Spike I.D.: 16-026
Spike Concentration (pCi/mL): 44.671
Volume Used (mL): 0.10
Aliquot Volume (L, g, F): 0.508
Target Conc. (pCi/L, g, F): 8.793
Uncertainty (Calculated): 0.414
Result (pCi/L, g, F): 7.393
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.833
Numerical Performance Indicator: -2.95
Percent Recovery: 84.09%
Status vs Numerical Indicator: N/A
Status vs Recovery: Pass

Duplicate Sample Assessment

Sample I.D.: 30207573005
Duplicate Sample I.D.: 30207573005DUP
Sample Result (pCi/L, g, F): 0.397
Sample Duplicate Result (pCi/L, g, F): 0.225
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.189
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.232
Are sample and/or duplicate results below MDC? See Below ##
Duplicate Numerical Performance Indicator: 1.263
Duplicate RPD: 71.14%
Duplicate Status vs Numerical Indicator: N/A
Duplicate Status vs RPD: Fail***

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

Comments:

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

Sample Matrix Spike Control Assessment

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Sample Matrix Spike Result:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:
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:

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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: AAA0197

January 17, 2017

Project: CCR Event

Project #:Plant Kraft

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

Approved:

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

Project Manager

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All test results relate only to the samples analyzed.



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 17, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Dup-2-1-5-17	AAA0197-01	Ground Water	01/05/17 00:00	01/06/17 13:30
FB-3-1-5-17	AAA0197-02	Water	01/05/17 10:00	01/06/17 13:30
GWC-6	AAA0197-03	Ground Water	01/05/17 11:30	01/06/17 13:30
GWC-15	AAA0197-04	Ground Water	01/05/17 13:15	01/06/17 13:30
GWC-14	AAA0197-05	Ground Water	01/05/17 14:37	01/06/17 13:30
GWC-19	AAA0197-06	Ground Water	01/05/17 15:42	01/06/17 13:30
EB-3-1-6-17	AAA0197-07	Water	01/06/17 07:45	01/06/17 13:30
GWA-7	AAA0197-08	Ground Water	01/06/17 07:49	01/06/17 13:30
GWC-9	AAA0197-09	Ground Water	01/06/17 08:34	01/06/17 13:30
Dup-3-1-5-17	AAA0197-10	Ground Water	01/05/17 00:00	01/06/17 13:30
GWC-13	AAA0197-11	Ground Water	01/05/17 10:10	01/06/17 13:30
GWC-2	AAA0197-12	Ground Water	01/05/17 15:35	01/06/17 13:30
GWC-17	AAA0197-13	Ground Water	01/05/17 12:45	01/06/17 13:30
FB-2-1-5-17	AAA0197-14	Water	01/05/17 13:20	01/06/17 13:30
EB-1-1-5-17	AAA0197-15	Water	01/05/17 16:25	01/06/17 13:30
GWC-4	AAA0197-16	Ground Water	01/06/17 08:25	01/06/17 13:30
GWA-7 Filtered	AAA0197-17	Ground Water	01/06/17 07:49	01/06/17 13:30
GWC-4 Filtered	AAA0197-18	Ground Water	01/06/17 08:25	01/06/17 13:30



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 17, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0197

Project: CCR Event

Client ID: Dup-2-1-5-17

Lab Number ID: AAA0197-01

Date/Time Sampled: 1/5/2017 12:00:00AM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	449	25	10	mg/L	SM 2540 C		1	01/09/17 17:05	01/09/17 17:05	7010161	JPT
Inorganic Anions											
Chloride	69	2.5	0.14	mg/L	EPA 300.0	B-01	10	01/12/17 08:42	01/13/17 04:41	7010261	RNB
Fluoride	0.12	0.30	0.02	mg/L	EPA 300.0	J	1	01/12/17 08:42	01/12/17 10:48	7010261	RNB
Sulfate	130	10	0.51	mg/L	EPA 300.0	B-01	10	01/12/17 08:42	01/13/17 04:41	7010261	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:23	7010168	CSW
Arsenic	0.0018	0.0050	0.0016	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 19:23	7010168	CSW
Barium	0.104	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:23	7010168	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:23	7010168	CSW
Boron	3.02	2.00	0.321	mg/L	EPA 6020B		50	01/10/17 07:50	01/10/17 19:28	7010168	CSW
Cadmium	0.00007	0.0010	0.00007	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 19:23	7010168	CSW
Calcium	5.40	2.50	0.155	mg/L	EPA 6020B		5	01/10/17 07:50	01/11/17 15:59	7010168	CSW
Chromium	0.0020	0.0100	0.0009	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 19:23	7010168	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:23	7010168	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 19:23	7010168	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:23	7010168	CSW
Selenium	0.0016	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 19:23	7010168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:23	7010168	CSW
Vanadium	0.0078	0.0100	0.0071	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 19:23	7010168	CSW
Zinc	0.0026	0.0100	0.0021	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 19:23	7010168	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:23	7010168	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/10/17 10:30	01/11/17 16:35	7010224	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 17, 2017

Report No.: AAA0197

Project: CCR Event

Client ID: FB-3-1-5-17

Lab Number ID: AAA0197-02

Date/Time Sampled: 1/5/2017 10:00:00AM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Water

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	01/12/17 17:35	01/12/17 17:35	7010294	JPT
Inorganic Anions											
Chloride	0.12	0.25	0.01	mg/L	EPA 300.0	B-01, J	1	01/12/17 08:42	01/12/17 11:09	7010261	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	01/12/17 08:42	01/12/17 11:09	7010261	RNB
Sulfate	0.39	1.0	0.05	mg/L	EPA 300.0	B-01, J	1	01/12/17 08:42	01/12/17 11:09	7010261	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:34	7010168	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:34	7010168	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:34	7010168	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:34	7010168	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:34	7010168	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:34	7010168	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:34	7010168	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:34	7010168	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:34	7010168	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:34	7010168	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:34	7010168	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:34	7010168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:34	7010168	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:34	7010168	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:34	7010168	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:34	7010168	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/10/17 10:30	01/11/17 16:37	7010224	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 17, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0197

Project: CCR Event

Client ID: GWC-6

Lab Number ID: AAA0197-03

Date/Time Sampled: 1/5/2017 11:30:00AM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	543	25	10	mg/L	SM 2540 C		1	01/09/17 17:05	01/09/17 17:05	7010161	JPT
Inorganic Anions											
Chloride	70	2.5	0.14	mg/L	EPA 300.0	B-01	10	01/12/17 08:42	01/13/17 06:30	7010261	RNB
Fluoride	0.11	0.30	0.02	mg/L	EPA 300.0	J	1	01/12/17 08:42	01/12/17 11:31	7010261	RNB
Sulfate	130	10	0.51	mg/L	EPA 300.0	B-01	10	01/12/17 08:42	01/13/17 06:30	7010261	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:40	7010168	CSW
Arsenic	0.0021	0.0050	0.0016	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 19:40	7010168	CSW
Barium	0.107	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:40	7010168	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:40	7010168	CSW
Boron	3.07	2.00	0.321	mg/L	EPA 6020B		50	01/10/17 07:50	01/10/17 19:45	7010168	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:40	7010168	CSW
Calcium	5.35	2.50	0.155	mg/L	EPA 6020B		5	01/10/17 07:50	01/11/17 16:05	7010168	CSW
Chromium	0.0020	0.0100	0.0009	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 19:40	7010168	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:40	7010168	CSW
Lead	0.0003	0.0050	0.0001	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 19:40	7010168	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:40	7010168	CSW
Selenium	0.0014	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 19:40	7010168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:40	7010168	CSW
Vanadium	0.0077	0.0100	0.0071	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 19:40	7010168	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:40	7010168	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:40	7010168	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/10/17 10:30	01/11/17 16:40	7010224	MTC



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 17, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0197

Project: CCR Event

Client ID: GWC-15

Lab Number ID: AAA0197-04

Date/Time Sampled: 1/5/2017 1:15:00PM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	565	25	10	mg/L	SM 2540 C		1	01/09/17 17:05	01/09/17 17:05	7010161	JPT
Inorganic Anions											
Chloride	10	0.25	0.01	mg/L	EPA 300.0	B-01	1	01/12/17 08:42	01/12/17 12:35	7010261	RNB
Fluoride	0.22	0.30	0.02	mg/L	EPA 300.0	J	1	01/12/17 08:42	01/12/17 12:35	7010261	RNB
Sulfate	140	10	0.51	mg/L	EPA 300.0	B-01	10	01/12/17 08:42	01/13/17 06:52	7010261	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:51	7010168	CSW
Arsenic	0.0437	0.0050	0.0016	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:51	7010168	CSW
Barium	0.0392	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:51	7010168	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:51	7010168	CSW
Boron	1.10	0.0400	0.0064	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:51	7010168	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:51	7010168	CSW
Calcium	115	25.0	1.55	mg/L	EPA 6020B		50	01/10/17 07:50	01/10/17 19:57	7010168	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:51	7010168	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:51	7010168	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:51	7010168	CSW
Molybdenum	0.109	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:51	7010168	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:51	7010168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:51	7010168	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:51	7010168	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:51	7010168	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 19:51	7010168	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/10/17 10:30	01/11/17 16:42	7010224	MTC



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 17, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0197

Project: CCR Event

Client ID: GWC-14

Lab Number ID: AAA0197-05

Date/Time Sampled: 1/5/2017 2:37:00PM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	781	25	10	mg/L	SM 2540 C		1	01/09/17 17:05	01/09/17 17:05	7010161	JPT
Inorganic Anions											
Chloride	37	0.25	0.01	mg/L	EPA 300.0	B-01	1	01/12/17 08:42	01/12/17 12:56	7010261	RNB
Fluoride	0.21	0.30	0.02	mg/L	EPA 300.0	J	1	01/12/17 08:42	01/12/17 12:56	7010261	RNB
Sulfate	430	10	0.51	mg/L	EPA 300.0	B-01	10	01/12/17 08:42	01/13/17 07:14	7010261	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:03	7010168	CSW
Arsenic	0.0024	0.0050	0.0016	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 20:03	7010168	CSW
Barium	0.0245	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:03	7010168	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:03	7010168	CSW
Boron	0.0813	0.0400	0.0064	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:03	7010168	CSW
Cadmium	0.0002	0.0010	0.00007	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 20:03	7010168	CSW
Calcium	107	25.0	1.55	mg/L	EPA 6020B		50	01/10/17 07:50	01/10/17 20:20	7010168	CSW
Chromium	0.0010	0.0100	0.0009	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 20:03	7010168	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:03	7010168	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:03	7010168	CSW
Molybdenum	0.0022	0.0100	0.0017	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 20:03	7010168	CSW
Selenium	0.0038	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 20:03	7010168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:03	7010168	CSW
Vanadium	0.0172	0.0100	0.0071	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:03	7010168	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:03	7010168	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:03	7010168	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/10/17 10:30	01/11/17 16:44	7010224	MTC



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
 110 Technology Parkway, Peachtree Corners, GA 30092
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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 17, 2017

Report No.: AAA0197

Project: CCR Event

Client ID: GWC-19

Lab Number ID: AAA0197-06

Date/Time Sampled: 1/5/2017 3:42:00PM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	475	25	10	mg/L	SM 2540 C		1	01/09/17 17:05	01/09/17 17:05	7010161	JPT
Inorganic Anions											
Chloride	25	0.25	0.01	mg/L	EPA 300.0	B-01	1	01/12/17 08:42	01/12/17 13:17	7010261	RNB
Fluoride	0.14	0.30	0.02	mg/L	EPA 300.0	J	1	01/12/17 08:42	01/12/17 13:17	7010261	RNB
Sulfate	240	10	0.51	mg/L	EPA 300.0	B-01	10	01/12/17 08:42	01/13/17 07:36	7010261	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:26	7010168	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:26	7010168	CSW
Barium	0.102	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:26	7010168	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 20:26	7010168	CSW
Boron	4.34	2.00	0.321	mg/L	EPA 6020B		50	01/10/17 07:50	01/10/17 20:31	7010168	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:26	7010168	CSW
Calcium	30.0	25.0	1.55	mg/L	EPA 6020B		50	01/10/17 07:50	01/10/17 20:31	7010168	CSW
Chromium	0.0009	0.0100	0.0009	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 20:26	7010168	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:26	7010168	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:26	7010168	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:26	7010168	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:26	7010168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:26	7010168	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:26	7010168	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:26	7010168	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:26	7010168	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/10/17 10:30	01/11/17 16:47	7010224	MTC



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 17, 2017

Report No.: AAA0197

Project: CCR Event

Client ID: EB-3-1-6-17

Lab Number ID: AAA0197-07

Date/Time Sampled: 1/6/2017 7:45:00AM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Water

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	01/12/17 17:35	01/12/17 17:35	7010294	JPT
Inorganic Anions											
Chloride	0.14	0.25	0.01	mg/L	EPA 300.0	J, B-01	1	01/12/17 08:42	01/12/17 13:38	7010261	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	01/12/17 08:42	01/12/17 13:38	7010261	RNB
Sulfate	1.3	1.0	0.05	mg/L	EPA 300.0	B-01	1	01/12/17 08:42	01/12/17 13:38	7010261	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:37	7010168	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:37	7010168	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:37	7010168	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:37	7010168	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:37	7010168	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:37	7010168	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:37	7010168	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:37	7010168	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:37	7010168	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:37	7010168	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:37	7010168	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:37	7010168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:37	7010168	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:37	7010168	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:37	7010168	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:37	7010168	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/10/17 10:30	01/11/17 16:59	7010224	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 17, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0197

Project: CCR Event

Client ID: GWA-7

Lab Number ID: AAA0197-08

Date/Time Sampled: 1/6/2017 7:49:00AM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	3490	25	10	mg/L	SM 2540 C		1	01/09/17 17:05	01/09/17 17:05	7010161	JPT
Inorganic Anions											
Chloride	180	2.5	0.14	mg/L	EPA 300.0	B-01	10	01/12/17 08:42	01/13/17 07:57	7010261	RNB
Fluoride	0.20	0.30	0.02	mg/L	EPA 300.0	J	1	01/12/17 08:42	01/12/17 14:00	7010261	RNB
Sulfate	23	1.0	0.05	mg/L	EPA 300.0	B-01	1	01/12/17 08:42	01/12/17 14:00	7010261	RNB
Metals, Total											
Antimony	0.0009	0.0030	0.0008	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/11/17 16:16	7010168	CSW
Arsenic	0.0097	0.0050	0.0016	mg/L	EPA 6020B		1	01/10/17 07:50	01/11/17 16:16	7010168	CSW
Barium	0.167	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 07:50	01/11/17 16:16	7010168	CSW
Beryllium	0.0003	0.0030	0.00008	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/11/17 16:16	7010168	CSW
Boron	20.1	2.00	0.321	mg/L	EPA 6020B		50	01/10/17 07:50	01/10/17 23:06	7010168	CSW
Cadmium	0.0001	0.0010	0.00007	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/11/17 16:16	7010168	CSW
Calcium	8.13	2.50	0.155	mg/L	EPA 6020B		5	01/10/17 07:50	01/10/17 23:12	7010168	CSW
Chromium	0.0536	0.0100	0.0009	mg/L	EPA 6020B		1	01/10/17 07:50	01/11/17 16:16	7010168	CSW
Cobalt	0.0039	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/11/17 16:16	7010168	CSW
Lead	0.0060	0.0050	0.0001	mg/L	EPA 6020B		1	01/10/17 07:50	01/11/17 16:16	7010168	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 07:50	01/11/17 16:16	7010168	CSW
Selenium	0.0324	0.0100	0.0010	mg/L	EPA 6020B		1	01/10/17 07:50	01/11/17 16:16	7010168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 07:50	01/11/17 16:16	7010168	CSW
Vanadium	0.410	0.0100	0.0071	mg/L	EPA 6020B		1	01/10/17 07:50	01/11/17 16:16	7010168	CSW
Zinc	0.0235	0.0100	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/11/17 16:16	7010168	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/11/17 16:16	7010168	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/10/17 10:30	01/11/17 17:02	7010224	MTC



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 17, 2017

Report No.: AAA0197

Project: CCR Event

Client ID: GWC-9

Lab Number ID: AAA0197-09

Date/Time Sampled: 1/6/2017 8:34:00AM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	259	25	10	mg/L	SM 2540 C		1	01/09/17 17:05	01/09/17 17:05	7010161	JPT
Inorganic Anions											
Chloride	16	0.25	0.01	mg/L	EPA 300.0	B-01	1	01/12/17 08:42	01/12/17 15:46	7010261	RNB
Fluoride	0.25	0.30	0.02	mg/L	EPA 300.0	J	1	01/12/17 08:42	01/12/17 15:46	7010261	RNB
Sulfate	66	10	0.51	mg/L	EPA 300.0	B-01	10	01/12/17 08:42	01/13/17 09:03	7010261	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:43	7010168	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:43	7010168	CSW
Barium	0.305	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:43	7010168	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 20:43	7010168	CSW
Boron	0.0189	0.0400	0.0064	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 20:43	7010168	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:43	7010168	CSW
Calcium	7.97	2.50	0.155	mg/L	EPA 6020B		5	01/10/17 07:50	01/11/17 16:10	7010168	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:43	7010168	CSW
Cobalt	0.0017	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 20:43	7010168	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:43	7010168	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:43	7010168	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:43	7010168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:43	7010168	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:43	7010168	CSW
Zinc	0.0026	0.0100	0.0021	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 20:43	7010168	CSW
Lithium	0.0021	0.0500	0.0021	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 20:43	7010168	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/10/17 10:30	01/11/17 17:04	7010224	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

January 17, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0197

Project: CCR Event

Client ID: Dup-3-1-5-17

Lab Number ID: AAA0197-10

Date/Time Sampled: 1/5/2017 12:00:00AM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	123	25	10	mg/L	SM 2540 C		1	01/09/17 17:05	01/09/17 17:05	7010161	JPT
Inorganic Anions											
Chloride	3.7	0.25	0.01	mg/L	EPA 300.0	B-01	1	01/12/17 08:42	01/12/17 16:07	7010261	RNB
Fluoride	0.09	0.30	0.02	mg/L	EPA 300.0	J	1	01/12/17 08:42	01/12/17 16:07	7010261	RNB
Sulfate	29	1.0	0.05	mg/L	EPA 300.0	B-01	1	01/12/17 08:42	01/12/17 16:07	7010261	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:54	7010168	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:54	7010168	CSW
Barium	0.0216	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:54	7010168	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:54	7010168	CSW
Boron	0.174	0.0400	0.0064	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:54	7010168	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:54	7010168	CSW
Calcium	2.20	0.500	0.0311	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:54	7010168	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:54	7010168	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:54	7010168	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 20:54	7010168	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:54	7010168	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:54	7010168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:54	7010168	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:54	7010168	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:54	7010168	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 20:54	7010168	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/10/17 10:30	01/11/17 17:07	7010224	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

January 17, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0197

Project: CCR Event

Client ID: GWC-13

Lab Number ID: AAA0197-11

Date/Time Sampled: 1/5/2017 10:10:00AM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	146	25	10	mg/L	SM 2540 C		1	01/09/17 17:05	01/09/17 17:05	7010161	JPT
Inorganic Anions											
Chloride	4.1	0.25	0.01	mg/L	EPA 300.0	B-01	1	01/12/17 08:42	01/12/17 16:28	7010261	RNB
Fluoride	0.09	0.30	0.02	mg/L	EPA 300.0	J	1	01/12/17 08:42	01/12/17 16:28	7010261	RNB
Sulfate	32	1.0	0.05	mg/L	EPA 300.0	B-01	1	01/12/17 08:42	01/12/17 16:28	7010261	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:06	7010168	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:06	7010168	CSW
Barium	0.0218	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:06	7010168	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:06	7010168	CSW
Boron	0.179	0.0400	0.0064	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:06	7010168	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:06	7010168	CSW
Calcium	2.27	0.500	0.0311	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:06	7010168	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:06	7010168	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:06	7010168	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 21:06	7010168	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:06	7010168	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:06	7010168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:06	7010168	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:06	7010168	CSW
Zinc	0.0021	0.0100	0.0021	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 21:06	7010168	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:06	7010168	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/10/17 10:30	01/11/17 17:52	7010225	MTC



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 17, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0197

Project: CCR Event

Client ID: GWC-2

Lab Number ID: AAA0197-12

Date/Time Sampled: 1/5/2017 3:35:00PM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Ground Water

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	01/09/17 17:05	01/09/17 17:05	7010161	JPT
Inorganic Anions											
Chloride	7.4	0.25	0.01	mg/L	EPA 300.0	B-01	1	01/12/17 08:42	01/12/17 16:49	7010261	RNB
Fluoride	0.17	0.30	0.02	mg/L	EPA 300.0	J	1	01/12/17 08:42	01/12/17 16:49	7010261	RNB
Sulfate	22	1.0	0.05	mg/L	EPA 300.0	B-01	1	01/12/17 08:42	01/12/17 16:49	7010261	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:28	7010168	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:28	7010168	CSW
Barium	0.0526	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:28	7010168	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:28	7010168	CSW
Boron	0.0162	0.0400	0.0064	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 21:28	7010168	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:28	7010168	CSW
Calcium	0.379	0.500	0.0311	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 21:28	7010168	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:28	7010168	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:28	7010168	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:28	7010168	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:28	7010168	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:28	7010168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:28	7010168	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:28	7010168	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:28	7010168	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:28	7010168	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/10/17 10:30	01/11/17 17:54	7010225	MTC



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 17, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0197

Project: CCR Event

Client ID: GWC-17

Lab Number ID: AAA0197-13

Date/Time Sampled: 1/5/2017 12:45:00PM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1770	25	10	mg/L	SM 2540 C		1	01/09/17 17:05	01/09/17 17:05	7010161	JPT
Inorganic Anions											
Chloride	710	25	1.4	mg/L	EPA 300.0	B-01	100	01/12/17 08:42	01/13/17 09:25	7010261	RNB
Fluoride	0.73	0.30	0.02	mg/L	EPA 300.0		1	01/12/17 08:42	01/12/17 17:10	7010261	RNB
Sulfate	310	100	5.1	mg/L	EPA 300.0	B-01	100	01/12/17 08:42	01/13/17 09:25	7010261	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:40	7010168	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:40	7010168	CSW
Barium	0.142	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:40	7010168	CSW
Beryllium	0.0019	0.0030	0.00008	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 21:40	7010168	CSW
Boron	0.676	0.0400	0.0064	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:40	7010168	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:40	7010168	CSW
Calcium	94.4	25.0	1.55	mg/L	EPA 6020B		50	01/10/17 07:50	01/10/17 21:46	7010168	CSW
Chromium	0.0012	0.0100	0.0009	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 21:40	7010168	CSW
Cobalt	0.0062	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 21:40	7010168	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:40	7010168	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:40	7010168	CSW
Selenium	0.0012	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 21:40	7010168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:40	7010168	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:40	7010168	CSW
Zinc	0.0160	0.0100	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:40	7010168	CSW
Lithium	0.0062	0.0500	0.0021	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 21:40	7010168	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/10/17 10:30	01/11/17 17:56	7010225	MTC



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
 110 Technology Parkway, Peachtree Corners, GA 30092
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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 17, 2017

Report No.: AAA0197

Project: CCR Event

Client ID: FB-2-1-5-17

Lab Number ID: AAA0197-14

Date/Time Sampled: 1/5/2017 1:20:00PM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Water

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	01/12/17 17:35	01/12/17 17:35	7010294	JPT
Inorganic Anions											
Chloride	0.19	0.25	0.01	mg/L	EPA 300.0	J, B-01	1	01/12/17 08:42	01/12/17 17:53	7010261	RNB
Fluoride	0.30	0.30	0.02	mg/L	EPA 300.0	J	1	01/12/17 08:42	01/12/17 17:53	7010261	RNB
Sulfate	1.8	1.0	0.05	mg/L	EPA 300.0	B-01	1	01/12/17 08:42	01/12/17 17:53	7010261	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:51	7010168	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:51	7010168	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:51	7010168	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:51	7010168	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:51	7010168	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:51	7010168	CSW
Calcium	ND	0.500	0.0311	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:51	7010168	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:51	7010168	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:51	7010168	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:51	7010168	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:51	7010168	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:51	7010168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:51	7010168	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:51	7010168	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:51	7010168	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:51	7010168	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/10/17 10:30	01/11/17 17:59	7010225	MTC



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
 110 Technology Parkway, Peachtree Corners, GA 30092
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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 17, 2017

Report No.: AAA0197

Project: CCR Event

Client ID: EB-1-1-5-17

Lab Number ID: AAA0197-15

Date/Time Sampled: 1/5/2017 4:25:00PM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Water

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	01/12/17 17:35	01/12/17 17:35	7010294	JPT
Inorganic Anions											
Chloride	0.09	0.25	0.01	mg/L	EPA 300.0	J, B-01	1	01/12/17 08:42	01/12/17 18:14	7010261	RNB
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	01/12/17 08:42	01/12/17 18:14	7010261	RNB
Sulfate	0.08	1.0	0.05	mg/L	EPA 300.0	J, B-01	1	01/12/17 08:42	01/12/17 18:14	7010261	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:57	7010168	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:57	7010168	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:57	7010168	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:57	7010168	CSW
Boron	ND	0.0400	0.0064	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:57	7010168	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:57	7010168	CSW
Calcium	0.0458	0.500	0.0311	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 21:57	7010168	CSW
Chromium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:57	7010168	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:57	7010168	CSW
Lead	ND	0.0050	0.0001	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:57	7010168	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:57	7010168	CSW
Selenium	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:57	7010168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:57	7010168	CSW
Vanadium	ND	0.0100	0.0071	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:57	7010168	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:57	7010168	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 21:57	7010168	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/10/17 10:30	01/11/17 18:01	7010225	MTC



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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 17, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0197

Project: CCR Event

Client ID: GWC-4

Lab Number ID: AAA0197-16

Date/Time Sampled: 1/6/2017 8:25:00AM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Ground Water

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	01/09/17 17:05	01/09/17 17:05	7010161	JPT
Inorganic Anions											
Chloride	67	5.0	0.28	mg/L	EPA 300.0	B-01	20	01/12/17 08:42	01/13/17 09:46	7010261	RNB
Fluoride	0.08	0.30	0.02	mg/L	EPA 300.0	J	1	01/12/17 08:42	01/12/17 18:35	7010261	RNB
Sulfate	220	20	1.0	mg/L	EPA 300.0	B-01	20	01/12/17 08:42	01/13/17 09:46	7010261	RNB
Metals, Total											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 22:03	7010168	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 22:03	7010168	CSW
Barium	0.0758	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 22:03	7010168	CSW
Beryllium	0.0001	0.0030	0.00008	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 22:03	7010168	CSW
Boron	8.34	2.00	0.321	mg/L	EPA 6020B		50	01/10/17 07:50	01/10/17 22:08	7010168	CSW
Cadmium	0.00009	0.0010	0.00007	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 22:03	7010168	CSW
Calcium	8.18	2.50	0.155	mg/L	EPA 6020B		5	01/10/17 07:50	01/10/17 22:49	7010168	CSW
Chromium	0.0098	0.0100	0.0009	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 22:03	7010168	CSW
Cobalt	0.0010	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 22:03	7010168	CSW
Lead	0.0053	0.0050	0.0001	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 22:03	7010168	CSW
Molybdenum	0.0278	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 22:03	7010168	CSW
Selenium	0.0042	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 22:03	7010168	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 22:03	7010168	CSW
Vanadium	0.0341	0.0100	0.0071	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 22:03	7010168	CSW
Zinc	0.0104	0.0100	0.0021	mg/L	EPA 6020B		1	01/10/17 07:50	01/10/17 22:03	7010168	CSW
Lithium	0.0042	0.0500	0.0021	mg/L	EPA 6020B	J	1	01/10/17 07:50	01/10/17 22:03	7010168	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	01/10/17 10:30	01/11/17 18:03	7010225	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 17, 2017

Attention: Mr. Joju Abraham

Report No.: AAA0197

Project: CCR Event

Client ID: GWA-7 Filtered

Lab Number ID: AAA0197-17

Date/Time Sampled: 1/6/2017 7:49:00AM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Metals, Dissolved											
Antimony	0.0009	0.0030	0.0008	mg/L	EPA 6020B	J	1	01/10/17 16:00	01/13/17 21:19	7010210	CSW
Arsenic	0.0089	0.0050	0.0016	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:19	7010210	CSW
Barium	0.155	0.100	0.0044	mg/L	EPA 6020B		10	01/10/17 16:00	01/16/17 13:50	7010210	CSW
Beryllium	0.0002	0.0030	0.00008	mg/L	EPA 6020B	J	1	01/10/17 16:00	01/13/17 21:19	7010210	CSW
Boron	23.3	2.00	0.321	mg/L	EPA 6020B		50	01/10/17 16:00	01/13/17 21:24	7010210	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:19	7010210	CSW
Calcium	7.52	0.500	0.0311	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:19	7010210	CSW
Chromium	0.0498	0.0100	0.0009	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:19	7010210	CSW
Cobalt	0.0031	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/10/17 16:00	01/13/17 21:19	7010210	CSW
Lead	0.0004	0.0050	0.0001	mg/L	EPA 6020B	J	1	01/10/17 16:00	01/13/17 21:19	7010210	CSW
Molybdenum	ND	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:19	7010210	CSW
Selenium	0.0322	0.0100	0.0010	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:19	7010210	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:19	7010210	CSW
Vanadium	0.403	0.100	0.0714	mg/L	EPA 6020B		10	01/10/17 16:00	01/16/17 13:50	7010210	CSW
Zinc	0.0027	0.0100	0.0021	mg/L	EPA 6020B	J	1	01/10/17 16:00	01/13/17 21:19	7010210	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:19	7010210	CSW
Mercury	ND	0.0005	0.00004	mg/L	EPA 7470A		1	01/10/17 10:50	01/11/17 18:56	7010226	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 17, 2017

Report No.: AAA0197

Project: CCR Event

Client ID: GWC-4 Filtered

Lab Number ID: AAA0197-18

Date/Time Sampled: 1/6/2017 8:25:00AM

Date/Time Received: 1/6/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Metals, Dissolved											
Antimony	ND	0.0030	0.0008	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:41	7010210	CSW
Arsenic	ND	0.0050	0.0016	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:41	7010210	CSW
Barium	0.0691	0.0100	0.0004	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:41	7010210	CSW
Beryllium	ND	0.0030	0.00008	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:41	7010210	CSW
Boron	7.49	0.200	0.0321	mg/L	EPA 6020B		5	01/10/17 16:00	01/16/17 13:56	7010210	CSW
Cadmium	ND	0.0010	0.00007	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:41	7010210	CSW
Calcium	7.86	0.500	0.0311	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:41	7010210	CSW
Chromium	0.0069	0.0100	0.0009	mg/L	EPA 6020B	J	1	01/10/17 16:00	01/13/17 21:41	7010210	CSW
Cobalt	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/10/17 16:00	01/13/17 21:41	7010210	CSW
Lead	0.0002	0.0050	0.0001	mg/L	EPA 6020B	J	1	01/10/17 16:00	01/13/17 21:41	7010210	CSW
Molybdenum	0.0127	0.0100	0.0017	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:41	7010210	CSW
Selenium	0.0031	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/10/17 16:00	01/13/17 21:41	7010210	CSW
Thallium	ND	0.0010	0.0002	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:41	7010210	CSW
Vanadium	ND	0.0500	0.0357	mg/L	EPA 6020B		5	01/10/17 16:00	01/16/17 13:56	7010210	CSW
Zinc	ND	0.0100	0.0021	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:41	7010210	CSW
Lithium	ND	0.0500	0.0021	mg/L	EPA 6020B		1	01/10/17 16:00	01/13/17 21:41	7010210	CSW
Mercury	ND	0.0005	0.00004	mg/L	EPA 7470A		1	01/10/17 10:50	01/11/17 18:58	7010226	MTC



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Attention: Mr. Joju Abraham

January 17, 2017

Report No.: AAA0197

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010161 - SM 2540 C											
Blank (7010161-BLK1)						Prepared & Analyzed: 01/09/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7010161-BS1)						Prepared & Analyzed: 01/09/17					
Total Dissolved Solids	387	25	10	mg/L	400.00		97	84-108			
Duplicate (7010161-DUP1)						Source: AAA0197-02 Prepared & Analyzed: 01/09/17					
Total Dissolved Solids	79	25	10	mg/L		90			13	10	QR-03
Duplicate (7010161-DUP2)						Source: AAA0197-08 Prepared & Analyzed: 01/09/17					
Total Dissolved Solids	3420	25	10	mg/L		3490			2	10	
Batch 7010294 - SM 2540 C											
Blank (7010294-BLK1)						Prepared & Analyzed: 01/12/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7010294-BS1)						Prepared & Analyzed: 01/12/17					
Total Dissolved Solids	393	25	10	mg/L	400.00		98	84-108			
Duplicate (7010294-DUP1)						Source: AAA0197-02RE1 Prepared & Analyzed: 01/12/17					
Total Dissolved Solids	ND	25	10	mg/L		12				10	
Duplicate (7010294-DUP2)						Source: AAA0197-07RE1 Prepared & Analyzed: 01/12/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7010294-DUP3)						Source: AAA0197-14RE1 Prepared & Analyzed: 01/12/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	



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Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 17, 2017

Report No.: AAA0197

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010294 - SM 2540 C											
Duplicate (7010294-DUP4)			Source: AAA0197-15RE1			Prepared & Analyzed: 01/12/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	



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January 17, 2017

Report No.: AAA0197

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010261 - EPA 300.0											
Blank (7010261-BLK1)						Prepared & Analyzed: 01/12/17					
Chloride	0.02	0.25	0.01	mg/L							J
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	0.10	1.0	0.05	mg/L							J
LCS (7010261-BS1)						Prepared & Analyzed: 01/12/17					
Chloride	9.69	0.25	0.01	mg/L	10.010		97	90-110			
Fluoride	10.2	0.30	0.02	mg/L	10.020		102	90-110			
Sulfate	10.0	1.0	0.05	mg/L	10.020		100	90-110			
Matrix Spike (7010261-MS1)						Source: AAA0197-03 Prepared & Analyzed: 01/12/17					
Chloride	73.1	0.25	0.01	mg/L	10.010	70.5	26	90-110			QM-02
Fluoride	10.8	0.30	0.02	mg/L	10.020	0.11	106	90-110			
Sulfate	118	1.0	0.05	mg/L	10.020	121	NR	90-110			QM-02
Matrix Spike (7010261-MS2)						Source: AAA0197-13 Prepared & Analyzed: 01/12/17					
Chloride	339	0.25	0.01	mg/L	10.010	358	NR	90-110			QM-02
Fluoride	11.4	0.30	0.02	mg/L	10.020	0.73	107	90-110			
Sulfate	222	1.0	0.05	mg/L	10.020	236	NR	90-110			QM-02
Matrix Spike Dup (7010261-MSD1)						Source: AAA0197-03 Prepared & Analyzed: 01/12/17					
Chloride	73.2	0.25	0.01	mg/L	10.010	70.5	27	90-110	0.2	15	QM-02
Fluoride	11.7	0.30	0.02	mg/L	10.020	0.11	115	90-110	8	15	QM-05
Sulfate	118	1.0	0.05	mg/L	10.020	121	NR	90-110	0.06	15	QM-02



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January 17, 2017

Report No.: AAA0197

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7010168 - EPA 3005A

Blank (7010168-BLK1)

Prepared & Analyzed: 01/10/17

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	0.0008	0.0250	0.0005	mg/L							J
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 (7010168-BS1)

Prepared & Analyzed: 01/10/17

Antimony	0.101	0.0030	0.0008	mg/L	0.10000		101	80-120			
Arsenic	0.101	0.0050	0.0016	mg/L	0.10000		101	80-120			
Barium	0.0989	0.0100	0.0004	mg/L	0.10000		99	80-120			
Beryllium	0.107	0.0030	0.00008	mg/L	0.10000		107	80-120			
Boron	1.10	0.0400	0.0064	mg/L	1.0000		110	80-120			
Cadmium	0.101	0.0010	0.00007	mg/L	0.10000		101	80-120			
Calcium	0.984	0.500	0.0311	mg/L	1.0000		98	80-120			
Chromium	0.102	0.0100	0.0009	mg/L	0.10000		102	80-120			
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000		100	80-120			
Copper	0.0999	0.0250	0.0005	mg/L	0.10000		100	80-120			
Lead	0.0980	0.0050	0.0001	mg/L	0.10000		98	80-120			
Molybdenum	0.100	0.0100	0.0017	mg/L	0.10000		100	80-120			
Nickel	0.103	0.0100	0.0006	mg/L	0.10000		103	80-120			
Selenium	0.102	0.0100	0.0010	mg/L	0.10000		102	80-120			
Silver	0.0990	0.0100	0.0005	mg/L	0.10000		99	80-120			
Thallium	0.0996	0.0010	0.0002	mg/L	0.10000		100	80-120			
Vanadium	0.103	0.0100	0.0071	mg/L	0.10000		103	80-120			
Zinc	0.102	0.0100	0.0021	mg/L	0.10000		102	80-120			
Lithium	0.106	0.0500	0.0021	mg/L	0.10000		106	80-120			



PACE ANALYTICAL SERVICES, LLC.

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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 17, 2017

Report No.: AAA0197

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010168 - EPA 3005A											
Matrix Spike (7010168-MS1)			Source: AAA0192-01				Prepared & Analyzed: 01/10/17				
Antimony	0.102	0.0030	0.0008	mg/L	0.10000	ND	102	75-125			
Arsenic	0.104	0.0050	0.0016	mg/L	0.10000	ND	104	75-125			
Barium	0.112	0.0100	0.0004	mg/L	0.10000	0.0130	99	75-125			
Beryllium	0.107	0.0030	0.00008	mg/L	0.10000	0.0001	107	75-125			
Boron	1.04	0.0400	0.0064	mg/L	1.0000	ND	104	75-125			
Cadmium	0.105	0.0010	0.00007	mg/L	0.10000	0.0008	104	75-125			
Calcium	21.6	5.00	0.311	mg/L	1.0000	21.0	59	75-125			QM-02
Chromium	0.0999	0.0100	0.0009	mg/L	0.10000	ND	100	75-125			
Cobalt	0.0956	0.0100	0.0005	mg/L	0.10000	ND	96	75-125			
Copper	0.0969	0.0250	0.0005	mg/L	0.10000	ND	97	75-125			
Lead	0.0964	0.0050	0.0001	mg/L	0.10000	0.0001	96	75-125			
Molybdenum	0.103	0.0100	0.0017	mg/L	0.10000	ND	103	75-125			
Nickel	0.0981	0.0100	0.0006	mg/L	0.10000	ND	98	75-125			
Selenium	0.103	0.0100	0.0010	mg/L	0.10000	ND	103	75-125			
Silver	0.0972	0.0100	0.0005	mg/L	0.10000	ND	97	75-125			
Thallium	0.0971	0.0010	0.0002	mg/L	0.10000	ND	97	75-125			
Vanadium	0.101	0.0100	0.0071	mg/L	0.10000	ND	101	75-125			
Zinc	0.361	0.0100	0.0021	mg/L	0.10000	0.273	88	75-125			
Lithium	0.105	0.0500	0.0021	mg/L	0.10000	ND	105	75-125			
Matrix Spike Dup (7010168-MSD1)			Source: AAA0192-01				Prepared & Analyzed: 01/10/17				
Antimony	0.105	0.0030	0.0008	mg/L	0.10000	ND	105	75-125	3	20	
Arsenic	0.104	0.0050	0.0016	mg/L	0.10000	ND	104	75-125	0.2	20	
Barium	0.117	0.0100	0.0004	mg/L	0.10000	0.0130	104	75-125	4	20	
Beryllium	0.106	0.0030	0.00008	mg/L	0.10000	0.0001	106	75-125	1	20	
Boron	1.08	0.0400	0.0064	mg/L	1.0000	ND	108	75-125	3	20	
Cadmium	0.103	0.0010	0.00007	mg/L	0.10000	0.0008	102	75-125	2	20	
Calcium	21.7	5.00	0.311	mg/L	1.0000	21.0	75	75-125	0.7	20	
Chromium	0.104	0.0100	0.0009	mg/L	0.10000	ND	104	75-125	4	20	
Cobalt	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	5	20	
Copper	0.0995	0.0250	0.0005	mg/L	0.10000	ND	99	75-125	3	20	
Lead	0.100	0.0050	0.0001	mg/L	0.10000	0.0001	100	75-125	4	20	
Molybdenum	0.106	0.0100	0.0017	mg/L	0.10000	ND	106	75-125	3	20	
Nickel	0.102	0.0100	0.0006	mg/L	0.10000	ND	102	75-125	4	20	
Selenium	0.104	0.0100	0.0010	mg/L	0.10000	ND	104	75-125	2	20	
Silver	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125	3	20	
Thallium	0.0999	0.0010	0.0002	mg/L	0.10000	ND	100	75-125	3	20	
Vanadium	0.107	0.0100	0.0071	mg/L	0.10000	ND	107	75-125	5	20	
Zinc	0.372	0.0100	0.0021	mg/L	0.10000	0.273	99	75-125	3	20	
Lithium	0.105	0.0500	0.0021	mg/L	0.10000	ND	105	75-125	0.8	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

January 17, 2017

Report No.: AAA0197

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010168 - EPA 3005A											
Post Spike (7010168-PS1)			Source: AAA0192-01			Prepared & Analyzed: 01/10/17					
Antimony	94.2			ug/L	100.00	0.396	94	80-120			
Arsenic	105			ug/L	100.00	0.300	104	80-120			
Barium	113			ug/L	100.00	13.0	100	80-120			
Beryllium	106			ug/L	100.00	0.131	105	80-120			
Boron	1060			ug/L	1000.0	4.28	105	80-120			
Cadmium	104			ug/L	100.00	0.847	103	80-120			
Calcium	21600			ug/L	1000.0	21000	60	80-120			QM-02
Chromium	105			ug/L	100.00	0.402	104	80-120			
Cobalt	101			ug/L	100.00	0.0724	101	80-120			
Copper	99.6			ug/L	100.00	0.180	99	80-120			
Lead	99.7			ug/L	100.00	0.117	100	80-120			
Molybdenum	106			ug/L	100.00	0.0693	106	80-120			
Nickel	101			ug/L	100.00	0.457	100	80-120			
Selenium	108			ug/L	100.00	0.167	108	80-120			
Silver	97.3			ug/L	100.00	0.0156	97	80-120			
Thallium	99.1			ug/L	100.00	0.0359	99	80-120			
Vanadium	106			ug/L	100.00	0.481	106	80-120			
Zinc	373			ug/L	100.00	273	99	80-120			
Lithium	105			ug/L	100.00	1.15	104	80-120			

Batch 7010224 - EPA 7470A

Blank (7010224-BLK1)					Prepared: 01/10/17 Analyzed: 01/11/17						
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7010224-BS1)					Prepared: 01/10/17 Analyzed: 01/11/17						
Mercury	0.00229	0.00050	0.000041	mg/L	2.5000E-3		92	80-120			



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Report No.: AAA0197

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010224 - EPA 7470A											
Matrix Spike (7010224-MS1)			Source: AAA0197-06			Prepared: 01/10/17 Analyzed: 01/11/17					
Mercury	0.00231	0.00050	0.000041	mg/L	2.5000E-3	ND	92	75-125			
Matrix Spike Dup (7010224-MSD1)			Source: AAA0197-06			Prepared: 01/10/17 Analyzed: 01/11/17					
Mercury	0.00234	0.00050	0.000041	mg/L	2.5000E-3	ND	94	75-125	2	20	
Post Spike (7010224-PS1)			Source: AAA0197-06			Prepared: 01/10/17 Analyzed: 01/11/17					
Mercury	1.69			ug/L	1.6667	-0.0139	101	80-120			
Batch 7010225 - EPA 7470A											
Blank (7010225-BLK1)						Prepared: 01/10/17 Analyzed: 01/11/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7010225-BS1)						Prepared: 01/10/17 Analyzed: 01/11/17					
Mercury	0.00240	0.00050	0.000041	mg/L	2.5000E-3		96	80-120			
Duplicate (7010225-DUP1)			Source: AAA0181-01RE1			Prepared: 01/10/17 Analyzed: 01/11/17					
Mercury	0.00203	0.00050	0.000041	mg/L		0.00201			1	20	
Duplicate (7010225-DUP2)			Source: AAA0181-02RE1			Prepared: 01/10/17 Analyzed: 01/11/17					
Mercury	0.00140	0.00050	0.000041	mg/L		0.00097			37	20	QR-03
Duplicate (7010225-DUP3)			Source: AAA0181-03RE1			Prepared: 01/10/17 Analyzed: 01/11/17					
Mercury	0.00172	0.00050	0.000041	mg/L		0.00123			33	20	QR-03
Duplicate (7010225-DUP4)			Source: AAA0181-04			Prepared: 01/10/17 Analyzed: 01/11/17					
Mercury	0.00060	0.00050	0.000041	mg/L		0.00042			36	20	QR-03



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010225 - EPA 7470A											
Matrix Spike (7010225-MS1)			Source: AAA0197-11			Prepared: 01/10/17 Analyzed: 01/11/17					
Mercury	0.00223	0.00050	0.000041	mg/L	2.5000E-3	ND	89	75-125			
Matrix Spike Dup (7010225-MSD1)			Source: AAA0197-11			Prepared: 01/10/17 Analyzed: 01/11/17					
Mercury	0.00230	0.00050	0.000041	mg/L	2.5000E-3	ND	92	75-125	3	20	



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Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7010210 - EPA 3005A

Blank (7010210-BLK1)

Prepared: 01/10/17 Analyzed: 01/13/17

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 (7010210-BS1)

Prepared: 01/10/17 Analyzed: 01/13/17

Antimony	0.111	0.0030	0.0008	mg/L	0.10000		111	80-120			
Arsenic	0.102	0.0050	0.0016	mg/L	0.10000		102	80-120			
Barium	0.108	0.0100	0.0004	mg/L	0.10000		108	80-120			
Beryllium	0.106	0.0030	0.00008	mg/L	0.10000		106	80-120			
Boron	1.04	0.0400	0.0064	mg/L	1.0000		104	80-120			
Cadmium	0.103	0.0010	0.00007	mg/L	0.10000		103	80-120			
Calcium	1.04	0.500	0.0311	mg/L	1.0000		104	80-120			
Chromium	0.115	0.0100	0.0009	mg/L	0.10000		115	80-120			
Cobalt	0.113	0.0100	0.0005	mg/L	0.10000		113	80-120			
Copper	0.111	0.0250	0.0005	mg/L	0.10000		111	80-120			
Lead	0.108	0.0050	0.0001	mg/L	0.10000		108	80-120			
Molybdenum	0.100	0.0100	0.0017	mg/L	0.10000		100	80-120			
Nickel	0.113	0.0100	0.0006	mg/L	0.10000		113	80-120			
Selenium	0.0978	0.0100	0.0010	mg/L	0.10000		98	80-120			
Silver	0.102	0.0100	0.0005	mg/L	0.10000		102	80-120			
Thallium	0.107	0.0010	0.0002	mg/L	0.10000		107	80-120			
Vanadium	0.118	0.0100	0.0071	mg/L	0.10000		118	80-120			
Zinc	0.108	0.0100	0.0021	mg/L	0.10000		108	80-120			
Lithium	0.101	0.0500	0.0021	mg/L	0.10000		101	80-120			



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Attention: Mr. Joju Abraham

January 17, 2017

Report No.: AAA0197

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010210 - EPA 3005A											
Matrix Spike (7010210-MS1)			Source: AAA0197-17				Prepared: 01/10/17 Analyzed: 01/13/17				
Antimony	0.114	0.0030	0.0008	mg/L	0.10000	0.0009	113	75-125			
Arsenic	0.119	0.0050	0.0016	mg/L	0.10000	0.0089	110	75-125			
Barium	0.276	0.500	0.0218	mg/L	0.10000	0.155	121	75-125			J
Beryllium	0.0772	0.0030	0.00008	mg/L	0.10000	0.0002	77	75-125			
Boron	25.4	2.00	0.321	mg/L	1.0000	23.3	206	75-125			QM-02
Cadmium	0.0954	0.0010	0.00007	mg/L	0.10000	ND	95	75-125			
Calcium	8.19	0.500	0.0311	mg/L	1.0000	7.52	68	75-125			QM-02
Chromium	0.164	0.0100	0.0009	mg/L	0.10000	0.0498	114	75-125			
Cobalt	0.109	0.0100	0.0005	mg/L	0.10000	0.0031	106	75-125			
Copper	0.0959	0.0250	0.0005	mg/L	0.10000	0.0007	95	75-125			
Lead	0.0971	0.0050	0.0001	mg/L	0.10000	0.0004	97	75-125			
Molybdenum	0.111	0.0100	0.0017	mg/L	0.10000	ND	111	75-125			
Nickel	0.115	0.0100	0.0006	mg/L	0.10000	0.0166	98	75-125			
Selenium	0.132	0.0100	0.0010	mg/L	0.10000	0.0322	100	75-125			
Silver	0.0931	0.0100	0.0005	mg/L	0.10000	ND	93	75-125			
Thallium	0.0994	0.0010	0.0002	mg/L	0.10000	ND	99	75-125			
Vanadium	0.684	0.500	0.357	mg/L	0.10000	0.403	280	75-125			QM-05
Zinc	0.102	0.0100	0.0021	mg/L	0.10000	0.0027	99	75-125			
Lithium	0.0761	0.0500	0.0021	mg/L	0.10000	ND	76	75-125			
Matrix Spike Dup (7010210-MSD1)			Source: AAA0197-17				Prepared: 01/10/17 Analyzed: 01/13/17				
Antimony	0.116	0.0030	0.0008	mg/L	0.10000	0.0009	115	75-125	2	20	
Arsenic	0.117	0.0050	0.0016	mg/L	0.10000	0.0089	108	75-125	1	20	
Barium	0.263	0.500	0.0218	mg/L	0.10000	0.155	108	75-125	5	20	J
Beryllium	0.0739	0.0030	0.00008	mg/L	0.10000	0.0002	74	75-125	4	20	QM-05
Boron	23.4	2.00	0.321	mg/L	1.0000	23.3	4	75-125	8	20	QM-02
Cadmium	0.0903	0.0010	0.00007	mg/L	0.10000	ND	90	75-125	5	20	
Calcium	8.16	0.500	0.0311	mg/L	1.0000	7.52	65	75-125	0.3	20	QM-02
Chromium	0.159	0.0100	0.0009	mg/L	0.10000	0.0498	109	75-125	3	20	
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000	0.0031	102	75-125	4	20	
Copper	0.0911	0.0250	0.0005	mg/L	0.10000	0.0007	90	75-125	5	20	
Lead	0.0982	0.0050	0.0001	mg/L	0.10000	0.0004	98	75-125	1	20	
Molybdenum	0.110	0.0100	0.0017	mg/L	0.10000	ND	110	75-125	1	20	
Nickel	0.114	0.0100	0.0006	mg/L	0.10000	0.0166	97	75-125	0.8	20	
Selenium	0.138	0.0100	0.0010	mg/L	0.10000	0.0322	106	75-125	4	20	
Silver	0.0901	0.0100	0.0005	mg/L	0.10000	ND	90	75-125	3	20	
Thallium	0.101	0.0010	0.0002	mg/L	0.10000	ND	101	75-125	2	20	
Vanadium	0.590	0.500	0.357	mg/L	0.10000	0.403	186	75-125	15	20	QM-05
Zinc	0.100	0.0100	0.0021	mg/L	0.10000	0.0027	98	75-125	1	20	
Lithium	0.0713	0.0500	0.0021	mg/L	0.10000	ND	71	75-125	6	20	QM-05



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January 17, 2017

Report No.: AAA0197

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010210 - EPA 3005A											
Post Spike (7010210-PS1)			Source: AAA0197-17			Prepared: 01/10/17 Analyzed: 01/13/17					
Antimony	117			ug/L	100.00	0.907	116	80-120			
Arsenic	116			ug/L	100.00	8.86	108	80-120			
Barium	280			ug/L	100.00	155	125	80-120			QM-02
Beryllium	74.6			ug/L	100.00	0.232	74	80-120			QM-05
Boron	24700			ug/L	1000.0	23300	143	80-120			QM-02
Cadmium	96.2			ug/L	100.00	0.0331	96	80-120			
Calcium	8220			ug/L	1000.0	7520	70	80-120			QM-02
Chromium	164			ug/L	100.00	49.8	114	80-120			
Cobalt	109			ug/L	100.00	3.09	106	80-120			
Copper	93.7			ug/L	100.00	0.682	93	80-120			
Lead	101			ug/L	100.00	0.447	100	80-120			
Molybdenum	112			ug/L	100.00	0.809	112	80-120			
Nickel	115			ug/L	100.00	16.6	98	80-120			
Selenium	144			ug/L	100.00	32.2	111	80-120			
Silver	92.3			ug/L	100.00	0.0847	92	80-120			
Thallium	104			ug/L	100.00	0.0241	104	80-120			
Vanadium	576			ug/L	100.00	403	173	80-120			QM-05
Zinc	106			ug/L	100.00	2.70	103	80-120			
Lithium	77.9			ug/L	100.00	0.0559	78	80-120			QM-05

Batch 7010226 - EPA 7470A

Blank (7010226-BLK1)					Prepared: 01/10/17 Analyzed: 01/11/17						
Mercury	ND	0.0005	0.00004	mg/L							
LCS (7010226-BS1)					Prepared: 01/10/17 Analyzed: 01/11/17						
Mercury	0.0022	0.0005	0.00004	mg/L	2.5000E-3		90	80-120			



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January 17, 2017

Report No.: AAA0197

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7010226 - EPA 7470A											
Matrix Spike (7010226-MS1)			Source: AAA0197-18			Prepared: 01/10/17 Analyzed: 01/11/17					
Mercury	0.0021	0.0005	0.00004	mg/L	2.5000E-3	ND	83	75-125			
Matrix Spike Dup (7010226-MSD1)			Source: AAA0197-18			Prepared: 01/10/17 Analyzed: 01/11/17					
Mercury	0.0020	0.0005	0.00004	mg/L	2.5000E-3	ND	82	75-125	2	20	
Post Spike (7010226-PS1)			Source: AAA0197-18			Prepared: 01/10/17 Analyzed: 01/11/17					
Mercury	1.50			ug/L	1.6667	-0.0159	90	80-120			



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January 17, 2017

Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

- 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

PAGE: 1 OF 1

CLIENT NAME: Atlantic Coast Consulting, Inc. CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 630 Colonial Park Dr. #110 Roswell, GA 30075		REPORT TO: L. Peathy CC: M. Padilla, H. McLeble REQUESTED COMPLETION DATE:																			
PROJECT NAME/STATE: Plant Kraft Brunswick Rd. Phase Z CCR + State D+O		PROJECT #:																			
Collection DATE	Collection TIME	MATRIX CODE*	SAMPLE IDENTIFICATION																		
1-5-17	—	GW	DUP-2-1-5-17																		
1-5-17	1000	W	EB-57617 FB-3-1-5-17																		
1-5-17	1130	GW	GWC-6																		
1-5-17	1315	GW	GWC-15																		
1-5-17	1437	GW	GWC-14																		
1-5-17	1542	GW	GWC-19																		
1-6-17	0745	W	EB-3-1-6-17																		
1-6-17	0749	GW	GWA-7																		
1-6-17	0834	GW	GWL-9																		
SAMPLED BY AND TITLE: O. EQUEVA (ACC)		DATE/TIME:	1-6-17 0834																		
RECEIVED BY:		DATE/TIME:																			
SHIPPED BY LAB: Kenle Peathy		DATE/TIME:	1/6/17 1330																		
Checked:		Temperature:	Min: Max:																		
No. NA	ES	No. NA	Max:																		
RELINQUISHED BY: Rjn wohn		DATE/TIME:	1-6-17 1330																		
RELINQUISHED BY:		DATE/TIME:																			
SAMPLE SHIPPED VIA: UPS		FED-EX	USPS																		
Custody Seal: Intact Broken Not Present		COURIER	CUSTOMER ID:																		
CONTAINER TYPE: PRESERVATION: # of CONTAINERS →		ANALYSIS REQUESTED	DATE/TIME:																		
CONTAINER TYPE: PRESERVATION: # of CONTAINERS →		ANALYSIS REQUESTED	DATE/TIME:																		
L	A	B	I	D	N	U	M	B	E	R	→	1	2	3	4	5	6	7	8	9	
P - PLASTIC	A - AMBER GLASS	G - CLEAR GLASS	V - VOA VIAL	S - STERILE	O - OTHER																
1 - HCl, ≤6°C	2 - H ₂ SO ₄ , ≤6°C	3 - HNO ₃	4 - NaOH, ≤6°C	5 - NaOH/ZnAc, ≤6°C	6 - Na ₂ S ₂ O 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 4 Rakium containers collected									
CONTAINER TYPE PRESERVATION # of CONTAINERS →												ANALYSIS REQUESTED Metals Vanadium + Zinc Metals Vanadium + Zinc Metals App III + App III Cl, F, SO ₄ , + TDS									
CONTAINER TYPE PRESERVATION # of CONTAINERS →												ANALYSIS REQUESTED Metals Vanadium + Zinc Metals Vanadium + Zinc Metals App III + App III Cl, F, SO ₄ , + TDS									



CHAIN OF CUSTODY RECORD

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 30303
 404-506-7239

REPORT TO: Lauren Petty
 REQUESTED COMPLETION DATE: CC: Marie Padilla
 PO#: Heath McCorkle
 laburch@southern.com

PROJECT NAME/STATE: Plant Kraft Grumman Road
 PROJECT #: Phase 2 CUR & State D:O

Collection DATE	Collection TIME	MATRIX CODE*	C O M P O S I T I O N	SAMPLE IDENTIFICATION	ANALYSIS REQUESTED			CONTAINER TYPE: PRESERVATION	CONTAINER TYPE PRESERVATION
					P	P	P		
1-5-17	—	GW	*	Dup-3-1-5-17	1	1	2	Rad:um 226 & 228 (SW-846 95/43)	1 - HCl, ≤6°C
1-5-17	1010	GW	*	GW-C-13	1	1	2	Metals (Vanadium and Zinc) EPA 3000 & 5M (2540)	2 - H ₂ SO ₄ , ≤6°C
1-5-17	1535	GW	*	GW-C-2	1	1	2	Metals App III & IV (EPA 6020/34)	3 - HNO ₃
1-5-17	1245	GW	*	GW-C-17	1	1	2		4 - NaOH, ≤6°C
1-5-17	1320	W	X	FB-2-1-5-17	1	1	2		5 - NaOH/ZnAc, ≤6°C
1-5-17	1625	W	X	EB-1-1-5-17	1	1	2		6 - Na ₂ S ₂ O ₃ , ≤6°C
1-6-17	0825	GW	*	GW-C-4	1	1	2		7 - ≤6°C not frozen

CONTAINERS →

RELINQUISHED BY: [Signature] DATE/TIME: 1-6-17 1330
 RELINQUISHED BY: [Signature] DATE/TIME: []

SAMPLED BY AND TITLE: ACC RECEIVED BY: Ryan Walker

DATE/TIME: 1-6-17/0825

DATE/TIME: []

DATE/TIME: 1-6-17 1330

DATE/TIME: []

TEMPERATURE: 16/17 1330 (Min: 10 Max: 10)

SAMPLE SHIPPED VIA: UPS

CUSTOMER SEAL: Intact

COURIER: []

COOLERS: # of Coolers []

CLIENT: []

OTHER: FS

LAB #: []

ENTERED INTO LIMS: []

TRACKING #: []

CHAIN OF CUSTODY RECORD

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

PAGE: 1 OF 1



CLIENT NAME: Atlantic Coast Consulting, Inc.
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 630 Colonial Park Dr. #110 Roswell, GA 30075
REPORT TO: L. Peltz
CC: Mr. Peltz, H. Melville
REQUESTED COMPLETION DATE:
PROJECT NAME/STATE: Plant Kraft Gummien Rd.
PROJECT #: Phase Z CCR + State D+O

Collection DATE	Collection TIME	MATRIX CODE*	GRA B	SAMPLE IDENTIFICATION	CONTAINER TYPE	ANALYSIS REQUESTED	DATE/TIME	RELINQUISHED BY	DATE/TIME	REMARKS/ADDITIONAL INFORMATION
1-6-17	0749	GW	X	GWA-7		Asp III + App II Metab - F. Filter	1-6-17 1330	Ryan	1-6-17 1330	
1-6-17	0825	GW	X	GWC-4		Vanadium + Zinc Metab - Filter				

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

PRESERVATION
1 - HCl, ≤6°C
2 - H₂SO₄, ≤6°C
3 - HNO₃
4 - NaOH, ≤6°C
5 - NaOH/IZnAc, ≤6°C
6 - Na₂S₂O₃, ≤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

CONTAINERS →

ANALYSIS REQUESTED

DATE/TIME: 1-6-17 1330

RELINQUISHED BY: Ryan

DATE/TIME: 1-6-17 1330

SAMPLE SHIPPED VIA: UPS
RELINQUISHED BY: Ryan

DATE/TIME: 1-6-17 1330

COPIES: 100

TEMPERATURE: 16 Min. 16 Max.

COOLERS: Intact

CLIENT: OTHER FS

COOLER ID:

LAB #: AAAA0197
Entered into LIMS:
Tracking #:

FOR LAB USE ONLY



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: 1/9/2017 1:17:11PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 01/06/17 13:30

Work Order: AAA0197

Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 18

#Containers: 68

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:

February 07, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant Kraft
Pace Project No.: 30207573

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on January 10, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft
Pace Project No.: 30207573

Pennsylvania Certification IDs

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft
Pace Project No.: 30207573

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30207573001	Dup-2-1-5-17	Water	01/05/17 00:00	01/10/17 10:15
30207573002	FB-3-1-5-17	Water	01/05/17 10:00	01/10/17 10:15
30207573003	GWC-6	Water	01/05/17 11:30	01/10/17 10:15
30207573004	GWC-15	Water	01/05/17 13:15	01/10/17 10:15
30207573005	GWC-14	Water	01/05/17 14:37	01/10/17 10:15
30207573006	GWC-19	Water	01/05/17 15:42	01/10/17 10:15
30207573007	EB-3-1-6-17	Water	01/06/17 07:45	01/10/17 10:15
30207573008	GWA-7	Water	01/06/17 07:49	01/10/17 10:15
30207573009	GWC-9	Water	01/06/17 08:34	01/10/17 10:15
30207573010	Dup-3-1-5-17	Water	01/05/17 00:00	01/10/17 10:15
30207573011	GWC-13	Water	01/05/17 10:10	01/10/17 10:15
30207573012	GWC-2	Water	01/05/17 15:35	01/10/17 10:15
30207573013	GWC-17	Water	01/05/17 12:45	01/10/17 10:15
30207573014	FB-2-1-5-17	Water	01/05/17 13:20	01/10/17 10:15
30207573015	EB-1-1-5-17	Water	01/05/17 16:25	01/10/17 10:15
30207573016	GWC-4	Water	01/06/17 08:25	01/10/17 10:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft
Pace Project No.: 30207573

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30207573001	Dup-2-1-5-17	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30207573002	FB-3-1-5-17	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30207573003	GWC-6	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30207573004	GWC-15	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30207573005	GWC-14	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30207573006	GWC-19	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30207573007	EB-3-1-6-17	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30207573008	GWA-7	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30207573009	GWC-9	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30207573010	Dup-3-1-5-17	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30207573011	GWC-13	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30207573012	GWC-2	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30207573013	GWC-17	EPA 9315	LAL	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft
Pace Project No.: 30207573

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30207573014	FB-2-1-5-17	EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
		EPA 9315	LAL	1
		EPA 9320	JLW	1
30207573015	EB-1-1-5-17	Total Radium Calculation	RMK	1
		EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30207573016	GWC-4	EPA 9315	LAL	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft
Pace Project No.: 30207573

Sample: Dup-2-1-5-17 **Lab ID: 30207573001** Collected: 01/05/17 00:00 Received: 01/10/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • Upon receipt at the laboratory, 3 mls of nitric acid were added to 2 L of Sample 008 to meet the sample preservation requirement of pH <2 for radiological analyses.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.959 ± 0.372 (0.335) C:82% T:NA	pCi/L	01/20/17 09:57	13982-63-3	
Radium-228	EPA 9320	0.835 ± 0.416 (0.710) C:61% T:89%	pCi/L	01/27/17 15:06	15262-20-1	
Total Radium	Total Radium Calculation	1.79 ± 0.788 (1.05)	pCi/L	02/01/17 10:37	7440-14-4	

Sample: FB-3-1-5-17 **Lab ID: 30207573002** Collected: 01/05/17 10:00 Received: 01/10/17 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	0.0937 ± 0.166 (0.373) C:87% T:NA	pCi/L	01/20/17 10:00	13982-63-3	
Radium-228	EPA 9320	0.0964 ± 0.341 (0.771) C:63% T:92%	pCi/L	01/27/17 15:06	15262-20-1	
Total Radium	Total Radium Calculation	0.190 ± 0.507 (1.14)	pCi/L	02/01/17 10:37	7440-14-4	

Sample: GWC-6 **Lab ID: 30207573003** Collected: 01/05/17 11:30 Received: 01/10/17 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	2.42 ± 0.630 (0.401) C:86% T:NA	pCi/L	01/20/17 09:59	13982-63-3	
Radium-228	EPA 9320	1.32 ± 0.622 (1.04) C:55% T:75%	pCi/L	01/30/17 18:25	15262-20-1	
Total Radium	Total Radium Calculation	3.74 ± 1.25 (1.44)	pCi/L	02/01/17 10:37	7440-14-4	

Sample: GWC-15 **Lab ID: 30207573004** Collected: 01/05/17 13:15 Received: 01/10/17 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	0.880 ± 0.363 (0.398) C:85% T:NA	pCi/L	01/20/17 09:59	13982-63-3	
Radium-228	EPA 9320	0.484 ± 0.417 (0.841) C:63% T:89%	pCi/L	01/25/17 11:54	15262-20-1	
Total Radium	Total Radium Calculation	1.36 ± 0.780 (1.24)	pCi/L	01/26/17 05:24	7440-14-4	

Sample: GWC-14 **Lab ID: 30207573005** Collected: 01/05/17 14:37 Received: 01/10/17 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	0.397 ± 0.233 (0.318) C:88% T:NA	pCi/L	01/20/17 10:02	13982-63-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft
Pace Project No.: 30207573

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-14		Lab ID: 30207573005	Collected: 01/05/17 14:37	Received: 01/10/17 10:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-228	EPA 9320		0.318 ± 0.348 (0.724) C:72% T:77%	pCi/L	01/30/17 18:25	15262-20-1	
Total Radium	Total Radium Calculation		0.715 ± 0.581 (1.04)	pCi/L	02/01/17 10:37	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-19		Lab ID: 30207573006	Collected: 01/05/17 15:42	Received: 01/10/17 10:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315		3.63 ± 0.835 (0.471) C:85% T:NA	pCi/L	01/20/17 10:02	13982-63-3	
Radium-228	EPA 9320		1.26 ± 0.531 (0.858) C:65% T:82%	pCi/L	02/03/17 14:55	15262-20-1	
Total Radium	Total Radium Calculation		4.89 ± 1.37 (1.33)	pCi/L	02/07/17 17:51	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EB-3-1-6-17		Lab ID: 30207573007	Collected: 01/06/17 07:45	Received: 01/10/17 10:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315		0.0608 ± 0.166 (0.403) C:84% T:NA	pCi/L	01/20/17 10:02	13982-63-3	
Radium-228	EPA 9320		-0.227 ± 0.416 (1.02) C:60% T:81%	pCi/L	02/03/17 14:55	15262-20-1	
Total Radium	Total Radium Calculation		0.0608 ± 0.582 (1.42)	pCi/L	02/07/17 17:51	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWA-7		Lab ID: 30207573008	Collected: 01/06/17 07:49	Received: 01/10/17 10:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315		5.36 ± 1.00 (0.405) C:95% T:NA	pCi/L	02/01/17 10:24	13982-63-3	
Radium-228	EPA 9320		1.45 ± 0.752 (1.34) C:65% T:88%	pCi/L	02/03/17 14:55	15262-20-1	
Total Radium	Total Radium Calculation		6.81 ± 1.75 (1.75)	pCi/L	02/07/17 17:51	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-9		Lab ID: 30207573009	Collected: 01/06/17 08:34	Received: 01/10/17 10:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315		2.06 ± 0.567 (0.376) C:88% T:NA	pCi/L	01/20/17 10:07	13982-63-3	
Radium-228	EPA 9320		2.39 ± 0.917 (1.49) C:63% T:67%	pCi/L	02/03/17 14:55	15262-20-1	
Total Radium	Total Radium Calculation		4.45 ± 1.48 (1.87)	pCi/L	02/07/17 17:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft
Pace Project No.: 30207573

Sample: Dup-3-1-5-17		Lab ID: 30207573010	Collected: 01/05/17 00:00	Received: 01/10/17 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	0.478 ± 0.260 (0.352)		pCi/L	01/20/17 10:09	13982-63-3	
		C:91% T:NA					
Radium-228	EPA 9320	0.0221 ± 0.425 (0.984)		pCi/L	02/03/17 14:55	15262-20-1	
		C:67% T:78%					
Total Radium	Total Radium Calculation	0.500 ± 0.685 (1.34)		pCi/L	02/07/17 17:51	7440-14-4	

Sample: GWC-13		Lab ID: 30207573011	Collected: 01/05/17 10:10	Received: 01/10/17 10:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.142 ± 0.158 (0.294)		pCi/L	01/20/17 11:42	13982-63-3	
		C:82% T:NA					
Radium-228	EPA 9320	0.515 ± 0.466 (0.948)		pCi/L	02/03/17 14:55	15262-20-1	
		C:62% T:79%					
Total Radium	Total Radium Calculation	0.657 ± 0.624 (1.24)		pCi/L	02/07/17 17:51	7440-14-4	

Sample: GWC-2		Lab ID: 30207573012	Collected: 01/05/17 15:35	Received: 01/10/17 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	0.126 ± 0.138 (0.248)		pCi/L	01/20/17 11:42	13982-63-3	
		C:87% T:NA					
Radium-228	EPA 9320	0.609 ± 0.421 (0.812)		pCi/L	02/03/17 14:55	15262-20-1	
		C:60% T:94%					
Total Radium	Total Radium Calculation	0.735 ± 0.559 (1.06)		pCi/L	02/07/17 17:51	7440-14-4	

Sample: GWC-17		Lab ID: 30207573013	Collected: 01/05/17 12:45	Received: 01/10/17 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	2.79 ± 0.668 (0.300)		pCi/L	01/20/17 11:42	13982-63-3	
		C:88% T:NA					
Radium-228	EPA 9320	0.758 ± 0.507 (0.973)		pCi/L	02/03/17 14:55	15262-20-1	
		C:62% T:79%					
Total Radium	Total Radium Calculation	3.55 ± 1.18 (1.27)		pCi/L	02/07/17 17:51	7440-14-4	

Sample: FB-2-1-5-17		Lab ID: 30207573014	Collected: 01/05/17 13:20	Received: 01/10/17 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	0.0270 ± 0.125 (0.327)		pCi/L	01/20/17 11:42	13982-63-3	
		C:92% T:NA					
Radium-228	EPA 9320	0.232 ± 0.377 (0.819)		pCi/L	02/03/17 14:55	15262-20-1	
		C:69% T:75%					

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft

Pace Project No.: 30207573

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	0.259 ± 0.502 (1.15)	pCi/L	02/07/17 17:51	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.0843 ± 0.132 (0.284) C:94% T:NA	pCi/L	01/20/17 11:42	13982-63-3	
Radium-228	EPA 9320	0.231 ± 0.434 (0.952) C:72% T:74%	pCi/L	02/03/17 14:56	15262-20-1	
Total Radium	Total Radium Calculation	0.315 ± 0.566 (1.24)	pCi/L	02/07/17 17:51	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	3.50 ± 1.04 (0.648) C:93% T:NA	pCi/L	01/20/17 11:42	13982-63-3	
Radium-228	EPA 9320	1.60 ± 0.766 (1.30) C:66% T:82%	pCi/L	02/03/17 14:56	15262-20-1	
Total Radium	Total Radium Calculation	5.10 ± 1.81 (1.95)	pCi/L	02/07/17 17:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft

Pace Project No.: 30207573

QC Batch: 246698

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30207573001, 30207573002, 30207573003, 30207573004, 30207573005

METHOD BLANK: 1213121

Matrix: Water

Associated Lab Samples: 30207573001, 30207573002, 30207573003, 30207573004, 30207573005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.181 ± 0.312 (0.785) C:66% T:77%	pCi/L	01/25/17 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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft

Pace Project No.: 30207573

QC Batch: 246693

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30207573001, 30207573002, 30207573003, 30207573004, 30207573005

METHOD BLANK: 1213109

Matrix: Water

Associated Lab Samples: 30207573001, 30207573002, 30207573003, 30207573004, 30207573005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.233 ± 0.182 (0.280) C:90% T:NA	pCi/L	01/20/17 10:09	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft

Pace Project No.: 30207573

QC Batch:	246699	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	30207573006, 30207573007, 30207573008, 30207573009, 30207573010, 30207573011, 30207573012, 30207573013, 30207573014, 30207573015, 30207573016		

METHOD BLANK:	1213122	Matrix:	Water
Associated Lab Samples:	30207573006, 30207573007, 30207573008, 30207573009, 30207573010, 30207573011, 30207573012, 30207573013, 30207573014, 30207573015, 30207573016		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.153 ± 0.320 (0.707) C:86% T:78%	pCi/L	02/03/17 14:54	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft

Pace Project No.: 30207573

QC Batch:	246694	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	30207573006, 30207573007, 30207573008, 30207573009, 30207573010, 30207573011, 30207573012, 30207573013, 30207573014, 30207573015, 30207573016		

METHOD BLANK:	1213110	Matrix:	Water
Associated Lab Samples:	30207573006, 30207573007, 30207573008, 30207573009, 30207573010, 30207573011, 30207573012, 30207573013, 30207573014, 30207573015, 30207573016		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0754 ± 0.132 (0.297) C:93% T:NA	pCi/L	01/20/17 10:02	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Kraft
Pace Project No.: 30207573

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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WO#: 30207573



30207573



Chain of Custody

Results Requested By: 1/31/2017

Owner Received Date:

Workorder Name: Plant Kraft

Report 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		Date/Time	Date/Time	Comments
						CON	H			
1	Dup-2-1-5-17	G	1/5/2017 0:00	AAA0197-01	GW	2				
2	FB-3-1-5-17	G	1/5/2017 10:00	AAA0197-02	W	2				
3	GWC-6	G	1/5/2017 11:30	AAA0197-03	GW	2				
4	GWC-15	G	1/5/2017 13:15	AAA0197-04	GW	4				
5	GWC-14	G	1/5/2017 14:37	AAA0197-05	GW	2				
6	GWC-19	G	1/5/2017 15:42	AAA0197-06	GW	2				
7	EB-3-1-6-17	G	1/6/2017 7:45	AAA0197-07	W	2				
8	GWA-7	G	1/6/2017 7:49	AAA0197-08	GW	2				
9	GWC-9	G	1/6/2017 8:34	AAA0197-09	GW	2				
10	Dup-3-1-5-17	G	1/5/2017 0:00	AAA0197-10	GW	2				
Transfers Released By										
1	Ashley Rose Pace									1-10-17/1015
2										
3										

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

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

30207573

Chain of Custody



Workorder: AAA0197 Workorder Name: Plant Kraft Owner Received Date: Results Requested By: 1/31/2017
 Report To: Betsy McDaniel Subcontract To: Pace - Pittsburgh
 Pace Analytical Atlanta 1638 Roseytown Road
 110 Technology Parkway Stes. 2,3,4
 Peachtree Corners, GA 30092 Greensburg, PA 15601
 Phone (770)-734-4200 Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		LAB USE ONLY	
						CON	H		
11	GWC-13	G	1/5/2017 10:10	AAA0197-11	GW	2		X	011
12	GWC-2	G	1/5/2017 15:35	AAA0197-12	GW	2		X	012
13	GWC-17	G	1/5/2017 12:45	AAA0197-13	GW	2		X	013
14	FB-2-1-5-17	G	1/5/2017 13:20	AAA0197-14	W	2		X	014
15	EB-1-1-5-17	G	1/5/2017 16:25	AAA0197-15	W	2		X	015
16	GWC-4	G	1/6/2017 8:25	AAA0197-16	GW	2		X	016
17									
18									
19									
20									

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			<i>Whitney Rose Pace</i>	1-10-17/1015	
2					
3					

Cooler Temperature on Receipt MT °C Custody Seal Y or N Received on Ice Y or N Sample Intact Y or N
 ***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

CHAIN OF CUSTODY RECORD

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

PAGE: 1 OF 1

CLIENT NAME: <i>Atlantic Coast Consulting, Inc.</i>		ANALYSIS REQUESTED		CONTAINER TYPE		PRESERVATION	
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: <i>630 Colonial Park Dr. #110 Roswell, GA 30075</i>		CONTAINER TYPE PRESERVATION		P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		1 - HCl, 56°C 2 - H ₂ SO ₄ , 56°C 3 - HNO ₃ 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na ₂ S ₂ O ₃ , 56°C 7 - 56°C not frozen	
REPORT TO: <i>L. Petty</i>	CC: <i>M. Padilla, H. McLeble</i>	CONTAINERS		MATRIX CODES:		DW - DRINKING WATER S - SOIL WW - WASTEWATER SL - SLUDGE GW - GROUNDWATER SD - SOLID SW - SURFACE WATER A - AIR ST - STORM WATER L - LIQUID W - WATER P - PRODUCT	
REQUESTED COMPLETION DATE:	PO #:	PROJECT NAME/STATE: <i>Plant Kraft Gorman Rd.</i>		REMARKS/ADDITIONAL INFORMATION			
PROJECT #: <i>Phase Z CR + State D+O</i>		PROJECT NAME/STATE: <i>Phase Z CR + State D+O</i>		REMARKS/ADDITIONAL INFORMATION			
Collection DATE	Collection TIME	MATRIX CODE*	SAMPLE IDENTIFICATION	L	A	B	LAB #
1-5-17	—	GW	DUP-2-1-5-17	1			
1-5-17	1000	W	EB-11/17 FB-3-1-5-17	2			
1-5-17	1130	GW	GWC-6	3			
1-5-17	1315	GW	GWC-15	4			4 Radura contains collected
1-5-17	1437	GW	GWC-14	5			
1-5-17	1542	GW	GWC-19	6			
1-6-17	0745	W	EB-3-1-6-17	7			
1-6-17	0749	GW	GWA-7	8			
1-6-17	0834	GW	GWC-9	9			
SAMPLED BY AND TITLE: <i>O. FIDUEA (AN)</i>		DATE/TIME: <i>1-6-17 0834</i>		RELINQUISHED BY: <i>R. Wade</i>		DATE/TIME: <i>1-6-17 1330</i>	
RECEIVED BY:		DATE/TIME:		RELINQUISHED BY:		DATE/TIME:	
RECEIVED BY LAB: <i>Charles Hardy</i>		DATE/TIME: <i>1/6/17 1330</i>		SAMPLE SHIPPED VIA:		CLIENT OTHER FS	
Signature: <i>CH</i> Min. <i>CC</i> Max.		Temperature: <i>11</i> Min. <i>11</i> Max.		UPS Intact <input checked="" type="checkbox"/> Broken <input type="checkbox"/>		COURIER <input checked="" type="checkbox"/> USPS <input type="checkbox"/> # of Coolers <i>VIA</i>	
LAB #: <i>AAA-0197</i>		Entered into LIMS:		Tracking #:		FOR LAB USE ONLY	

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



CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power
 CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
 241 Ralph McGill Blvd SE B10185
 Atlanta, GA 30309
 404-526-7334

REPORT TO: Lauren Petty
 REQUESTED COMPLETION DATE:
 CC: Marie Padilla
 PO#: Heath MacCorkle
 labench@southernco.com

PROJECT NAME/STATE: Plantkraft Grueman Road
 PROJECT #: Phase 2 CUR & State D/O

Collection DATE	Collection TIME	MATRIX CODE	C O M P	SAMPLE IDENTIFICATION	ANALYSIS REQUESTED				CONTAINER TYPE	PRESERVATION	# of CONTAINERS	RELINQUISHED BY:	DATE/TIME:
					P	P	P	P					
1-5-17	—	GW	X	Dup-3-1-5-17	1	1	1	1	P	3	4	Metals App III & IV (EPA 60201-74)	1-5-17 1330
1-5-17	1010	GW	X	GW-C-13	1	1	1	1	P	3	4	Metals (Vanadium and Zinc) 5174	1-5-17 1330
1-5-17	1535	GW	X	GW-C-2	1	1	1	1	P	3	4	Metals App III & IV (EPA 60201-74)	1-5-17 1330
1-5-17	1245	GW	X	GW-C-17	1	1	1	1	P	3	4	Metals App III & IV (EPA 60201-74)	1-5-17 1330
1-5-17	1320	W	X	FB-2-1-5-17	1	1	1	1	P	3	4	Metals App III & IV (EPA 60201-74)	1-5-17 1330
1-5-17	1625	W	X	EB-1-1-5-17	1	1	1	1	P	3	4	Metals App III & IV (EPA 60201-74)	1-5-17 1330
1-6-17	0825	GW	X	GW-C-4	1	1	1	1	P	3	4	Metals App III & IV (EPA 60201-74)	1-6-17 1330

CONTAINER TYPE: P - PLASTIC, A - AMBER GLASS, G - CLEAR GLASS, V - VOA VIAL, S - STERILE, O - OTHER
 PRESERVATION: 1 - HCl, 56°C, 2 - H₂SO₄, 56°C, 3 - HNO₃, 4 - NaOH, 56°C, 5 - NaOH/ZnAc, 56°C, 6 - Na₂O₂, 56°C, 7 - 56°C, not frozen

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

REMARKS/ADDITIONAL INFORMATION

RELINQUISHED BY: ACC
 RECEIVED BY: Charles Hanker

SAMPLED BY AND TITLE: Ryan Walker

DATE/TIME: 1-6-17/0825
 DATE/TIME: 1-6-17 1330

RECEIVED BY LAB: Charles Hanker
 DATE/TIME: 1-6-17 1330

Tempature: Min: 60, Max: 60

Checked: Yes, No, NA, Yes, No, MA

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

Custody Seal: Intact, Broken, Not Present

of Coolers: 1

Relinquished by: 1-5-17 1330

Relinquished by: 1-6-17 1330

LAB #: FOR LAB USE ONLY: HAH0117
 Entered Into LIMS: 124
 Tracking #:



CHAIN OF CUSTODY RECORD

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 G101SS Atlanta, GA 30309 404-526-7234		REPORT TO: Lorena Petty Requested Completion Date:		PROJECT NAME/STATE: Plant Kraft Gorman Road		PROJECT #:																																	
CC: Maria Padilla Hess McCreckle		PO #: laburch@sestenergy.com		PROJECT #:		PROJECT #:		PROJECT #:																																	
Collection DATE	Collection TIME	MATRIX CODE*	C O M P	G R A B	SAMPLE IDENTIFICATION	CONTAINER TYPE	ANALYSIS REQUESTED	CONTAINER TYPE	PRESERVATION																																
1-5-17	—	GW	*	X	Dup-3-1-5-17	P	Metals App III & IV (EPA 6020174)	P	1-HCl, 56°C																																
1-5-17	1010	GW	*	X	GW-13	P	Metals (Vanadium & Zinc) EPA 6020174	A	2-H ₂ SO ₄ , 56°C																																
1-5-17	1535	GW	*	X	GW-2	P	Metals (Vanadium & Zinc) EPA 6020174	B	3-HNO ₃																																
1-5-17	1245	GW	*	X	GW-17	P	Metals (Vanadium & Zinc) EPA 6020174	P	4-NaOH, 56°C																																
1-5-17	1320	W		X	FB-2-1-5-17	P	Metals (Vanadium & Zinc) EPA 6020174	V	5-NaOH/ZnAc, 56°C																																
1-5-17	1625	W		X	EB-1-1-5-17	P	Metals (Vanadium & Zinc) EPA 6020174	S	6-Na ₂ S ₂ O ₃ , 56°C																																
1-6-17	0825	GW	*	X	GW-4	P	Metals (Vanadium & Zinc) EPA 6020174	O	7-56°C not frozen																																
<table border="1"> <thead> <tr> <th>CONTAINER TYPE</th> <th>ANALYSIS REQUESTED</th> <th>CONTAINER TYPE</th> <th>PRESERVATION</th> </tr> </thead> <tbody> <tr> <td>P</td> <td>P</td> <td>P</td> <td>1-HCl, 56°C</td> </tr> <tr> <td>A</td> <td>P</td> <td>P</td> <td>2-H₂SO₄, 56°C</td> </tr> <tr> <td>B</td> <td>P</td> <td>P</td> <td>3-HNO₃</td> </tr> <tr> <td></td> <td>P</td> <td>P</td> <td>4-NaOH, 56°C</td> </tr> <tr> <td></td> <td>P</td> <td>P</td> <td>5-NaOH/ZnAc, 56°C</td> </tr> <tr> <td></td> <td>P</td> <td>P</td> <td>6-Na₂S₂O₃, 56°C</td> </tr> <tr> <td></td> <td>P</td> <td>P</td> <td>7-56°C not frozen</td> </tr> </tbody> </table>										CONTAINER TYPE	ANALYSIS REQUESTED	CONTAINER TYPE	PRESERVATION	P	P	P	1-HCl, 56°C	A	P	P	2-H ₂ SO ₄ , 56°C	B	P	P	3-HNO ₃		P	P	4-NaOH, 56°C		P	P	5-NaOH/ZnAc, 56°C		P	P	6-Na ₂ S ₂ O ₃ , 56°C		P	P	7-56°C not frozen
CONTAINER TYPE	ANALYSIS REQUESTED	CONTAINER TYPE	PRESERVATION																																						
P	P	P	1-HCl, 56°C																																						
A	P	P	2-H ₂ SO ₄ , 56°C																																						
B	P	P	3-HNO ₃																																						
	P	P	4-NaOH, 56°C																																						
	P	P	5-NaOH/ZnAc, 56°C																																						
	P	P	6-Na ₂ S ₂ O ₃ , 56°C																																						
	P	P	7-56°C not frozen																																						
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MATRIX CODES:	REMARKS/ADDITIONAL INFORMATION																																								
DW - DRINKING WATER	S - SOIL																																								
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ST - STORM WATER	L - LIQUID																																								
W - WATER	P - PRODUCT																																								
<table border="1"> <thead> <tr> <th>L A B I D N U M B E R</th> <th>ANALYSIS REQUESTED</th> <th>DATE/TIME</th> <th>DATE/TIME</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>Metals App III & IV (EPA 6020174)</td> <td>1-6-17 1330</td> <td></td> </tr> <tr> <td>11</td> <td>Metals (Vanadium & Zinc) EPA 6020174</td> <td></td> <td></td> </tr> <tr> <td>12</td> <td>Metals (Vanadium & Zinc) EPA 6020174</td> <td></td> <td></td> </tr> <tr> <td>13</td> <td>Metals (Vanadium & Zinc) EPA 6020174</td> <td></td> <td></td> </tr> <tr> <td>14</td> <td>Metals (Vanadium & Zinc) EPA 6020174</td> <td></td> <td></td> </tr> <tr> <td>15</td> <td>Metals (Vanadium & Zinc) EPA 6020174</td> <td></td> <td></td> </tr> <tr> <td>16</td> <td>Metals (Vanadium & Zinc) EPA 6020174</td> <td></td> <td></td> </tr> </tbody> </table>						L A B I D N U M B E R	ANALYSIS REQUESTED	DATE/TIME	DATE/TIME	10	Metals App III & IV (EPA 6020174)	1-6-17 1330		11	Metals (Vanadium & Zinc) EPA 6020174			12	Metals (Vanadium & Zinc) EPA 6020174			13	Metals (Vanadium & Zinc) EPA 6020174			14	Metals (Vanadium & Zinc) EPA 6020174			15	Metals (Vanadium & Zinc) EPA 6020174			16	Metals (Vanadium & Zinc) EPA 6020174			FOR LAB USE ONLY LAB #: 4478197 Entered into LIMS: 12A Tracking #:			
L A B I D N U M B E R	ANALYSIS REQUESTED	DATE/TIME	DATE/TIME																																						
10	Metals App III & IV (EPA 6020174)	1-6-17 1330																																							
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16	Metals (Vanadium & Zinc) EPA 6020174																																								
SAMPLED BY AND TITLE: <i>W.A. Walker</i> RECEIVED BY:						RELINQUISHED BY: <i>W.A. Walker</i> RELINQUISHED BY:																																			
RECEIVED BY LAB: <i>Charles Hanks</i> Date checked: <i>1/6/17</i>						SAMPLE SHIPPED VIA: <i>1330</i> UPS FED-EX USPS COURIER CLIENT OTHER FS Custody Seal: Intact Broken Not Preserved # of Coolers: <i>1</i>																																			

Sample Condition Upon Receipt Pittsburgh

30207573



Client Name: GA Power Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 6812 5101 5547

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 1-10-17

Comments:

	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X	X		3. <u>see 1/12/17</u>
Sampler Name & Signature on COC:	X	X		4.
Sample Labels match COC:	X			5.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used:	X			
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Organic Samples checked for dechlorination:			X	13.
Filtered volume received for Dissolved tests			X	14.
All containers have been checked for preservation.	X			15. <u>Added 3mL of HNO₃ to 2 ILKs in sample 008</u>
All containers needing preservation are found to be in compliance with EPA recommendation.		X		
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>AGR</u> Date/time of preservation: <u>1-10-17/1510</u>
				Lot # of added preservative: <u>DL16-1298</u>
Headspace in VOA Vials (>6mm):			X	16.
Trip Blank Present:		X		17.
Trip Blank Custody Seals Present		X		
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: <u>AGR</u> Date: <u>1-10-17</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 1/19/2017
Worklist: 33555
Matrix: DW

Method Blank Assessment	
MB Sample ID	1213109
MB concentration:	0.233
M/B Counting Uncertainty:	0.179
MB MDC:	0.280
MB Numerical Performance Indicator:	2.55
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS33555	N
Count Date:	1/20/2017
Spike I.D.:	16-026
Spike Concentration (pCi/mL):	44.671
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.508
Target Conc. (pCi/L, g, F):	8.793
Uncertainty (Calculated):	0.414
Result (pCi/L, g, F):	7.393
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.833
Numerical Performance Indicator:	-2.95
Percent Recovery:	84.09%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30207573005
Duplicate Sample I.D.:	30207573005DUP
Sample Result (pCi/L, g, F):	0.397
Sample Duplicate Result (pCi/L, g, F):	0.225
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.189
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.232
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	1.263
Duplicate RPD:	24.44%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

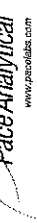
Comments:

results < 5x MDC
numerical indicator acceptable < 3

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

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 1/19/2017
Worklist: 33556
Matrix: DW

Method Blank Assessment	
MB Sample ID	1213110
MB concentration:	0.075
MB Counting Uncertainty:	0.132
MB MDC:	0.297
MB Numerical Performance Indicator:	1.12
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	N
LCS33556	LCS33556
Count Date:	1/20/2017
Spike I.D.:	16-026
Spike Concentration (pCi/mL):	44.671
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.507
Target Conc. (pCi/L, g, F):	8.803
Uncertainty (Calculated):	0.414
Result (pCi/L, g, F):	7.363
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.841
Numerical Performance Indicator:	-3.01
Percent Recovery:	83.65%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30207665001
Duplicate Sample I.D.:	30207665001DUP
Sample Result (pCi/L, g, F):	0.077
Sample Result Counting Uncertainty (pCi/L, g, F):	0.127
Sample Duplicate Result (pCi/L, g, F):	-0.026
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.142
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	1.066
Duplicate RPD:	407.02%
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.

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

Comments:

***Batch must be re-sampled due to unacceptable precision

2/27/17

results < 5x MDC
numerical indicator acceptable < 3

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

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

Quality Control Sample Performance Assessment



Test: Ra-228
Analyst: JLW
Date: 1/19/2017
Worklist: 33557
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1213121
MB concentration:	-0.181
MB Counting Uncertainty:	0.310
MB MDC:	0.785
MB Numerical Performance Indicator:	-1.14
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	N
LCSID	LCSD33557
Count Date:	1/25/2017
Spike I.D.:	16-027
Spike Concentration (pCi/mL):	25.471
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.802
Target Conc. (pCi/L, g, F):	6.352
Uncertainty (Calculated):	0.457
Result (pCi/L, g, F):	7.485
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.739
Numerical Performance Indicator:	2.55
Percent Recovery:	117.83%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30207573004
Duplicate Sample I.D.:	30207573004DUP
Sample Result (pCi/L, g, F):	0.484
Sample Result Counting Uncertainty (pCi/L, g, F):	0.408
Sample Duplicate Result (pCi/L, g, F):	1.198
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.366
Are sample and/or duplicate results below MDC?	See Below
Duplicate Numerical Performance Indicator:	-2.553
Duplicate RPD:	84.92%
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:
30207573004
30207573004DUP

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

2/2/17
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:	
Sample Matrix Spike Duplicate Result:	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

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

results < 5x MDC
numerical indicator acceptable < 3

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 1/19/2017
Worklist: 33558
Matrix: DW

Method Blank Assessment

MB Sample ID: 1213122
MB concentration: 0.153
MB Counting Uncertainty: 0.319
MB MDC: 0.707
MB Numerical Performance Indicator: 0.94
MB Status vs Numerical Indicator: N/A
MB Status vs. MDC: Pass

Laboratory Control Sample Assessment

LCS(Y or N)? N
LCSID: LCS33558

Count Date: 2/3/2017
Spike I.D.: 16-027
Spike Concentration (pCi/mL): 25.394
Volume Used (mL): 0.20
Aliquot Volume (L, g, F): 0.811
Target Conc. (pCi/L, g, F): 6.264
Uncertainty (Calculated): 0.451
Result (pCi/L, g, F): 6.386
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.700
Numerical Performance Indicator: 0.29
Percent Recovery: 101.95%
Status vs Numerical Indicator: N/A
Status vs Recovery: Pass

Duplicate Sample Assessment

Sample I.D.: 30207665001
Duplicate Sample I.D.: 30207665001DUP
Sample Result (pCi/L, g, F): 0.251
Sample Result Counting Uncertainty (pCi/L, g, F): 0.366
Sample Duplicate Result (pCi/L, g, F): -0.207
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.370
Are sample and/or duplicate results below MDC? See Below #
Duplicate Numerical Performance Indicator: 1.726
Duplicate RPD: 2104.33%
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:
Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
MS Numerical Performance Indicator:
MSD Numerical Performance Indicator:
MS Percent Recovery:
MSD Percent Recovery:
MS Status vs Numerical Indicator:
MSD Status vs Numerical Indicator:
MS Status vs Recovery:
MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

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

Comments:

results < SA MDC
numerical indicator acceptable < 3

*** Batch must be re-prepped due to unacceptable precision.
01/27/17

Product Name: Low-Flow System

Date: 2017-04-06 15:02:35

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 35.34"
Longitude -81° -10' -59.38"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 18 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 21.1 ft
Screen Length 5 ft
Depth to Water 5.98 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.1703416 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	14:40:57	600.02	21.41	6.26	3253.99	988.00	6.60	0.04	15.16
Last 5	14:45:57	900.02	21.33	6.26	3261.82	1000.00	6.60	0.02	6.47
Last 5	14:50:57	1200.02	21.34	6.26	3269.14	1000.00	6.60	0.01	0.46
Last 5	14:55:57	1500.02	21.22	6.26	3273.96	1000.00	6.60	0.04	-3.40
Last 5	15:00:57	1800.02	21.22	6.26	3276.16	1000.00	6.60	0.02	-6.29
Variance 0			0.01	0.00	7.32			-0.01	-6.01
Variance 1			-0.12	-0.00	4.82			0.02	-3.86
Variance 2			0.00	-0.00	2.20			-0.02	-2.89

Notes

Sunny, sample collected at 1500, field filter sample taken at 1510

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-03 16:53:20

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 38.15"
Longitude -81° -11' -0.51"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 23 ft

Pump placement from TOC 18.4 ft

Well Information:

Well ID GWA-8
Well diameter 2 in
Well Total Depth 20.9 ft
Screen Length 5 ft
Depth to Water 8.07 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12.3 in
Total Volume Pumped 9.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	16:30:49	2699.97	21.05	4.30	352.63	8.20	9.40	0.11	184.84
Last 5	16:35:49	2999.97	20.99	4.31	351.04	8.40	9.40	0.11	182.39
Last 5	16:40:49	3299.96	20.93	4.30	355.20	7.68	9.40	0.11	181.37
Last 5	16:45:49	3599.97	20.93	4.31	354.83	6.10	9.40	0.11	179.22
Last 5	16:50:49	3899.97	20.94	4.29	358.85	4.65	9.40	0.11	177.55
Variance 0			-0.06	-0.01	4.16			0.00	-1.02
Variance 1			-0.00	0.00	-0.37			-0.00	-2.14
Variance 2			0.02	-0.02	4.02			-0.00	-1.67

Notes

73F Light Rain. Sampled @ 1650 on 4-3-17

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-04 15:21:47

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 22.51"
Longitude -81° -10' -56.13"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.1 ft
Screen Length 5 ft
Depth to Water 18.64 ft

Pumping Information:

Final Pumping Rate 300 mL/min
Total System Volume 0.5965856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 0
Last 5	15:00:26	600.00	22.18	5.45	441.58	3.72	18.80	0.21	96.16
Last 5	15:05:26	900.00	22.00	5.43	441.22	3.14	18.80	0.16	98.71
Last 5	15:10:26	1199.99	22.18	5.43	444.01	2.87	18.80	0.13	101.03
Last 5	15:15:26	1499.99	22.22	5.43	442.46	2.29	18.80	0.11	103.27
Last 5	15:20:26	1799.99	22.18	5.43	441.37	1.99	18.80	0.11	104.30
Variance 0			0.18	0.00	2.79			-0.03	2.32
Variance 1			0.05	-0.00	-1.55			-0.01	2.24
Variance 2			-0.04	-0.00	-1.09			-0.01	1.03

Notes

Sunny, sample time-1520

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-04 17:26:17

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 21.02"
Longitude -81° -11' -1.97"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 34 ft

Pump placement from TOC 28.4 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 31.4 ft
Screen Length 5 ft
Depth to Water 15.67 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.6367564 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 9.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 10
Last 5	17:05:09	2400.01	21.15	4.56	108.79	6.97	15.80	0.27	148.30
Last 5	17:10:09	2700.01	21.14	4.56	110.77	6.25	15.80	0.24	146.51
Last 5	17:15:09	3000.01	21.05	4.57	109.45	6.10	15.80	0.22	144.36
Last 5	17:20:08	3299.97	21.03	4.58	108.18	5.08	15.80	0.20	142.24
Last 5	17:25:08	3599.96	21.11	4.58	107.54	4.84	15.80	0.19	140.08
Variance 0			-0.09	0.01	-1.32			-0.02	-2.15
Variance 1			-0.02	0.01	-1.27			-0.02	-2.12
Variance 2			0.08	0.01	-0.65			-0.02	-2.15

Notes

64F Sunny. Sampled at 1730.

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-04 13:52:45

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 20.36"
Longitude -81° -10' -55.24"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 21 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 22.08 ft
Screen Length 5 ft
Depth to Water 20.15 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.1837319 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.6 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	13:30:48	1799.99	23.44	6.15	445.53	1.18	20.20	0.61	42.30
Last 5	13:35:48	2099.99	23.27	6.18	457.46	2.93	20.20	0.64	37.52
Last 5	13:40:48	2399.99	23.61	6.21	478.03	0.75	20.20	0.67	30.43
Last 5	13:45:48	2699.99	23.44	6.23	490.54	0.54	20.20	0.68	25.13
Last 5	13:50:48	2999.97	23.41	6.26	500.02	0.99	20.20	0.65	21.24
Variance 0			0.34	0.03	20.57			0.02	-7.09
Variance 1			-0.17	0.03	12.50			0.02	-5.30
Variance 2			-0.03	0.02	9.48			-0.03	-3.90

Notes

Sunny, sample time -GWC-3

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-04 17:11:24

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 26.21"
Longitude -81° -10' -56.81"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 24 ft

Pump placement from TOC 20 ft

Well Information:

Well ID GWC-4
Well diameter 2 in
Well Total Depth 26.4 ft
Screen Length 5 ft
Depth to Water 12.05 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.5921222 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 41.4 in
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 0
Last 5	16:50:06	2400.00	22.67	6.12	1298.02	411.00	15.40	0.33	-8.91
Last 5	16:55:06	2699.97	22.58	6.11	1311.53	417.00	15.50	0.29	-9.29
Last 5	17:00:06	2999.97	22.72	6.10	1330.11	395.00	15.50	0.25	-9.61
Last 5	17:05:06	3299.97	22.82	6.09	1343.44	424.00	15.50	0.27	-10.16
Last 5	17:10:06	3599.97	22.83	6.08	1353.49	423.00	15.50	0.30	-10.32
Variance 0			0.14	-0.01	18.58			-0.03	-0.33
Variance 1			0.11	-0.01	13.33			0.01	-0.55
Variance 2			0.00	-0.01	10.05			0.04	-0.16

Notes

Sunny , sample collected -1710, filter sample collected

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-06 11:51:35

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 29.47"
Longitude -81° -10' -57.71"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 23 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 5 ft
Depth to Water 10.7 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	11:30:30	9611.86	20.14	5.20	440.33	9.30	10.60	0.04	44.17
Last 5	11:35:30	9911.87	20.21	5.22	448.63	9.56	10.60	0.04	44.43
Last 5	11:40:30	10211.86	20.16	5.21	448.36	9.81	10.60	0.04	44.24
Last 5	11:45:32	10513.86	20.21	5.21	447.01	9.36	10.60	0.04	43.82
Last 5	11:50:34	10815.86	20.22	5.22	450.11	9.12	10.60	0.04	43.85
Variance 0			-0.05	-0.00	-0.27			-0.00	-0.18
Variance 1			0.05	-0.00	-1.36			-0.00	-0.42
Variance 2			0.00	0.01	3.10			0.00	0.03

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-06 10:26:59

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 32.28"
Longitude -81° -10' -58.75"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 20.3 ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 22.8 ft
Screen Length 5 ft
Depth to Water 7.59 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 24 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	10:05:07	5105.96	19.06	5.18	674.37	8.58	7.10	0.08	108.60
Last 5	10:10:08	5406.89	19.15	5.17	684.64	7.10	7.10	0.08	107.95
Last 5	10:15:08	5706.88	19.15	5.17	677.54	6.90	7.10	0.07	107.59
Last 5	10:20:08	6006.89	19.15	5.18	676.94	5.12	7.10	0.07	107.15
Last 5	10:25:08	6306.87	19.19	5.17	678.04	4.93	7.10	0.07	106.61
Variance 0			-0.00	-0.00	-7.09			-0.00	-0.36
Variance 1			-0.00	0.01	-0.60			-0.01	-0.43
Variance 2			0.05	-0.00	1.09			0.00	-0.54

Notes

Sunny 62F high winds. Sampled at 1025

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-06 13:44:18

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 37.13"
Longitude -81° -11' -6.17"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 23 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 25.7 ft
Screen Length 5 ft
Depth to Water 8.05 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12 in
Total Volume Pumped 0.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	13:35:03	300.03	23.97	4.49	231.09	10.20	9.00	0.37	140.35
Last 5	13:40:03	600.02	23.81	4.50	230.69	12.20	9.80	0.22	149.33
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.16	0.01	-0.40			-0.15	8.99
Variance 2			0.00	0.00	0.00			0.00	0.00

Notes

Sunny, sample time -1340, purged dry 4-5-17, collected 4-6-17

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-05 18:08:27

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 36.74"
Longitude -81° -11' -6.34"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 22 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 25.7 ft
Screen Length 5 ft
Depth to Water 10.5 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1881953 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 180 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	17:40:48	2401.98	21.02	4.11	234.12	17.10	20.00	0.24	203.09
Last 5	17:45:48	2701.98	21.06	4.12	233.08	12.30	21.00	0.23	215.60
Last 5	17:50:48	3001.97	21.02	4.12	233.33	13.60	22.00	0.23	234.75
Last 5	17:55:48	3301.97	21.01	4.13	232.89	11.20	22.80	0.23	237.04
Last 5	18:00:49	3602.96	21.03	4.17	231.98	11.40	23.60	0.24	216.00
Variance 0			-0.04	0.00	0.25			-0.00	19.14
Variance 1			-0.00	0.01	-0.44			0.00	2.30
Variance 2			0.02	0.03	-0.91			0.01	-21.04

Notes

Well purged dry no sample taken, allowed overnight recharge

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-06 12:46:48

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 30.18"
Longitude -81° -11' -4.46"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 20 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 22.5 ft
Screen Length 5 ft
Depth to Water 11.52 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	12:25:35	5108.95	22.84	4.97	279.40	8.32	15.50	0.35	93.81
Last 5	12:30:35	5408.95	22.82	4.98	286.08	7.58	15.50	0.34	94.59
Last 5	12:35:35	5708.92	22.90	4.97	289.24	7.00	15.50	0.32	95.57
Last 5	12:40:35	6008.91	22.74	4.97	294.01	6.09	15.50	0.30	96.63
Last 5	12:45:36	6309.91	22.89	4.97	295.41	4.96	15.50	0.30	96.78
Variance 0			0.08	-0.00	3.16			-0.03	0.99
Variance 1			-0.16	-0.00	4.77			-0.01	1.06
Variance 2			0.15	0.00	1.41			-0.01	0.15

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-05 16:32:23

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 27.54"
Longitude -81° -11' -3.87"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 24.2 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 5 ft
Depth to Water 11.75 ft

Pumping Information:

Final Pumping Rate 174 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	16:10:05	3600.96	22.06	3.99	1806.48	10.90	12.20	0.09	251.44
Last 5	16:15:05	3900.96	21.95	4.00	1792.94	9.31	12.20	0.09	250.74
Last 5	16:20:05	4200.96	21.92	4.00	1791.36	9.24	12.20	0.10	249.35
Last 5	16:25:05	4500.96	21.87	4.00	1804.64	5.89	12.20	0.09	247.37
Last 5	16:30:05	4800.96	21.80	4.00	1808.28	4.24	12.20	0.08	244.97
Variance 0			-0.04	-0.00	-1.58			0.01	-1.39
Variance 1			-0.05	0.00	13.28			-0.01	-1.99
Variance 2			-0.06	0.00	3.64			-0.00	-2.39

Notes

Cloudy 86F. Collected at 1630

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-05 12:35:56

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 24.11"
Longitude -81° -11' -3.06"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27.1 ft

Pump placement from TOC 22.1 ft

Well Information:

Well ID GWC-13
Well diameter 2 in
Well Total Depth 24.1 ft
Screen Length 5 ft
Depth to Water 13.02 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.6059588 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6 in
Total Volume Pumped 36 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 10	+/- 10
Last 5	12:10:10	9306.89	22.55	4.79	82.40	63.00	13.80	1.50	154.32
Last 5	12:15:10	9606.89	22.26	4.81	82.83	64.00	13.80	2.31	154.39
Last 5	12:20:10	9906.89	22.27	4.81	82.89	60.00	13.80	1.64	152.68
Last 5	12:25:10	10206.89	21.93	4.79	84.37	72.00	13.80	1.39	152.95
Last 5	12:30:11	10507.96	21.91	4.81	66.03	94.00	13.80	1.98	150.89
Variance 0			0.00	0.00	0.06			-0.67	-1.72
Variance 1			-0.34	-0.02	1.48			-0.25	0.27
Variance 2			-0.02	0.03	-18.34			0.60	-2.05

Notes

No sample collected

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-04 12:02:12

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 18.01"
Longitude -81° -11' -1.18"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-14
Well diameter 2 in
Well Total Depth 27 ft
Screen Length 5 ft
Depth to Water 18.88 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.6 in
Total Volume Pumped 5.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	11:40:31	600.02	23.30	4.67	1181.55	8.02	19.10	0.18	146.38
Last 5	11:45:31	900.01	23.23	4.67	1139.61	7.52	19.10	0.16	156.90
Last 5	11:50:31	1200.01	23.24	4.67	1168.60	5.14	19.10	0.15	159.38
Last 5	11:55:31	1499.99	23.25	4.67	1180.74	4.65	19.10	0.13	159.13
Last 5	12:00:31	1799.98	23.34	4.68	1186.42	4.09	19.10	0.12	158.82
Variance 0			0.01	-0.00	28.99			-0.01	2.47
Variance 1			0.01	0.00	12.14			-0.02	-0.25
Variance 2			0.09	0.00	5.68			-0.01	-0.30

Notes

Sunny, sample time -1200

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-03 17:51:44

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 16.27"
Longitude -81° -10' -58.59"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type dedicated QED bladder Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 21 ft

Pump placement from TOC 21 ft

Well Information:

Well ID GWC-15
Well diameter 2 in
Well Total Depth 26.80 ft
Screen Length 5 ft
Depth to Water 18.90 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1837319 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.2 in
Total Volume Pumped 3.78 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	17:28:32	5700.93	21.07	6.25	842.77	7.62	19.00	0.16	54.41
Last 5	17:33:34	6002.93	21.03	6.25	840.16	7.39	19.00	0.16	54.00
Last 5	17:38:34	6302.93	21.11	6.25	837.40	7.30	19.00	0.17	53.88
Last 5	17:43:34	6602.93	20.83	6.25	834.85	6.75	19.00	0.16	54.20
Last 5	17:48:34	6902.93	20.21	6.25	831.26	4.89	19.00	0.16	54.08
Variance 0			0.08	0.00	-2.76			0.00	-0.13
Variance 1			-0.28	0.00	-2.55			-0.01	0.32
Variance 2			-0.62	-0.00	-3.59			-0.00	-0.12

Notes

Rain, sample time-1748

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-04 13:31:41

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 17.07"
Longitude -81° -10' -55.17"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 25.5 ft

Well Information:

Well ID GWC-16
Well diameter 2 in
Well Total Depth 28.2 ft
Screen Length 5 ft
Depth to Water 20.23 ft

Pumping Information:

Final Pumping Rate 225 mL/min
Total System Volume 0.6189027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12 in
Total Volume Pumped 56.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 0
Last 5	13:05:28	13810.77	23.36	5.49	1050.64	43.00	21.20	0.68	143.13
Last 5	13:10:28	14110.82	23.32	5.50	1027.73	27.00	21.20	0.70	142.48
Last 5	13:15:28	14410.78	23.36	5.50	1048.86	21.00	21.20	0.66	142.58
Last 5	13:20:28	14710.77	23.38	5.49	1045.26	32.00	21.20	0.65	142.38
Last 5	13:25:28	15010.77	23.46	5.50	1069.87	48.00	21.20	0.62	142.83
Variance 0			0.04	-0.01	21.13			-0.04	0.10
Variance 1			0.02	-0.00	-3.60			-0.01	-0.20
Variance 2			0.08	0.00	24.61			-0.03	0.44

Notes

No sample collected

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-05 13:09:14

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 40.72"
Longitude -81° -11' -5.41"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 20 ft

Pump placement from TOC 18 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 23.2 ft
Screen Length 5 ft
Depth to Water 5.84 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.5742685 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 20 in
Total Volume Pumped 31.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 0
Last 5	12:46:16	11406.88	21.65	4.34	3064.33	10.60	7.50	0.05	91.89
Last 5	12:51:16	11706.87	21.78	4.33	3077.10	11.50	7.50	0.05	91.88
Last 5	12:56:16	12006.87	21.70	4.33	3073.96	8.81	7.50	0.05	91.94
Last 5	13:01:16	12306.84	21.84	4.33	3061.37	9.30	7.50	0.05	92.01
Last 5	13:06:16	12606.84	21.68	4.33	3060.31	8.59	7.50	0.06	91.86
Variance 0			-0.08	-0.00	-3.14			0.00	0.06
Variance 1			0.14	0.00	-12.59			-0.00	0.07
Variance 2			-0.16	-0.00	-1.06			0.01	-0.15

Notes

Sunny, sample time-1306, purged 3.5 hours- turbidity under 10

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-04 09:56:45

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 19.53"
Longitude -81° -10' -55.19"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 22 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 24.95 ft
Screen Length 5 ft
Depth to Water 20.77 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.1881953 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.75 in
Total Volume Pumped 3.125 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	09:35:19	300.10	21.13	6.04	1013.63	3.08	20.90	0.33	37.76
Last 5	09:40:19	600.01	21.10	6.03	996.55	1.44	20.90	0.26	34.62
Last 5	09:45:19	900.00	21.00	6.02	996.67	1.45	21.00	0.22	33.46
Last 5	09:50:19	1200.00	21.10	6.02	996.22	0.94	21.00	0.19	32.41
Last 5	09:55:19	1500.01	21.11	6.03	989.72	1.28	21.00	0.17	31.29
Variance 0			-0.09	-0.01	0.12			-0.04	-1.16
Variance 1			0.09	0.00	-0.45			-0.02	-1.06
Variance 2			0.01	0.00	-6.50			-0.03	-1.11

Notes

Clear, sample time-0955

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-04 15:43:52

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 17.27"
Longitude -81° -10' -55.03"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 21.3 ft

Well Information:

Well ID GEC-21
Well diameter 2 in
Well Total Depth 23.8 ft
Screen Length 5 ft
Depth to Water 20.68 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 16.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	15:15:11	5399.91	24.56	5.84	261.89	5.28	20.30	3.05	146.78
Last 5	15:20:11	5699.91	24.50	5.87	272.41	4.37	20.30	2.96	147.26
Last 5	15:30:11	6299.87	24.06	5.92	293.51	3.13	20.30	2.78	148.53
Last 5	15:35:11	6599.87	24.59	5.92	296.07	2.69	20.30	2.63	147.80
Last 5	15:40:12	6900.87	24.60	5.94	301.61	1.85	20.30	2.73	147.95
Variance 0			-0.43	0.05	21.10			-0.17	1.27
Variance 1			0.53	0.01	2.56			-0.15	-0.72
Variance 2			0.01	0.01	5.55			0.10	0.15

Notes

Sunny 67F. Collected at 1540 on 4-4-17

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-06 12:52:10

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 33.87"
Longitude -81° -11' -5.55"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 15 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-22
Well diameter 2 in
Well Total Depth 18.6 ft
Screen Length 5 ft
Depth to Water 7.45 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.1569514 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	12:30:08	600.01	20.39	4.78	509.00	8.20	7.30	0.08	87.41
Last 5	12:35:08	900.01	20.24	4.79	515.63	4.33	7.30	0.06	93.50
Last 5	12:40:08	1200.01	20.45	4.79	522.41	2.44	7.30	0.05	98.17
Last 5	12:45:08	1500.06	20.35	4.78	525.68	2.08	7.30	0.05	101.82
Last 5	12:50:08	1800.02	20.59	4.79	526.61	2.26	7.30	0.04	105.14
Variance 0			0.21	0.00	6.78			-0.01	4.67
Variance 1			-0.10	-0.00	3.28			-0.00	3.65
Variance 2			0.24	0.01	0.92			-0.00	3.32

Notes

Sunny, sample time-1250

Grab Samples



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: AAD0166

April 12, 2017

Project: CCR Event

Project #: Plant Kraft Grumman Road

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

Approved:

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

Project Manager

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All test results relate only to the samples analyzed.



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWA-8	AAD0166-01	Ground Water	04/03/17 16:50	04/05/17 13:30
GWC-15	AAD0166-02	Ground Water	04/03/17 17:48	04/05/17 13:30
GWC-20	AAD0166-03	Ground Water	04/04/17 09:55	04/05/17 13:30
GWC-14	AAD0166-04	Ground Water	04/04/17 12:00	04/05/17 13:30
GWC-3	AAD0166-05	Ground Water	04/04/17 13:50	04/05/17 13:30
Dup-1-4-4-17	AAD0166-06	Ground Water	04/04/17 00:00	04/05/17 13:30
FB-1-4-4-17	AAD0166-07	Water	04/04/17 11:00	04/05/17 13:30
GWC-21	AAD0166-08	Ground Water	04/04/17 15:40	04/05/17 13:30
GWC-1	AAD0166-09	Ground Water	04/04/17 15:20	04/05/17 13:30
GWC-2	AAD0166-10	Ground Water	04/04/17 17:30	04/05/17 13:30
GWC-4	AAD0166-11	Ground Water	04/04/17 17:10	04/05/17 13:30



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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Case Narrative

The Radium analysis by methods EPA 9315/9320 was performed by Pace-Pittsburgh, 1638 Roseytown Road - Suites 2, 3, 4, Greensburg PA 15601. The Pace-Pittsburgh lab contact is Jacquelyn Collins at 724-850-5612.



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAD0166

Project: CCR Event

Client ID: GWA-8

Lab Number ID: AAD0166-01

Date/Time Sampled: 4/3/2017 4:50:00PM

Date/Time Received: 4/5/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	288	25	10	mg/L	SM 2540 C		1	04/06/17 17:00	04/06/17 17:00	7040146	JPT
Inorganic Anions											
Chloride	14	0.25	0.01	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 01:25	7040239	RLC
Fluoride	0.12	0.30	0.004	mg/L	EPA 300.0	J	1	04/08/17 14:02	04/09/17 01:25	7040239	RLC
Sulfate	140	10	0.92	mg/L	EPA 300.0		10	04/08/17 14:02	04/09/17 16:46	7040239	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:35	7040136	CSW
Arsenic	0.0006	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 22:35	7040136	CSW
Barium	0.0612	0.0100	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:35	7040136	CSW
Beryllium	0.0002	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 22:35	7040136	CSW
Boron	0.105	0.0400	0.0060	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:35	7040136	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:35	7040136	CSW
Calcium	24.6	25.0	0.522	mg/L	EPA 6020B	J	50	04/06/17 10:40	04/07/17 22:40	7040136	CSW
Chromium	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 22:35	7040136	CSW
Cobalt	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 22:35	7040136	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 22:35	7040136	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:35	7040136	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:35	7040136	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:35	7040136	CSW
Vanadium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:35	7040136	CSW
Zinc	0.0041	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 22:35	7040136	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:35	7040136	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 11:45	04/10/17 18:10	7040220	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

April 12, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0166

Project: CCR Event

Client ID: GWC-15

Lab Number ID: AAD0166-02

Date/Time Sampled: 4/3/2017 5:48:00PM

Date/Time Received: 4/5/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	632	25	10	mg/L	SM 2540 C		1	04/06/17 17:00	04/06/17 17:00	7040146	JPT
Inorganic Anions											
Chloride	7.3	0.25	0.01	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 01:46	7040239	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 01:46	7040239	RLC
Sulfate	150	10	0.92	mg/L	EPA 300.0		10	04/08/17 14:02	04/09/17 17:07	7040239	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:46	7040136	CSW
Arsenic	0.0713	0.0050	0.0004	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:46	7040136	CSW
Barium	0.0439	0.0100	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:46	7040136	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:46	7040136	CSW
Boron	1.21	0.0400	0.0060	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:46	7040136	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:46	7040136	CSW
Calcium	131	25.0	0.522	mg/L	EPA 6020B		50	04/06/17 10:40	04/07/17 22:52	7040136	CSW
Chromium	0.0015	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 22:46	7040136	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:46	7040136	CSW
Lead	0.0003	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 22:46	7040136	CSW
Molybdenum	0.0994	0.0100	0.0006	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:46	7040136	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:46	7040136	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:46	7040136	CSW
Vanadium	0.0020	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 22:46	7040136	CSW
Zinc	ND	0.0100	0.0013	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:46	7040136	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 22:46	7040136	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 11:45	04/10/17 18:13	7040220	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

April 12, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0166

Project: CCR Event

Client ID: GWC-20

Lab Number ID: AAD0166-03

Date/Time Sampled: 4/4/2017 9:55:00AM

Date/Time Received: 4/5/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	660	25	10	mg/L	SM 2540 C		1	04/07/17 15:25	04/07/17 15:25	7040209	JPT
Inorganic Anions											
Chloride	23	0.25	0.01	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 02:06	7040239	RLC
Fluoride	0.02	0.30	0.004	mg/L	EPA 300.0	J	1	04/08/17 14:02	04/09/17 02:06	7040239	RLC
Sulfate	300	20	1.8	mg/L	EPA 300.0		20	04/08/17 14:02	04/09/17 17:27	7040239	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:09	7040136	CSW
Arsenic	0.317	0.0050	0.0004	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:09	7040136	CSW
Barium	0.136	0.0100	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:09	7040136	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:09	7040136	CSW
Boron	2.77	0.0400	0.0060	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:09	7040136	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:09	7040136	CSW
Calcium	108	25.0	0.522	mg/L	EPA 6020B		50	04/06/17 10:40	04/07/17 23:15	7040136	CSW
Chromium	0.0011	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:09	7040136	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:09	7040136	CSW
Lead	0.00007	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:09	7040136	CSW
Molybdenum	0.147	0.0100	0.0006	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:09	7040136	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:09	7040136	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:09	7040136	CSW
Vanadium	0.0024	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:09	7040136	CSW
Zinc	ND	0.0100	0.0013	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:09	7040136	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:09	7040136	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 11:45	04/10/17 18:15	7040220	MTC



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 Atlanta GA, 30339

April 12, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0166

Project: CCR Event

Client ID: GWC-14

Lab Number ID: AAD0166-04

Date/Time Sampled: 4/4/2017 12:00:00PM

Date/Time Received: 4/5/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	916	25	10	mg/L	SM 2540 C		1	04/07/17 15:25	04/07/17 15:25	7040209	JPT
Inorganic Anions											
Chloride	47	5.0	0.26	mg/L	EPA 300.0		20	04/08/17 14:02	04/09/17 17:48	7040239	RLC
Fluoride	0.45	0.30	0.004	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 02:27	7040239	RLC
Sulfate	600	20	1.8	mg/L	EPA 300.0		20	04/08/17 14:02	04/09/17 17:48	7040239	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:20	7040136	CSW
Arsenic	0.0030	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:20	7040136	CSW
Barium	0.0342	0.0100	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:20	7040136	CSW
Beryllium	0.00009	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:20	7040136	CSW
Boron	0.0723	0.0400	0.0060	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:20	7040136	CSW
Cadmium	0.0002	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:20	7040136	CSW
Calcium	153	25.0	0.522	mg/L	EPA 6020B		50	04/06/17 10:40	04/07/17 23:26	7040136	CSW
Chromium	0.0010	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:20	7040136	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:20	7040136	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:20	7040136	CSW
Molybdenum	0.0022	0.0100	0.0006	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:20	7040136	CSW
Selenium	0.0064	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:20	7040136	CSW
Thallium	0.00007	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:20	7040136	CSW
Vanadium	0.0235	0.0100	0.0014	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:20	7040136	CSW
Zinc	ND	0.0100	0.0013	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:20	7040136	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:20	7040136	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 11:45	04/10/17 18:17	7040220	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

April 12, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0166

Project: CCR Event

Client ID: GWC-3

Lab Number ID: AAD0166-05

Date/Time Sampled: 4/4/2017 1:50:00PM

Date/Time Received: 4/5/2017 1:30:00PM

Matrix: Ground Water

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	04/07/17 15:25	04/07/17 15:25	7040209	JPT
Inorganic Anions											
Chloride	2.6	0.25	0.01	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 02:48	7040239	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 02:48	7040239	RLC
Sulfate	21	1.0	0.09	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 02:48	7040239	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:32	7040136	CSW
Arsenic	0.341	0.0050	0.0004	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:32	7040136	CSW
Barium	0.0603	0.0100	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:32	7040136	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:32	7040136	CSW
Boron	0.721	0.0400	0.0060	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:32	7040136	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:32	7040136	CSW
Calcium	60.9	25.0	0.522	mg/L	EPA 6020B		50	04/06/17 10:40	04/07/17 23:38	7040136	CSW
Chromium	0.0025	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:32	7040136	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:32	7040136	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:32	7040136	CSW
Molybdenum	0.110	0.0100	0.0006	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:32	7040136	CSW
Selenium	0.0014	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:32	7040136	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:32	7040136	CSW
Vanadium	0.0027	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:32	7040136	CSW
Zinc	0.0051	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:32	7040136	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:32	7040136	CSW
Mercury	0.00009	0.00050	0.000041	mg/L	EPA 7470A	J	1	04/10/17 11:45	04/10/17 18:25	7040220	MTC



PACE ANALYTICAL SERVICES, LLC.

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

April 12, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0166
Client ID: Dup-1-4-4-17
Date/Time Sampled: 4/4/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAD0166-06
Date/Time Received: 4/5/2017 1:30:00PM

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	04/07/17 15:25	04/07/17 15:25	7040209	JPT
Inorganic Anions											
Chloride	23	0.25	0.01	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 03:08	7040239	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 03:08	7040239	RLC
Sulfate	300	20	1.8	mg/L	EPA 300.0		20	04/08/17 14:02	04/09/17 18:09	7040239	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:43	7040136	CSW
Arsenic	0.313	0.0050	0.0004	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:43	7040136	CSW
Barium	0.140	0.0100	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:43	7040136	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:43	7040136	CSW
Boron	2.94	0.0400	0.0060	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:43	7040136	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:43	7040136	CSW
Calcium	114	25.0	0.522	mg/L	EPA 6020B		50	04/06/17 10:40	04/07/17 23:49	7040136	CSW
Chromium	0.0008	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:43	7040136	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:43	7040136	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:43	7040136	CSW
Molybdenum	0.147	0.0100	0.0006	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:43	7040136	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:43	7040136	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:43	7040136	CSW
Vanadium	0.0025	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:43	7040136	CSW
Zinc	ND	0.0100	0.0013	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:43	7040136	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:43	7040136	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 11:45	04/10/17 18:27	7040220	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 12, 2017

Report No.: AAD0166

Project: CCR Event

Client ID: FB-1-4-4-17

Lab Number ID: AAD0166-07

Date/Time Sampled: 4/4/2017 11:00:00AM

Date/Time Received: 4/5/2017 1:30:00PM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	04/07/17 15:25	04/07/17 15:25	7040209	JPT
Inorganic Anions											
Chloride	0.07	0.25	0.01	mg/L	EPA 300.0	J	1	04/08/17 14:02	04/09/17 03:29	7040239	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 03:29	7040239	RLC
Sulfate	0.24	1.0	0.09	mg/L	EPA 300.0	J	1	04/08/17 14:02	04/09/17 03:29	7040239	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:55	7040136	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:55	7040136	CSW
Barium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:55	7040136	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:55	7040136	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:55	7040136	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:55	7040136	CSW
Calcium	0.0706	0.500	0.0104	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:55	7040136	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:55	7040136	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:55	7040136	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:55	7040136	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:55	7040136	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:55	7040136	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:55	7040136	CSW
Vanadium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:55	7040136	CSW
Zinc	0.0020	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/07/17 23:55	7040136	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/06/17 10:40	04/07/17 23:55	7040136	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 11:45	04/10/17 18:29	7040220	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

April 12, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0166

Project: CCR Event

Client ID: GWC-21

Lab Number ID: AAD0166-08

Date/Time Sampled: 4/4/2017 3:40:00PM

Date/Time Received: 4/5/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	187	25	10	mg/L	SM 2540 C		1	04/07/17 15:25	04/07/17 15:25	7040209	JPT
Inorganic Anions											
Chloride	8.0	0.25	0.01	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 03:50	7040239	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 03:50	7040239	RLC
Sulfate	46	1.0	0.09	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 03:50	7040239	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:12	7040136	CSW
Arsenic	0.0031	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:12	7040136	CSW
Barium	0.0761	0.0100	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:12	7040136	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:12	7040136	CSW
Boron	0.509	0.0400	0.0060	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:12	7040136	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:12	7040136	CSW
Calcium	32.3	25.0	0.522	mg/L	EPA 6020B		50	04/06/17 10:40	04/08/17 00:18	7040136	CSW
Chromium	0.0008	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:12	7040136	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:12	7040136	CSW
Lead	0.00009	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:12	7040136	CSW
Molybdenum	0.0476	0.0100	0.0006	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:12	7040136	CSW
Selenium	0.0236	0.0100	0.0014	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:12	7040136	CSW
Thallium	0.00005	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:12	7040136	CSW
Vanadium	0.0030	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:12	7040136	CSW
Zinc	0.0015	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:12	7040136	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:12	7040136	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 11:45	04/10/17 18:32	7040220	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

April 12, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0166

Project: CCR Event

Client ID: GWC-1

Lab Number ID: AAD0166-09

Date/Time Sampled: 4/4/2017 3:20:00PM

Date/Time Received: 4/5/2017 1:30:00PM

Matrix: Ground Water

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	04/07/17 15:25	04/07/17 15:25	7040209	JPT
Inorganic Anions											
Chloride	6.5	0.25	0.01	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 05:12	7040239	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 05:12	7040239	RLC
Sulfate	110	10	0.92	mg/L	EPA 300.0		10	04/08/17 14:02	04/09/17 18:29	7040239	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:23	7040136	CSW
Arsenic	0.0015	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:23	7040136	CSW
Barium	0.0549	0.0100	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:23	7040136	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:23	7040136	CSW
Boron	1.19	0.0400	0.0060	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:23	7040136	CSW
Cadmium	0.00007	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:23	7040136	CSW
Calcium	34.6	25.0	0.522	mg/L	EPA 6020B		50	04/06/17 10:40	04/08/17 00:29	7040136	CSW
Chromium	0.0020	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:23	7040136	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:23	7040136	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:23	7040136	CSW
Molybdenum	0.172	0.0100	0.0006	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:23	7040136	CSW
Selenium	0.0052	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:23	7040136	CSW
Thallium	0.00005	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:23	7040136	CSW
Vanadium	0.0061	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:23	7040136	CSW
Zinc	ND	0.0100	0.0013	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:23	7040136	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:23	7040136	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 11:45	04/10/17 18:34	7040220	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

April 12, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0166

Project: CCR Event

Client ID: GWC-2

Lab Number ID: AAD0166-10

Date/Time Sampled: 4/4/2017 5:30:00PM

Date/Time Received: 4/5/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	54	25	10	mg/L	SM 2540 C		1	04/07/17 15:25	04/07/17 15:25	7040209	JPT
Inorganic Anions											
Chloride	8.7	0.25	0.01	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 06:14	7040239	RLC
Fluoride	0.08	0.30	0.004	mg/L	EPA 300.0	J	1	04/08/17 14:02	04/09/17 06:14	7040239	RLC
Sulfate	29	1.0	0.09	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 06:14	7040239	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:35	7040136	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:35	7040136	CSW
Barium	0.0503	0.0100	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:35	7040136	CSW
Beryllium	0.00009	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:35	7040136	CSW
Boron	0.0190	0.0400	0.0060	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:35	7040136	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:35	7040136	CSW
Calcium	0.993	0.500	0.0104	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:35	7040136	CSW
Chromium	0.0008	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:35	7040136	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:35	7040136	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:35	7040136	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:35	7040136	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:35	7040136	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:35	7040136	CSW
Vanadium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:35	7040136	CSW
Zinc	0.0015	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:35	7040136	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:35	7040136	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 11:45	04/10/17 18:36	7040220	MTC



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 Atlanta GA, 30339

April 12, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0166

Project: CCR Event

Client ID: GWC-4

Lab Number ID: AAD0166-11

Date/Time Sampled: 4/4/2017 5:10:00PM

Date/Time Received: 4/5/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	994	25	10	mg/L	SM 2540 C		1	04/07/17 15:25	04/07/17 15:25	7040209	JPT
Inorganic Anions											
Chloride	80	2.5	0.13	mg/L	EPA 300.0		10	04/08/17 14:02	04/09/17 19:52	7040239	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/08/17 14:02	04/09/17 06:56	7040239	RLC
Sulfate	230	10	0.92	mg/L	EPA 300.0		10	04/08/17 14:02	04/09/17 19:52	7040239	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:58	7040136	CSW
Arsenic	0.0021	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:58	7040136	CSW
Barium	0.0910	0.0100	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:58	7040136	CSW
Beryllium	0.0001	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:58	7040136	CSW
Boron	8.18	4.00	0.604	mg/L	EPA 6020B		100	04/06/17 10:40	04/11/17 14:44	7040136	CSW
Cadmium	0.00009	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:58	7040136	CSW
Calcium	8.12	0.500	0.0104	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:58	7040136	CSW
Chromium	0.0101	0.0100	0.0003	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:58	7040136	CSW
Cobalt	0.0010	0.0100	0.0005	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:58	7040136	CSW
Lead	0.0092	0.0050	0.00007	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:58	7040136	CSW
Molybdenum	0.0265	0.0100	0.0006	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:58	7040136	CSW
Selenium	0.0043	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:58	7040136	CSW
Thallium	0.00007	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:58	7040136	CSW
Vanadium	0.0371	0.0100	0.0014	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:58	7040136	CSW
Zinc	0.0132	0.0100	0.0013	mg/L	EPA 6020B		1	04/06/17 10:40	04/08/17 00:58	7040136	CSW
Lithium	0.0056	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/06/17 10:40	04/08/17 00:58	7040136	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 11:45	04/10/17 18:39	7040220	MTC



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Report No.: AAD0166

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040146 - SM 2540 C											
Blank (7040146-BLK1)						Prepared & Analyzed: 04/06/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7040146-BS1)						Prepared & Analyzed: 04/06/17					
Total Dissolved Solids	405	25	10	mg/L	400.00		101	84-108			
Duplicate (7040146-DUP1)						Source: AAD0166-02 Prepared & Analyzed: 04/06/17					
Total Dissolved Solids	663	25	10	mg/L		632			5	10	
Batch 7040209 - SM 2540 C											
Blank (7040209-BLK1)						Prepared & Analyzed: 04/07/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7040209-BS1)						Prepared & Analyzed: 04/07/17					
Total Dissolved Solids	363	25	10	mg/L	400.00		91	84-108			
Duplicate (7040209-DUP1)						Source: AAD0170-01 Prepared & Analyzed: 04/07/17					
Total Dissolved Solids	4310	25	10	mg/L		4330			0.5	10	



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Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040239 - EPA 300.0											
Blank (7040239-BLK1)						Prepared & Analyzed: 04/08/17					
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 (7040239-BS1)						Prepared: 04/08/17 Analyzed: 04/09/17					
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		103	90-110			
Sulfate	10.4	1.0	0.09	mg/L	10.020		104	90-110			
Matrix Spike (7040239-MS1)						Source: AAD0166-09 Prepared: 04/08/17 Analyzed: 04/09/17					
Chloride	16.5	0.25	0.01	mg/L	10.010	6.50	100	90-110			
Fluoride	11.5	0.30	0.004	mg/L	10.020	ND	115	90-110			QM-05
Sulfate	101	1.0	0.09	mg/L	10.020	101	NR	90-110			QM-02
Matrix Spike (7040239-MS2)						Source: AAD0166-10 Prepared: 04/08/17 Analyzed: 04/09/17					
Chloride	19.1	0.25	0.01	mg/L	10.010	8.70	104	90-110			
Fluoride	12.2	0.30	0.004	mg/L	10.020	0.08	121	90-110			QM-05
Sulfate	36.2	1.0	0.09	mg/L	10.020	28.8	74	90-110			QM-02
Matrix Spike Dup (7040239-MSD1)						Source: AAD0166-09 Prepared: 04/08/17 Analyzed: 04/09/17					
Chloride	16.6	0.25	0.01	mg/L	10.010	6.50	101	90-110	0.3	15	
Fluoride	11.6	0.30	0.004	mg/L	10.020	ND	116	90-110	0.8	15	QM-05
Sulfate	101	1.0	0.09	mg/L	10.020	101	NR	90-110	0.3	15	QM-02



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7040136 - EPA 3005A

Blank (7040136-BLK1)

Prepared: 04/06/17 Analyzed: 04/07/17

Antimony	ND	0.0030	0.0003	mg/L							
Arsenic	ND	0.0050	0.0004	mg/L							
Barium	ND	0.0100	0.0003	mg/L							
Beryllium	ND	0.0030	0.00007	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.00006	mg/L							
Calcium	ND	0.500	0.0104	mg/L							
Chromium	ND	0.0100	0.0003	mg/L							
Cobalt	ND	0.0100	0.0005	mg/L							
Copper	ND	0.0250	0.0003	mg/L							
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0006	mg/L							
Nickel	ND	0.0100	0.0003	mg/L							
Selenium	ND	0.0100	0.0014	mg/L							
Silver	ND	0.0100	0.0003	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0014	mg/L							
Zinc	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0011	mg/L							

LCS (7040136-BS1)

Prepared: 04/06/17 Analyzed: 04/07/17

Antimony	0.107	0.0030	0.0003	mg/L	0.10000		107	80-120			
Arsenic	0.106	0.0050	0.0004	mg/L	0.10000		106	80-120			
Barium	0.0998	0.0100	0.0003	mg/L	0.10000		100	80-120			
Beryllium	0.101	0.0030	0.00007	mg/L	0.10000		101	80-120			
Boron	1.07	0.0400	0.0060	mg/L	1.0000		107	80-120			
Cadmium	0.0988	0.0010	0.00006	mg/L	0.10000		99	80-120			
Calcium	0.997	0.500	0.0104	mg/L	1.0000		100	80-120			
Chromium	0.106	0.0100	0.0003	mg/L	0.10000		106	80-120			
Cobalt	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Copper	0.100	0.0250	0.0003	mg/L	0.10000		100	80-120			
Lead	0.103	0.0050	0.00007	mg/L	0.10000		103	80-120			
Molybdenum	0.106	0.0100	0.0006	mg/L	0.10000		106	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	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Thallium	0.105	0.0010	0.00005	mg/L	0.10000		105	80-120			
Vanadium	0.106	0.0100	0.0014	mg/L	0.10000		106	80-120			
Zinc	0.103	0.0100	0.0013	mg/L	0.10000		103	80-120			
Lithium	0.103	0.0500	0.0011	mg/L	0.10000		103	80-120			



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040136 - EPA 3005A											
Matrix Spike (7040136-MS1)			Source: AAD0072-01				Prepared: 04/06/17 Analyzed: 04/07/17				
Antimony	0.115	0.0030	0.0003	mg/L	0.10000	ND	115	75-125			
Arsenic	0.104	0.0050	0.0004	mg/L	0.10000	ND	104	75-125			
Barium	0.108	0.0100	0.0003	mg/L	0.10000	0.0166	92	75-125			
Beryllium	0.101	0.0030	0.00007	mg/L	0.10000	ND	101	75-125			
Boron	1.02	0.0400	0.0060	mg/L	1.0000	ND	102	75-125			
Cadmium	0.105	0.0010	0.00006	mg/L	0.10000	ND	105	75-125			
Calcium	16.1	0.500	0.0104	mg/L	1.0000	6.26	989	75-125			QM-02
Chromium	0.104	0.0100	0.0003	mg/L	0.10000	0.0005	103	75-125			
Cobalt	0.0985	0.0100	0.0005	mg/L	0.10000	ND	98	75-125			
Copper	0.0995	0.0250	0.0003	mg/L	0.10000	0.0023	97	75-125			
Lead	0.0998	0.0050	0.00007	mg/L	0.10000	ND	100	75-125			
Molybdenum	0.107	0.0100	0.0006	mg/L	0.10000	ND	107	75-125			
Nickel	0.101	0.0100	0.0003	mg/L	0.10000	0.0022	99	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	0.0022	101	75-125			
Thallium	0.101	0.0010	0.00005	mg/L	0.10000	ND	101	75-125			
Vanadium	0.107	0.0100	0.0014	mg/L	0.10000	ND	107	75-125			
Zinc	0.101	0.0100	0.0013	mg/L	0.10000	0.0020	99	75-125			
Lithium	0.0991	0.0500	0.0011	mg/L	0.10000	ND	99	75-125			
Matrix Spike Dup (7040136-MSD1)			Source: AAD0072-01				Prepared: 04/06/17 Analyzed: 04/07/17				
Antimony	0.114	0.0030	0.0003	mg/L	0.10000	ND	114	75-125	0.1	20	
Arsenic	0.100	0.0050	0.0004	mg/L	0.10000	ND	100	75-125	3	20	
Barium	0.108	0.0100	0.0003	mg/L	0.10000	0.0166	92	75-125	0.2	20	
Beryllium	0.0967	0.0030	0.00007	mg/L	0.10000	ND	97	75-125	4	20	
Boron	1.00	0.0400	0.0060	mg/L	1.0000	ND	100	75-125	2	20	
Cadmium	0.0988	0.0010	0.00006	mg/L	0.10000	ND	99	75-125	6	20	
Calcium	15.4	0.500	0.0104	mg/L	1.0000	6.26	918	75-125	4	20	QM-02
Chromium	0.0987	0.0100	0.0003	mg/L	0.10000	0.0005	98	75-125	5	20	
Cobalt	0.0967	0.0100	0.0005	mg/L	0.10000	ND	97	75-125	2	20	
Copper	0.0964	0.0250	0.0003	mg/L	0.10000	0.0023	94	75-125	3	20	
Lead	0.102	0.0050	0.00007	mg/L	0.10000	ND	102	75-125	2	20	
Molybdenum	0.108	0.0100	0.0006	mg/L	0.10000	ND	108	75-125	0.3	20	
Nickel	0.0984	0.0100	0.0003	mg/L	0.10000	0.0022	96	75-125	3	20	
Selenium	0.101	0.0100	0.0014	mg/L	0.10000	ND	101	75-125	1	20	
Silver	0.103	0.0100	0.0003	mg/L	0.10000	0.0022	101	75-125	0.4	20	
Thallium	0.104	0.0010	0.00005	mg/L	0.10000	ND	104	75-125	3	20	
Vanadium	0.104	0.0100	0.0014	mg/L	0.10000	ND	104	75-125	3	20	
Zinc	0.0986	0.0100	0.0013	mg/L	0.10000	0.0020	97	75-125	3	20	
Lithium	0.0942	0.0500	0.0011	mg/L	0.10000	ND	94	75-125	5	20	



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April 12, 2017

Report No.: AAD0166

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040136 - EPA 3005A											
Post Spike (7040136-PS1)			Source: AAD0072-01			Prepared: 04/06/17 Analyzed: 04/07/17					
Antimony	107			ug/L	100.00	0.290	106	80-120			
Arsenic	104			ug/L	100.00	0.153	104	80-120			
Barium	108			ug/L	100.00	16.6	92	80-120			
Beryllium	101			ug/L	100.00	0.0373	101	80-120			
Boron	1030			ug/L	1000.0	4.30	102	80-120			
Cadmium	102			ug/L	100.00	0.0233	102	80-120			
Calcium	15900			ug/L	1000.0	6260	968	80-120			QM-02
Chromium	101			ug/L	100.00	0.504	101	80-120			
Cobalt	97.8			ug/L	100.00	0.104	98	80-120			
Copper	102			ug/L	100.00	2.33	99	80-120			
Lead	99.9			ug/L	100.00	0.0367	100	80-120			
Molybdenum	109			ug/L	100.00	0.276	109	80-120			
Nickel	101			ug/L	100.00	2.19	99	80-120			
Selenium	103			ug/L	100.00	0.0637	103	80-120			
Silver	103			ug/L	100.00	2.16	101	80-120			
Thallium	102			ug/L	100.00	0.0301	102	80-120			
Vanadium	106			ug/L	100.00	0.0682	106	80-120			
Zinc	99.7			ug/L	100.00	1.96	98	80-120			
Lithium	105			ug/L	100.00	0.692	104	80-120			

Batch 7040220 - EPA 7470A

Blank (7040220-BLK1)					Prepared & Analyzed: 04/10/17						
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7040220-BS1)					Prepared & Analyzed: 04/10/17						
Mercury	0.00251	0.00050	0.000041	mg/L	2.5000E-3		100	80-120			



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040220 - EPA 7470A											
Matrix Spike (7040220-MS1)			Source: AAD0166-01			Prepared & Analyzed: 04/10/17					
Mercury	0.00256	0.00050	0.000041	mg/L	2.5000E-3	ND	102	75-125			
Matrix Spike Dup (7040220-MSD1)			Source: AAD0166-01			Prepared & Analyzed: 04/10/17					
Mercury	0.00241	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125	6	20	
Post Spike (7040220-PS1)			Source: AAD0166-01			Prepared & Analyzed: 04/10/17					
Mercury	1.70			ug/L	1.6667	0.0107	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

April 12, 2017

Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

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

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



CHAIN OF CUSTODY RECORD

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

PAGE: | OF |

Form containing client information, analysis requested, sample identification, and custody tracking details.

Table with columns: CONTAINER TYPE, PRESERVATION, MATRIX CODES.

Table with columns: ANALYSIS REQUESTED, CONTAINER TYPE, # of CONTAINERS, and various analysis codes.

Table with columns: Collection DATE, Collection TIME, MATRIX CODE, SAMPLE IDENTIFICATION, and DATE/TIME.

Form for laboratory use only, including LAB #, tracking #, and sample identification.



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

PAGE: 1 OF 1

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239 REPORT TO: Lauren Petty REQUESTED COMPLETION DATE: PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase 2 CCR & State D&O		ANALYSIS REQUESTED CONTAINER TYPE: P 3 PRESERVATION: 3 # OF CONTAINERS: 4 METALS (EPA 6020/7470): 1 METALS APP. III & IV (EPA 6020/7470): 1 METALS (See attached): 1 EPA 6020: 1 Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C): 1 Radium 226 & 228 (SW-846 9315/9320): 2 Method for Radium: 4-4-17		CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen				
CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O 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 OF 4-4-17				
CONTAINER TYPE P PRESERVATION 3 # OF CONTAINERS 4	ANALYSIS REQUESTED P 3 P 3 P 7 P 3 P 3 P 3	DATE/TIME 4-4-17 1100 DATE/TIME 4-4-17 1540 DATE/TIME 4-4-17 1520 DATE/TIME 4-4-17 1730 DATE/TIME 4-4-17 1710 DATE/TIME 4-4-17 1720	SAMPLE IDENTIFICATION FB-1-4-4-17 GWC-21 GWC-1 GWC-2 GWC-4 GWC-4	MATRIX CODE* W GW GW GW GW GW	COLLECTION TIME 1100 1540 1520 1730 1710 1720	RELINQUISHED BY: [Signature] RELINQUISHED BY: [Signature]	DATE/TIME: 4-5-17 0800 DATE/TIME:	LAB #: AAD0166 Entered into LIMS: Tracking #:
SAMPLED BY AND TITLE: [Signature] RECEIVED BY LAB: [Signature] RECEIVED BY: [Signature]	DATE/TIME: 4-4-17 1710 DATE/TIME: 4-4-17 0300 DATE/TIME: 04/05/17 1300	RELINQUISHED BY: [Signature] RELINQUISHED BY: [Signature]	DATE/TIME: 4-5-17 0800 DATE/TIME:	LAB #: AAD0166 Entered into LIMS: Tracking #:				
TEMPERATURE: 10°C LOG: Yes NO. NA: 10 NO. NA: 10	DATE/TIME: 04/05/17 1300 TEMPERATURE: 10°C LOG: Yes NO. NA: 10 NO. NA: 10	SAMPLE SHIPPED VIA: COURIER UPS: [Signature] FED-EX: [Signature] USPS: [Signature] CLIENT: [Signature] OTHER: [Signature]	DATE/TIME: 4-5-17 0800 DATE/TIME:	LAB #: AAD0166 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: 4/6/2017 9:45:01AM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 04/05/17 13:30

Work Order: AAD0166

Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 11

#Containers: 45

Minimum Temp(C): 1.0

Maximum Temp(C): 1.0

Custody Seal(s) Used: Yes

CHECKLIST ITEMS

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

Comments:

April 28, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAD0166 Plant Kraft
Pace Project No.: 30215341

Dear Maria Padilla:

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



Robbin Robl for
Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AAD0166 Plant Kraft

Pace Project No.: 30215341

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: AAD0166 Plant Kraft

Pace Project No.: 30215341

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30215341001	GWA-8	Water	04/03/17 16:50	04/06/17 10:00
30215341002	GWC-15	Water	04/03/17 17:48	04/06/17 10:00
30215341003	GWC-20	Water	04/04/17 09:55	04/06/17 10:00
30215341004	GWC-14	Water	04/04/17 12:00	04/06/17 10:00
30215341005	GWC-3	Water	04/04/17 13:50	04/06/17 10:00
30215341006	Dup-1-4-4-17	Water	04/04/17 00:00	04/06/17 10:00
30215341007	FB-1-4-4-17	Water	04/04/17 11:00	04/06/17 10:00
30215341008	GWC-21	Water	04/04/17 15:40	04/06/17 10:00
30215341009	GWC-1	Water	04/04/17 15:20	04/06/17 10:00
30215341010	GWC-2	Water	04/04/17 17:30	04/06/17 10:00
30215341011	GWC-4	Water	04/04/17 17:10	04/06/17 10:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AAD0166 Plant Kraft
Pace Project No.: 30215341

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30215341001	GWA-8	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215341002	GWC-15	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215341003	GWC-20	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215341004	GWC-14	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215341005	GWC-3	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215341006	Dup-1-4-4-17	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215341007	FB-1-4-4-17	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215341008	GWC-21	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215341009	GWC-1	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215341010	GWC-2	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215341011	GWC-4	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAD0166 Plant Kraft
Pace Project No.: 30215341

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWA-8 Lab ID: 30215341001 Collected: 04/03/17 16:50 Received: 04/06/17 10:00 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	0.964 ± 0.260 (0.191) C:93% T:NA	pCi/L	04/20/17 10:43	13982-63-3	
Radium-228		EPA 9320	0.396 ± 0.372 (0.760) C:83% T:81%	pCi/L	04/21/17 12:52	15262-20-1	
Total Radium		Total Radium Calculation	1.36 ± 0.632 (0.951)	pCi/L	04/26/17 12:10	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-15 Lab ID: 30215341002 Collected: 04/03/17 17:48 Received: 04/06/17 10:00 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	0.437 ± 0.165 (0.157) C:90% T:NA	pCi/L	04/20/17 10:43	13982-63-3	
Radium-228		EPA 9320	0.260 ± 0.356 (0.763) C:81% T:82%	pCi/L	04/21/17 12:52	15262-20-1	
Total Radium		Total Radium Calculation	0.697 ± 0.521 (0.920)	pCi/L	04/26/17 12:10	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-20 Lab ID: 30215341003 Collected: 04/04/17 09:55 Received: 04/06/17 10:00 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	0.916 ± 0.268 (0.198) C:75% T:NA	pCi/L	04/20/17 10:43	13982-63-3	
Radium-228		EPA 9320	0.856 ± 0.396 (0.659) C:83% T:87%	pCi/L	04/21/17 12:53	15262-20-1	
Total Radium		Total Radium Calculation	1.77 ± 0.664 (0.857)	pCi/L	04/26/17 12:10	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-14 Lab ID: 30215341004 Collected: 04/04/17 12:00 Received: 04/06/17 10:00 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	0.240 ± 0.126 (0.151) C:80% T:NA	pCi/L	04/20/17 10:43	13982-63-3	
Radium-228		EPA 9320	0.459 ± 0.384 (0.769) C:80% T:84%	pCi/L	04/21/17 12:53	15262-20-1	
Total Radium		Total Radium Calculation	0.699 ± 0.510 (0.920)	pCi/L	04/26/17 12:10	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-3 Lab ID: 30215341005 Collected: 04/04/17 13:50 Received: 04/06/17 10:00 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	0.772 ± 0.569 (0.974) C:94% T:NA	pCi/L	04/20/17 10:56	13982-63-3	
Radium-228		EPA 9320	0.825 ± 0.370 (0.602) C:81% T:87%	pCi/L	04/25/17 12:15	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAD0166 Plant Kraft
Pace Project No.: 30215341

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-3 Lab ID: 30215341005 Collected: 04/04/17 13:50 Received: 04/06/17 10:00 Matrix: Water PWS: Site ID: Sample Type:						
Total Radium	Total Radium Calculation	1.60 ± 0.939 (1.58)	pCi/L	04/28/17 13:38	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: Dup-1-4-4-17 Lab ID: 30215341006 Collected: 04/04/17 00:00 Received: 04/06/17 10:00 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	1.15 ± 0.371 (0.397) C:87% T:NA	pCi/L	04/21/17 11:35	13982-63-3	
Radium-228	EPA 9320	1.37 ± 0.482 (0.662) C:78% T:81%	pCi/L	04/25/17 12:15	15262-20-1	
Total Radium	Total Radium Calculation	2.52 ± 0.853 (1.06)	pCi/L	04/28/17 13:38	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FB-1-4-4-17 Lab ID: 30215341007 Collected: 04/04/17 11:00 Received: 04/06/17 10:00 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.106 ± 0.155 (0.331) C:94% T:NA	pCi/L	04/20/17 10:56	13982-63-3	
Radium-228	EPA 9320	0.161 ± 0.273 (0.595) C:80% T:78%	pCi/L	04/25/17 12:15	15262-20-1	
Total Radium	Total Radium Calculation	0.267 ± 0.428 (0.926)	pCi/L	04/28/17 13:38	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-21 Lab ID: 30215341008 Collected: 04/04/17 15:40 Received: 04/06/17 10:00 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.753 ± 0.325 (0.377) C:92% T:NA	pCi/L	04/20/17 10:56	13982-63-3	
Radium-228	EPA 9320	1.27 ± 0.476 (0.681) C:77% T:76%	pCi/L	04/25/17 12:15	15262-20-1	
Total Radium	Total Radium Calculation	2.02 ± 0.801 (1.06)	pCi/L	04/28/17 13:38	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-1 Lab ID: 30215341009 Collected: 04/04/17 15:20 Received: 04/06/17 10:00 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.751 ± 0.528 (0.773) C:84% T:NA	pCi/L	04/20/17 10:56	13982-63-3	
Radium-228	EPA 9320	0.640 ± 0.373 (0.681) C:83% T:79%	pCi/L	04/25/17 12:15	15262-20-1	
Total Radium	Total Radium Calculation	1.39 ± 0.901 (1.45)	pCi/L	04/28/17 13:38	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAD0166 Plant Kraft

Pace Project No.: 30215341

Sample: GWC-2		Lab ID: 30215341010	Collected: 04/04/17 17:30	Received: 04/06/17 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	0.296 ± 0.224 (0.376) C:86% T:NA	pCi/L	04/20/17 10:56	13982-63-3	
Radium-228	EPA 9320	0.574 ± 0.384 (0.730) C:80% T:77%	pCi/L	04/25/17 12:15	15262-20-1	
Total Radium	Total Radium Calculation	0.870 ± 0.608 (1.11)	pCi/L	04/28/17 13:38	7440-14-4	

Sample: GWC-4		Lab ID: 30215341011	Collected: 04/04/17 17:10	Received: 04/06/17 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	3.74 ± 0.769 (0.375) C:87% T:NA	pCi/L	04/21/17 11:35	13982-63-3	
Radium-228	EPA 9320	1.26 ± 0.477 (0.700) C:81% T:76%	pCi/L	04/25/17 12:15	15262-20-1	
Total Radium	Total Radium Calculation	5.00 ± 1.25 (1.08)	pCi/L	04/28/17 13:38	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAD0166 Plant Kraft
Pace Project No.: 30215341

QC Batch: 254962 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30215341001, 30215341002, 30215341003, 30215341004

METHOD BLANK: 1255467 Matrix: Water
Associated Lab Samples: 30215341001, 30215341002, 30215341003, 30215341004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0962 ± 0.0828 (0.137) C:98% T:NA	pCi/L	04/19/17 08:34	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAD0166 Plant Kraft

Pace Project No.: 30215341

QC Batch: 255526

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30215341005, 30215341006, 30215341007, 30215341008, 30215341009, 30215341010, 30215341011

METHOD BLANK: 1258753

Matrix: Water

Associated Lab Samples: 30215341005, 30215341006, 30215341007, 30215341008, 30215341009, 30215341010, 30215341011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.234 ± 0.336 (0.721) C:80% T:78%	pCi/L	04/25/17 12:14	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAD0166 Plant Kraft

Pace Project No.: 30215341

QC Batch: 255525

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30215341001, 30215341002, 30215341003, 30215341004

METHOD BLANK: 1258752

Matrix: Water

Associated Lab Samples: 30215341001, 30215341002, 30215341003, 30215341004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.596 ± 0.409 (0.776) C:74% T:75%	pCi/L	04/21/17 12:50	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAD0166 Plant Kraft

Pace Project No.: 30215341

QC Batch: 255574

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30215341005, 30215341006, 30215341007, 30215341008, 30215341009, 30215341010, 30215341011

METHOD BLANK: 1258858

Matrix: Water

Associated Lab Samples: 30215341005, 30215341006, 30215341007, 30215341008, 30215341009, 30215341010, 30215341011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.128 ± 0.159 (0.319) C:92% T:NA	pCi/L	04/20/17 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

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without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: AAD0166 Plant Kraft
Pace Project No.: 30215341

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

WO#: 30215341



30215341



Chain of Custody

Workorder: AAD0166		Workorder Name: Plant Kraft		Owner Received Date:		Results Requested By: 4/28/2017	
Report To:		Subcontract To:		Requested Analysis			
Betsy McDaniel		Pace - Pittsburgh					
Pace Analytical Atlanta		1638 Roseytown Road					
110 Technology Parkway		Stes. 2,3,4					
Peachtree Corners, GA 30092		Greensburg, PA 15601					
Phone (770)-734-4200		Phone (724) 850-5600					
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Matrix	LAB USE ONLY
1	GWA-8	G	4/3/2017 16:50	AAD0166-01	GW	GW	001
2	GWC-15	G	4/3/2017 17:48	AAD0166-02	GW	GW	002
3	GWC-20	G	4/4/2017 9:55	AAD0166-03	GW	GW	003
4	GWC-14	G	4/4/2017 12:00	AAD0166-04	GW	GW	004
5	GWC-3	G	4/4/2017 13:50	AAD0166-05	GW	GW	005
6	Dup-1-4-4-17	G	4/4/2017 0:00	AAD0166-06	GW	GW	006
7	FB-1-4-4-17	G	4/4/2017 11:00	AAD0166-07	W	W	007
8	GWC-21	G	4/4/2017 15:40	AAD0166-08	GW	GW	008
9	GWC-1	G	4/4/2017 15:20	AAD0166-09	GW	GW	009
10	GWC-2	G	4/4/2017 17:30	AAD0166-10	GW	GW	010
Transfers Released By		Date/Time		Received By		Date/Time	
1		4/5/17		Michael [Signature]		4-5-17 1000	
2							
3							
						Comments	

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.					

30215341

Chain of Custody



Results Requested By: 4/28/2017

Owner Received Date:

Workorder Name: Plant Kraft

Workorder: AAD0166

Report To:		Subcontract To:		Requested Analysis			
Betsy McDaniel		Pace - Pittsburgh					
Pace Analytical Atlanta		1638 Roseytown Road					
110 Technology Parkway		Stes. 2,3,4					
Peachtree Corners, GA 30092		Greensburg, PA 15601					
Phone (770)-734-4200		Phone (724) 850-5600					
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	LAB USE ONLY
11	GWC-4	G	4/4/2017 17:10	AAD0166-11	GW	2	
12							001
13							
14							
15							
16							
17							
18							
19							
20							
Transfers	Released By	Date/Time	Received By	Date/Time	Comments		
1			<i>Michael</i>	4/6/17 1000			
2							
3							

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

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC

This chain of custody is considered complete as is since this information is available in the owner laboratory.



CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30082
 (770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

30215341 -
 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 REQUESTED COMPLETION DATE: laburch@southernco.com		PROJECT NAME/STATE: Plant Kraft Grumman Road Phase 2 CCR & State D&O	
CC: Maria Padilla Heath McCorkle PO #:		CONTAINER TYPE: PRESERVATION # of		ANALYSIS REQUESTED P 3 P 3 P 3 P 3 Metals App. III & IV (EPA 6020/7470) Metals (See attached) EPA 6020 Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SW-846 9315/9320)	
CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		PRESERVATION 1 - HCl, 56°C 2 - H ₂ SO ₄ , 56°C 3 - HNO ₃ 4 - NaOH, 56°C 5 - NaOH/HNO ₃ , 56°C 6 - Na ₂ S ₂ O ₈ , 56°C 7 - 56°C not frozen		MATRIX CODES: DW - DRINKING WATER S - SOIL WW - WASTEWATER SL - SLUDGE GW - GROUNDWATER SD - SOLID SW - SURFACE WATER A - AIR ST - STORM WATER L - LIQUID W - WATER P - PRODUCT	
REMARKS/ADDITIONAL INFORMATION		LAB #: AA D0166 Entered into LIMS: Tracking #:		FOR LAB USE ONLY	

LAB #	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME
1	4-3-17 1650	4-3-17 1650	4-4-17 1350	4-5-17 0800
2	4-3-17 1748	4-3-17 1650	4-4-17 1350	4-5-17 0800
3	4-4-17 0955	4-3-17 1650	4-4-17 1350	4-5-17 0800
4	4-4-17	4-3-17 1650	4-4-17 1350	4-5-17 0800
5	4-4-17 1200	4-3-17 1650	4-4-17 1350	4-5-17 0800
6	4-4-17 1350	4-3-17 1650	4-4-17 1350	4-5-17 0800
7	4-4-17	4-3-17 1650	4-4-17 1350	4-5-17 0800

Collection DATE	Collection TIME	MATRIX CODE*	SAMPLE IDENTIFICATION	RELINQUISHED BY:	DATE/TIME
4-3-17	1650	GW	GWA-8	[Signature]	4-4-17 1350
4-3-17	1748	GW	6WC-15	[Signature]	4-5-17 0800
4-4-17	0955	GW	6WC-20	[Signature]	4-5-17 0800
4-4-17		GW	6WC-16	[Signature]	4-5-17 0800
4-4-17	1200	GW	6WC-14	[Signature]	4-5-17 0800
4-4-17	1350	GW	6WC-3	[Signature]	4-5-17 0800
4-4-17		GW	DUP-1-4-4-17	[Signature]	4-5-17 0800

RECEIVED BY: D. Frazier, J. B. Bessie RECEIVED BY: M. Libalinton RECEIVED BY: M. Libalinton RECEIVED BY: M. Libalinton	DATE/TIME: 4-3-17 1650 DATE/TIME: 4-3-17 1650 DATE/TIME: 4-3-17 1650 DATE/TIME: 4-3-17 1650	DATE/TIME: 4-4-17 1350 DATE/TIME: 4-4-17 1350 DATE/TIME: 4-4-17 1350 DATE/TIME: 4-4-17 1350	DATE/TIME: 4-5-17 0800 DATE/TIME: 4-5-17 0800 DATE/TIME: 4-5-17 0800 DATE/TIME: 4-5-17 0800
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RECEIVED BY: M. Libalinton RECEIVED BY: M. Libalinton RECEIVED BY: M. Libalinton RECEIVED BY: M. Libalinton	DATE/TIME: 4-3-17 1650 DATE/TIME: 4-3-17 1650 DATE/TIME: 4-3-17 1650 DATE/TIME: 4-3-17 1650	DATE/TIME: 4-4-17 1350 DATE/TIME: 4-4-17 1350 DATE/TIME: 4-4-17 1350 DATE/TIME: 4-4-17 1350	DATE/TIME: 4-5-17 0800 DATE/TIME: 4-5-17 0800 DATE/TIME: 4-5-17 0800 DATE/TIME: 4-5-17 0800
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Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR & State

30215341

PAGE: 1 OF 1

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



CHAIN OF CUSTODY RECORD

CLIENT NAME:		ANALYSIS REQUESTED		CONTAINER TYPE		PRESERVATION								
Georgia Power		METALS (See attached)		P - PLASTIC		1 - HCl, 56°C								
241 Ralph McGill Blvd SE B10185		Metals App. III & IV (EPA 6020/7470)		A - AMBER GLASS		2 - H ₂ SO ₄ , 56°C								
Atlanta, GA 30308		Metals App. III & IV (EPA 6020/7470)		G - CLEAR GLASS		3 - HNO ₃								
404-505-7239		Metals App. III & IV (EPA 6020/7470)		V - VOA VIAL		4 - NaOH, 56°C								
REPORT TO:		Metals App. III & IV (EPA 6020/7470)		S - STERILE		5 - NaOH/ZnAc, 56°C								
Lauren Petty		Metals App. III & IV (EPA 6020/7470)		O - OTHER		6 - H ₂ S ₂ O ₈ , 56°C								
HEALTH McCortle		Metals App. III & IV (EPA 6020/7470)				7 - 56°C not frozen								
PO #:		Metals App. III & IV (EPA 6020/7470)												
laburch@southemco.com		Metals App. III & IV (EPA 6020/7470)												
PROJECT NAME/STATE:		Phase 2 CCR & State D&O												
Plant Kraft Grumman Road		Phase 2 CCR & State D&O												
PROJECT #:														
Collection DATE	Collection TIME	MATRIX CODE*	C O M P	G R A B	SAMPLE IDENTIFICATION	CONTAINER #	ANALYSIS REQUESTED	DATE/TIME	RELINQUISHED BY:	DATE/TIME	RELINQUISHED BY:	DATE/TIME	LAB #	FOR LAB USE ONLY
4-4-17	1100	W	X	X	FB-1-4-4-17	4	Metals App. III & IV (EPA 6020/7470)	4-4-17 0800	J-S	4-5-17 0800	J-S	4-5-17 0800	AA-D-0166	
4-4-17	1540	GW	X	X	GW-21	4	Metals App. III & IV (EPA 6020/7470)	4-4-17 1710		4-4-11 0300		4-4-11 0300		
4-4-17	1520	GW	X	X	GW-1	4	Metals App. III & IV (EPA 6020/7470)	4-4-17 1330		4-4-17 1330		4-4-17 1330		
4-4-17	1730	GW	X	X	GW-2	4	Metals App. III & IV (EPA 6020/7470)	4-4-17 1330		4-4-17 1330		4-4-17 1330		
4-4-17	1710	GW	X	X	GW-4	4	Metals App. III & IV (EPA 6020/7470)	4-4-17 1330		4-4-17 1330		4-4-17 1330		
4-4-17	1710	GW	X	X	GW-4	1	Metals App. III & IV (EPA 6020/7470)	4-4-17 1330		4-4-17 1330		4-4-17 1330		
REMARKS/ADDITIONAL INFORMATION											LAB #		ENTERED INTO LIMS	
											AA-D-0166		Tracking #	

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn

Sample Condition Upon Receipt Pittsburgh

ML



Client Name: Pace GA

Project # 30215341

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: born

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

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

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

Temp should be above freezing to 6°C

Date and Initials of person examining contents: ML 4-6-17

Comments:

	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC: -Includes date/time/ID Matrix: <u>Lt</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used: -Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Orthophosphate field filtered	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12.
Organic Samples checked for dechlorination:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
All containers have been checked for preservation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15. <u>PH < 2</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>ML</u> Date/time of preservation: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	16.
Trip Blank Present:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Rad Aqueous Samples Screened > 0.5 mrem/hr	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>ML</u> Date: <u>4-6-17</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment



www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JC2
Date: 4/19/2017
Worklist: 35144
Matrix: DW

Method Blank Assessment	
MB Sample ID	1258858
MB concentration:	0.128
M/B Counting Uncertainty:	0.157
MB MDC:	0.319
MB Numerical Performance Indicator:	1.59
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS# (Y or N)?	N
LCS35144	LCS35144
Count Date:	4/20/2017
Spike I.D.:	17-003
Spike Concentration (pCi/mL):	38.229
Volume Used (mL):	0.25
Aliquot Volume (L, g, F):	0.503
Target Conc. (pCi/L, g, F):	19.013
Uncertainty (Calculated):	0.894
Result (pCi/L, g, F):	16.733
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.287
Numerical Performance Indicator:	-2.85
Percent Recovery:	88.01%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30215341007
Duplicate Sample I.D.:	30215341007DUP
Sample Result (pCi/L, g, F):	0.106
Sample Result Counting Uncertainty (pCi/L, g, F):	0.154
Sample Duplicate Result (pCi/L, g, F):	-0.056
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.115
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	1.651
Duplicate RPD:	669.79%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**

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

Comments:

*LC3 acceptable for WT matrix
result to 5x mdc*

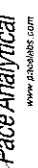
04/28/17

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

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

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JC2
Date: 4/13/2017
Worklist: 35077
Matrix: DW

Method Blank Assessment	
MB Sample ID	1255467
MB concentration:	0.096
MB Counting Uncertainty:	0.082
MB MDC:	0.137
MB Numerical Performance Indicator:	2.31
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS (Y or N)?	N
LCS#	LCS35077
Count Date:	4/20/2017
Spike I.D.:	17-003
Spike Concentration (pCi/mL):	38.229
Volume Used (mL):	0.25
Aliquot Volume (L, g, F):	0.502
Target Conc. (pCi/L, g, F):	19.038
Uncertainty (Calculated):	0.896
Result (pCi/L, g, F):	15.492
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.839
Numerical Performance Indicator:	-5.67
Percent Recovery:	81.37%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30214954002
Duplicate Sample I.D.:	30214954002DUP
Sample Result (pCi/L, g, F):	0.318
Sample Result Counting Uncertainty (pCi/L, g, F):	0.144
Sample Duplicate Result (pCi/L, g, F):	0.163
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.157
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	1.418
Duplicate RPD:	64.24%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**

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

Comments:

3 acceptable for water matrix results < 5x MDC

Batch must be re-prepped due to unacceptable precision on 4/28/17

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

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 4/19/2017
Worklist: 35139
Matrix: DW

Method Blank Assessment	
MB Sample ID	1258752
MB Concentration:	0.596
M/B Counting Uncertainty:	0.395
MB MDC:	0.776
MB Numerical Performance Indicator:	2.95
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	4/21/2017
Spike I.D.:	17-005
Spike Concentration (pCi/mL):	24.729
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.804
Target Conc. (pCi/L, g, F):	6.148
Uncertainty (Calculated):	0.443
Result (pCi/L, g, F):	6.590
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.804
Numerical Performance Indicator:	0.94
Percent Recovery:	107.18%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30215074001
Duplicate Sample I.D.:	30215074001DUP
Sample Result (pCi/L, g, F):	0.365
Sample Result Counting Uncertainty (pCi/L, g, F):	0.322
Sample Duplicate Result (pCi/L, g, F):	1.025
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.390
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-2.557
Duplicate RPD:	94.91%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:

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

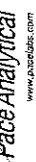
2/11/2017

c 3 acceptable for water matrix results < 5x 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 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:	

Quality Control Sample Performance Assessment



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

Test: Ra-228
Analyst: JLW
Date: 4/20/2017
Worklist: 35140
Matrix: DW

Method Blank Assessment	
MB Sample ID	1258753
MB concentration:	0.234
M/B Counting Uncertainty:	0.333
MB MDC:	0.721
MB Numerical Performance Indicator:	1.38
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS (Y or N)?
Count Date:	4/25/2017	LCS35140
Spike I.D.:	17-005	4/25/2017
Spike Concentration (pCi/mL):	24.697	17-005
Volume Used (mL):	0.20	24.697
Aliquot Volume (L, g, F):	0.800	0.20
Target Conc. (pCi/L, g, F):	6.171	0.800
Uncertainty (Calculated):	0.444	6.171
Result (pCi/L, g, F):	6.013	0.444
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.707	6.013
Numerical Performance Indicator:	-0.37	0.707
Percent Recovery:	97.43%	0.444
Status vs Numerical Indicator:	N/A	103.10%
Status vs Recovery:	Pass	N/A

Duplicate Sample Assessment		Y
Sample I.D.:	LCS35140	LCS35140
Duplicate Sample I.D.:	LCS35140	4/25/2017
Sample Result (pCi/L, g, F):	6.013	17-005
Sample Result Counting Uncertainty (pCi/L, g, F):	0.707	24.697
Sample Duplicate Result (pCi/L, g, F):	6.362	0.20
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.721	0.800
Are sample and/or duplicate results below MDC?	NO	6.171
Duplicate Numerical Performance Indicator:	-0.678	0.444
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	5.66%	6.362
Duplicate Status vs Numerical Indicator:	N/A	0.721
Duplicate Status vs RPD:	Pass	103.10%

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample I.D.
Sample MS I.D.:	Sample MS I.D.
Sample MSD I.D.:	Sample MSD I.D.
Sample Matrix Spike Result:	Sample Matrix Spike Result:
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result:	Duplicate Numerical Performance Indicator:
Duplicate Numerical Performance Indicator:	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:

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

Comments:

M-4/28/17



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: AAD0168

April 17, 2017

Project: CCR Event

Project #: Plant Kraft Grumman Road

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

Approved:

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

Project Manager

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All test results relate only to the samples analyzed.



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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 17, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-4 (Filtered)	AAD0168-01	Ground Water	04/04/17 17:20	04/05/17 13:30



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

April 17, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0168

Project: CCR Event

Client ID: GWC-4 (Filtered)

Lab Number ID: AAD0168-01

Date/Time Sampled: 4/4/2017 5:20:00PM

Date/Time Received: 4/5/2017 1:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Metals, Dissolved											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/10/17 09:40	04/14/17 00:28	7040224	CSW
Arsenic	0.0005	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/10/17 09:40	04/14/17 00:28	7040224	CSW
Barium	0.0668	0.0100	0.0003	mg/L	EPA 6020B		1	04/10/17 09:40	04/14/17 00:28	7040224	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/10/17 09:40	04/14/17 00:28	7040224	CSW
Boron	9.35	2.00	0.302	mg/L	EPA 6020B		50	04/10/17 09:40	04/14/17 00:34	7040224	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/10/17 09:40	04/14/17 00:28	7040224	CSW
Calcium	8.20	0.500	0.0104	mg/L	EPA 6020B	B-01	1	04/10/17 09:40	04/14/17 00:28	7040224	CSW
Chromium	0.0066	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/10/17 09:40	04/14/17 00:28	7040224	CSW
Cobalt	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	04/10/17 09:40	04/14/17 00:28	7040224	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/10/17 09:40	04/14/17 00:28	7040224	CSW
Molybdenum	0.0121	0.0100	0.0006	mg/L	EPA 6020B		1	04/10/17 09:40	04/14/17 00:28	7040224	CSW
Selenium	0.0022	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/10/17 09:40	04/14/17 00:28	7040224	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/10/17 09:40	04/14/17 00:28	7040224	CSW
Vanadium	0.0321	0.0100	0.0014	mg/L	EPA 6020B		1	04/10/17 09:40	04/14/17 00:28	7040224	CSW
Zinc	0.0033	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/10/17 09:40	04/14/17 00:28	7040224	CSW
Lithium	0.0022	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/10/17 09:40	04/14/17 00:28	7040224	CSW
Mercury	ND	0.0005	0.00004	mg/L	EPA 7470A		1	04/10/17 11:45	04/10/17 19:26	7040221	MTC



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Georgia Power
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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 17, 2017

Report No.: AAD0168

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040221 - EPA 7470A											
Blank (7040221-BLK1)						Prepared & Analyzed: 04/10/17					
Mercury	ND	0.0005	0.00004	mg/L							
LCS (7040221-BS1)						Prepared & Analyzed: 04/10/17					
Mercury	0.0025	0.0005	0.00004	mg/L	2.5000E-3		99	80-120			
Matrix Spike (7040221-MS1)						Source: AAD0168-01 Prepared & Analyzed: 04/10/17					
Mercury	0.0021	0.0005	0.00004	mg/L	2.5000E-3	ND	86	75-125			
Matrix Spike Dup (7040221-MSD1)						Source: AAD0168-01 Prepared & Analyzed: 04/10/17					
Mercury	0.0022	0.0005	0.00004	mg/L	2.5000E-3	ND	86	75-125	0.3	20	
Post Spike (7040221-PS1)						Source: AAD0168-01 Prepared & Analyzed: 04/10/17					
Mercury	1.58			ug/L	1.6667	0.0109	94	80-120			
Batch 7040224 - EPA 3005A											
Blank (7040224-BLK1)						Prepared: 04/10/17 Analyzed: 04/13/17					
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	0.0524	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							



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 17, 2017

Report No.: AAD0168

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7040224 - EPA 3005A

Blank (7040224-BLK2)

Prepared: 04/10/17 Analyzed: 04/13/17

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 (7040224-BS1)

Prepared: 04/10/17 Analyzed: 04/13/17

Antimony	0.0914	0.0030	0.0003	mg/L	0.10000		91	80-120			
Arsenic	0.0838	0.0050	0.0004	mg/L	0.10000		84	80-120			
Barium	0.0982	0.0100	0.0003	mg/L	0.10000		98	80-120			
Beryllium	0.0901	0.0030	0.00007	mg/L	0.10000		90	80-120			
Boron	0.978	0.0400	0.0060	mg/L	1.0000		98	80-120			
Cadmium	0.0909	0.0010	0.00006	mg/L	0.10000		91	80-120			
Calcium	1.03	0.500	0.0104	mg/L	1.0000		103	80-120			
Chromium	0.109	0.0100	0.0003	mg/L	0.10000		109	80-120			
Cobalt	0.106	0.0100	0.0005	mg/L	0.10000		106	80-120			
Copper	0.104	0.0250	0.0003	mg/L	0.10000		104	80-120			
Lead	0.0934	0.0050	0.00007	mg/L	0.10000		93	80-120			
Molybdenum	0.109	0.0100	0.0006	mg/L	0.10000		109	80-120			
Nickel	0.106	0.0100	0.0003	mg/L	0.10000		106	80-120			
Selenium	0.0810	0.0100	0.0014	mg/L	0.10000		81	80-120			
Silver	0.0966	0.0100	0.0003	mg/L	0.10000		97	80-120			
Thallium	0.0967	0.0010	0.00005	mg/L	0.10000		97	80-120			
Vanadium	0.111	0.0100	0.0014	mg/L	0.10000		111	80-120			
Zinc	0.0898	0.0100	0.0013	mg/L	0.10000		90	80-120			
Lithium	0.115	0.0500	0.0011	mg/L	0.10000		115	80-120			



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 17, 2017

Report No.: AAD0168

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7040224 - EPA 3005A

LCS (7040224-BS2)

Prepared: 04/10/17 Analyzed: 04/13/17

Antimony	0.106	0.0030	0.0003	mg/L	0.10000		106	80-120			
Arsenic	0.105	0.0050	0.0004	mg/L	0.10000		105	80-120			
Barium	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Beryllium	0.107	0.0030	0.00007	mg/L	0.10000		107	80-120			
Boron	1.08	0.0400	0.0060	mg/L	1.0000		108	80-120			
Cadmium	0.108	0.0010	0.00006	mg/L	0.10000		108	80-120			
Calcium	1.02	0.500	0.0104	mg/L	1.0000		102	80-120			
Chromium	0.106	0.0100	0.0003	mg/L	0.10000		106	80-120			
Cobalt	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Copper	0.104	0.0250	0.0003	mg/L	0.10000		104	80-120			
Lead	0.100	0.0050	0.00007	mg/L	0.10000		100	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	0.105	0.0100	0.0014	mg/L	0.10000		105	80-120			
Silver	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Thallium	0.100	0.0010	0.00005	mg/L	0.10000		100	80-120			
Vanadium	0.109	0.0100	0.0014	mg/L	0.10000		109	80-120			
Zinc	0.106	0.0100	0.0013	mg/L	0.10000		106	80-120			
Lithium	0.117	0.0500	0.0011	mg/L	0.10000		117	80-120			

Matrix Spike (7040224-MS1)

Source: AAD0274-01

Prepared: 04/10/17 Analyzed: 04/13/17

Antimony	0.105	0.0030	0.0003	mg/L	0.10000	ND	105	75-125			
Arsenic	0.103	0.0050	0.0004	mg/L	0.10000	ND	103	75-125			
Barium	0.372	0.500	0.0133	mg/L	0.10000	0.258	114	75-125			J
Beryllium	0.110	0.0030	0.00007	mg/L	0.10000	0.0003	110	75-125			
Boron	1.09	0.0400	0.0060	mg/L	1.0000	0.0184	107	75-125			
Cadmium	0.105	0.0010	0.00006	mg/L	0.10000	ND	105	75-125			
Calcium	9.17	0.500	0.0104	mg/L	1.0000	7.96	121	75-125			
Chromium	0.107	0.0100	0.0003	mg/L	0.10000	0.0007	106	75-125			
Cobalt	0.106	0.0100	0.0005	mg/L	0.10000	0.0018	104	75-125			
Copper	0.105	0.0250	0.0003	mg/L	0.10000	0.0012	104	75-125			
Lead	0.0986	0.0050	0.00007	mg/L	0.10000	0.0001	99	75-125			
Molybdenum	0.109	0.0100	0.0006	mg/L	0.10000	ND	109	75-125			
Nickel	0.105	0.0100	0.0003	mg/L	0.10000	0.0016	104	75-125			
Selenium	0.104	0.0100	0.0014	mg/L	0.10000	ND	104	75-125			
Silver	0.101	0.0100	0.0003	mg/L	0.10000	ND	101	75-125			
Thallium	0.0966	0.0010	0.00005	mg/L	0.10000	ND	97	75-125			
Vanadium	0.108	0.0100	0.0014	mg/L	0.10000	ND	108	75-125			
Zinc	0.110	0.0100	0.0013	mg/L	0.10000	0.0055	104	75-125			
Lithium	0.122	0.0500	0.0011	mg/L	0.10000	0.0023	120	75-125			



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 17, 2017

Report No.: AAD0168

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040224 - EPA 3005A											
Matrix Spike Dup (7040224-MSD1)			Source: AAD0274-01			Prepared: 04/10/17 Analyzed: 04/13/17					
Antimony	0.103	0.0030	0.0003	mg/L	0.10000	ND	103	75-125	2	20	
Arsenic	0.102	0.0050	0.0004	mg/L	0.10000	ND	102	75-125	1	20	
Barium	0.382	0.500	0.0133	mg/L	0.10000	0.258	124	75-125	3	20	J
Beryllium	0.105	0.0030	0.00007	mg/L	0.10000	0.0003	105	75-125	5	20	
Boron	1.02	0.0400	0.0060	mg/L	1.0000	0.0184	100	75-125	7	20	
Cadmium	0.107	0.0010	0.00006	mg/L	0.10000	ND	107	75-125	2	20	
Calcium	8.73	0.500	0.0104	mg/L	1.0000	7.96	77	75-125	5	20	
Chromium	0.104	0.0100	0.0003	mg/L	0.10000	0.0007	104	75-125	3	20	
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000	0.0018	103	75-125	1	20	
Copper	0.103	0.0250	0.0003	mg/L	0.10000	0.0012	102	75-125	2	20	
Lead	0.0975	0.0050	0.00007	mg/L	0.10000	0.0001	97	75-125	1	20	
Molybdenum	0.109	0.0100	0.0006	mg/L	0.10000	ND	109	75-125	0.8	20	
Nickel	0.103	0.0100	0.0003	mg/L	0.10000	0.0016	101	75-125	2	20	
Selenium	0.101	0.0100	0.0014	mg/L	0.10000	ND	101	75-125	3	20	
Silver	0.0992	0.0100	0.0003	mg/L	0.10000	ND	99	75-125	2	20	
Thallium	0.0959	0.0010	0.00005	mg/L	0.10000	ND	96	75-125	0.7	20	
Vanadium	0.104	0.0100	0.0014	mg/L	0.10000	ND	104	75-125	5	20	
Zinc	0.108	0.0100	0.0013	mg/L	0.10000	0.0055	102	75-125	2	20	
Lithium	0.118	0.0500	0.0011	mg/L	0.10000	0.0023	116	75-125	3	20	
Post Spike (7040224-PS1)											
Source: AAD0274-01			Prepared: 04/10/17 Analyzed: 04/13/17								
Antimony	101			ug/L	100.00	0.0627	101	80-120			
Arsenic	102			ug/L	100.00	-0.0486	102	80-120			
Barium	379			ug/L	100.00	258	121	80-120			QM-02
Beryllium	110			ug/L	100.00	0.265	110	80-120			
Boron	1110			ug/L	1000.0	18.4	109	80-120			
Cadmium	105			ug/L	100.00	0.0035	105	80-120			
Calcium	8920			ug/L	1000.0	7960	96	80-120			
Chromium	111			ug/L	100.00	0.665	110	80-120			
Cobalt	109			ug/L	100.00	1.76	107	80-120			
Copper	106			ug/L	100.00	1.18	105	80-120			
Lead	97.3			ug/L	100.00	0.0977	97	80-120			
Molybdenum	107			ug/L	100.00	0.151	107	80-120			
Nickel	109			ug/L	100.00	1.60	108	80-120			
Selenium	104			ug/L	100.00	-0.101	104	80-120			
Silver	98.3			ug/L	100.00	0.0014	98	80-120			
Thallium	98.2			ug/L	100.00	0.0126	98	80-120			
Vanadium	112			ug/L	100.00	-0.148	112	80-120			
Zinc	113			ug/L	100.00	5.54	108	80-120			
Lithium	116			ug/L	100.00	2.34	114	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 17, 2017

Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

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

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 REQUESTED COMPLETION DATE: laburch@southernco.com PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase 2 CCR & State D&O		CC: Maria Padilla Heath McCorkle PO #:																																																	
CONTAINER TYPE: P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	PRESERVATION: 1 - HCl, 56°C 2 - H ₂ SO ₄ , 56°C 3 - HNO ₃ 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na ₂ S ₂ O ₃ , 56°C 7 - 56°C not frozen	ANALYSIS REQUESTED <table border="1"> <tr> <th>CONTAINER TYPE</th> <th>P</th> <th>P</th> <th>P</th> <th>P</th> <th>P</th> <th>P</th> <th>P</th> </tr> <tr> <td># of</td> <td>3</td> <td>3</td> <td>7</td> <td>3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>METAALS App. III & IV (EPA 6020/7470)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>METAALS (See attached) EPA 6020</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CL, F, SO₄ & TDS (EPA 300.0 & SM 2540C)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Radium 226 & 228 (SW-846 9315/9320)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				CONTAINER TYPE	P	P	P	P	P	P	P	# of	3	3	7	3				METAALS App. III & IV (EPA 6020/7470)								METAALS (See attached) EPA 6020								CL, F, SO ₄ & TDS (EPA 300.0 & SM 2540C)								Radium 226 & 228 (SW-846 9315/9320)							
CONTAINER TYPE	P	P	P	P	P	P	P																																														
# of	3	3	7	3																																																	
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CL, F, SO ₄ & TDS (EPA 300.0 & SM 2540C)																																																					
Radium 226 & 228 (SW-846 9315/9320)																																																					
CONTAINER TYPE DW - DRINKING WATER WW - WASTEWATER GW - GROUNDWATER SW - SURFACE WATER ST - STORM WATER W - WATER		MATRIX CODES: S - SOIL SL - SLUDGE SD - SOLID A - AIR L - LIQUID P - PRODUCT		REMARKS/ADDITIONAL INFORMATION																																																	
LAB #: AAD0168 Entered into LIMS: Tracking #:		FOR LAB USE ONLY																																																			

L A B I D N U M B E R	ANALYSIS REQUESTED	DATE/TIME	DATE/TIME	RELINQUISHED BY	RELINQUISHED BY	SAMPLE SHIPPED VIA	CLIENT	OTHER	FS
1	Metals App III & IV Metals (See attached) EPA 6020 CL, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SW-846 9315/9320) Metals App III & IV (EPA 6020/7470)	4-4-17 1720	4-5-17 0800	[Signature]	[Signature]	UPS	Laburch		

Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR & State



PACE ANALYTICAL SERVICES, LLC.

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

LOG-IN CHECKLIST

Printed: 4/6/2017 10:05:47AM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 04/05/17 13:30

Work Order: AAD0168

Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 1

#Containers: 1

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.

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: AAD0272

April 14, 2017

Project: CCR Event

Project #: Plant Kraft Grumman Road

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

Approved:

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

Project Manager

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



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 14, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-16	AAD0272-01	Ground Water	04/05/17 14:25	04/07/17 09:20
GWC-17	AAD0272-02	Ground Water	04/05/17 13:06	04/07/17 09:20
GWC-12	AAD0272-03	Ground Water	04/05/17 16:30	04/07/17 09:20
GWC-6	AAD0272-04	Ground Water	04/06/17 10:25	04/07/17 09:20
GWC-11	AAD0272-05	Ground Water	04/06/17 12:45	04/07/17 09:20
GWC-5	AAD0272-06	Ground Water	04/06/17 11:55	04/07/17 09:20
GWC-9	AAD0272-07	Ground Water	04/06/17 13:40	04/07/17 09:20
GWA-7	AAD0272-08	Ground Water	04/06/17 15:00	04/07/17 09:20
GWC-22	AAD0272-09	Ground Water	04/06/17 12:50	04/07/17 09:20
FB-2-4-17	AAD0272-10	Water	04/05/17 17:15	04/07/17 09:20
EB-2-4-5-17	AAD0272-11	Water	04/05/17 18:15	04/07/17 09:20
EB-1-4-5-17	AAD0272-12	Water	04/05/17 17:20	04/07/17 09:20
Dup-2-4-5-17	AAD0272-13	Ground Water	04/05/17 00:00	04/07/17 09:20
GWC-13	AAD0272-14	Ground Water	04/06/17 17:45	04/07/17 09:20



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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 14, 2017

Case Narrative

The Radium analysis by methods EPA 9315/9320 was performed by Pace-Pittsburgh, 1638 Roseytown Road - Suites 2, 3, 4, Greensburg PA 15601. The Pace-Pittsburgh lab contact is Jacquelyn Collins at 724-850-5612.



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

April 14, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0272

Project: CCR Event

Client ID: GWC-16

Lab Number ID: AAD0272-01

Date/Time Sampled: 4/5/2017 2:25:00PM

Date/Time Received: 4/7/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	722	25	10	mg/L	SM 2540 C		1	04/11/17 17:10	04/11/17 17:10	7040299	JPT
Inorganic Anions											
Chloride	36	0.25	0.01	mg/L	EPA 300.0	B-01	1	04/09/17 14:01	04/11/17 23:58	7040248	RLC
Fluoride	0.20	0.30	0.004	mg/L	EPA 300.0	J	1	04/09/17 14:01	04/11/17 23:58	7040248	RLC
Sulfate	440	20	1.8	mg/L	EPA 300.0	B-01	20	04/09/17 14:01	04/12/17 12:39	7040248	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/11/17 23:44	7040307	CSW
Arsenic	0.0591	0.0050	0.0004	mg/L	EPA 6020B		1	04/11/17 12:10	04/11/17 23:44	7040307	CSW
Barium	0.0534	0.0100	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/11/17 23:44	7040307	CSW
Beryllium	0.00009	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/11/17 23:44	7040307	CSW
Boron	2.00	2.00	0.302	mg/L	EPA 6020B		50	04/11/17 12:10	04/11/17 23:49	7040307	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/11/17 12:10	04/11/17 23:44	7040307	CSW
Calcium	106	25.0	0.522	mg/L	EPA 6020B		50	04/11/17 12:10	04/11/17 23:49	7040307	CSW
Chromium	0.0010	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/11/17 23:44	7040307	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/11/17 12:10	04/11/17 23:44	7040307	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/11/17 23:44	7040307	CSW
Molybdenum	0.113	0.0100	0.0006	mg/L	EPA 6020B		1	04/11/17 12:10	04/11/17 23:44	7040307	CSW
Selenium	0.0068	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/11/17 23:44	7040307	CSW
Thallium	0.00006	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/11/17 23:44	7040307	CSW
Vanadium	0.0033	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/11/17 23:44	7040307	CSW
Zinc	0.0025	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/11/17 23:44	7040307	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/11/17 12:10	04/11/17 23:44	7040307	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 11:45	04/10/17 19:02	7040220	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

April 14, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0272

Project: CCR Event

Client ID: GWC-17

Lab Number ID: AAD0272-02

Date/Time Sampled: 4/5/2017 1:06:00PM

Date/Time Received: 4/7/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1600	25	10	mg/L	SM 2540 C		1	04/11/17 17:10	04/11/17 17:10	7040299	JPT
Inorganic Anions											
Chloride	860	12	0.65	mg/L	EPA 300.0	B-01	50	04/09/17 14:01	04/12/17 12:59	7040248	RLC
Fluoride	1.6	0.30	0.004	mg/L	EPA 300.0		1	04/09/17 14:01	04/12/17 01:42	7040248	RLC
Sulfate	460	50	4.6	mg/L	EPA 300.0	B-01	50	04/09/17 14:01	04/12/17 12:59	7040248	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/11/17 23:55	7040307	CSW
Arsenic	0.0011	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/11/17 23:55	7040307	CSW
Barium	0.106	0.0100	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/11/17 23:55	7040307	CSW
Beryllium	0.0024	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/11/17 23:55	7040307	CSW
Boron	0.690	0.0400	0.0060	mg/L	EPA 6020B		1	04/11/17 12:10	04/11/17 23:55	7040307	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/11/17 12:10	04/11/17 23:55	7040307	CSW
Calcium	104	25.0	0.522	mg/L	EPA 6020B		50	04/11/17 12:10	04/12/17 00:01	7040307	CSW
Chromium	0.0015	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/11/17 23:55	7040307	CSW
Cobalt	0.0070	0.0100	0.0005	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/11/17 23:55	7040307	CSW
Lead	0.0009	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/11/17 23:55	7040307	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/11/17 12:10	04/11/17 23:55	7040307	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/11/17 23:55	7040307	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/11/17 23:55	7040307	CSW
Vanadium	0.0029	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/11/17 23:55	7040307	CSW
Zinc	0.0175	0.0100	0.0013	mg/L	EPA 6020B		1	04/11/17 12:10	04/11/17 23:55	7040307	CSW
Lithium	0.0070	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/11/17 23:55	7040307	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 11:45	04/10/17 19:05	7040220	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 14, 2017

Report No.: AAD0272

Project: CCR Event

Client ID: GWC-12

Lab Number ID: AAD0272-03

Date/Time Sampled: 4/5/2017 4:30:00PM

Date/Time Received: 4/7/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1200	25	10	mg/L	SM 2540 C		1	04/11/17 17:10	04/11/17 17:10	7040299	JPT
Inorganic Anions											
Chloride	140	5.0	0.26	mg/L	EPA 300.0	B-01	20	04/09/17 14:01	04/12/17 13:20	7040248	RLC
Fluoride	0.71	0.30	0.004	mg/L	EPA 300.0		1	04/09/17 14:01	04/12/17 02:02	7040248	RLC
Sulfate	990	20	1.8	mg/L	EPA 300.0	B-01	20	04/09/17 14:01	04/12/17 13:20	7040248	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:07	7040307	CSW
Arsenic	0.0006	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:07	7040307	CSW
Barium	0.0174	0.0100	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:07	7040307	CSW
Beryllium	0.0008	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:07	7040307	CSW
Boron	6.49	2.00	0.302	mg/L	EPA 6020B		50	04/11/17 12:10	04/12/17 00:12	7040307	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:07	7040307	CSW
Calcium	92.5	25.0	0.522	mg/L	EPA 6020B		50	04/11/17 12:10	04/12/17 00:12	7040307	CSW
Chromium	0.0013	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:07	7040307	CSW
Cobalt	0.0013	0.0100	0.0005	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:07	7040307	CSW
Lead	0.0003	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:07	7040307	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:07	7040307	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:07	7040307	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:07	7040307	CSW
Vanadium	0.0039	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:07	7040307	CSW
Zinc	0.0026	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:07	7040307	CSW
Lithium	0.0012	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:07	7040307	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 14:40	04/11/17 10:04	7040255	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

April 14, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0272

Project: CCR Event

Client ID: GWC-6

Lab Number ID: AAD0272-04

Date/Time Sampled: 4/6/2017 10:25:00AM

Date/Time Received: 4/7/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	434	25	10	mg/L	SM 2540 C		1	04/11/17 17:10	04/11/17 17:10	7040299	JPT
Inorganic Anions											
Chloride	76	2.5	0.13	mg/L	EPA 300.0	B-01	10	04/09/17 14:01	04/12/17 13:41	7040248	RLC
Fluoride	0.30	0.30	0.004	mg/L	EPA 300.0		1	04/09/17 14:01	04/12/17 02:23	7040248	RLC
Sulfate	150	10	0.92	mg/L	EPA 300.0	B-01	10	04/09/17 14:01	04/12/17 13:41	7040248	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:18	7040307	CSW
Arsenic	0.0011	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:18	7040307	CSW
Barium	0.111	0.0100	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:18	7040307	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:18	7040307	CSW
Boron	3.19	2.00	0.302	mg/L	EPA 6020B		50	04/11/17 12:10	04/12/17 00:24	7040307	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:18	7040307	CSW
Calcium	5.41	0.500	0.0104	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:18	7040307	CSW
Chromium	0.0034	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:18	7040307	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:18	7040307	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:18	7040307	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:18	7040307	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:18	7040307	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:18	7040307	CSW
Vanadium	0.0069	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:18	7040307	CSW
Zinc	0.0032	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:18	7040307	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:18	7040307	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 14:40	04/11/17 10:11	7040255	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

April 14, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0272

Project: CCR Event

Client ID: GWC-11

Lab Number ID: AAD0272-05

Date/Time Sampled: 4/6/2017 12:45:00PM

Date/Time Received: 4/7/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	248	25	10	mg/L	SM 2540 C		1	04/11/17 17:10	04/11/17 17:10	7040299	JPT
Inorganic Anions											
Chloride	7.1	0.25	0.01	mg/L	EPA 300.0	B-01	1	04/09/17 14:01	04/12/17 02:44	7040248	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/09/17 14:01	04/12/17 02:44	7040248	RLC
Sulfate	110	10	0.92	mg/L	EPA 300.0	B-01	10	04/09/17 14:01	04/12/17 14:01	7040248	RLC
Metals, Total											
Antimony	0.0006	0.0030	0.0003	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:30	7040307	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:30	7040307	CSW
Barium	0.0813	0.0100	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:30	7040307	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:30	7040307	CSW
Boron	0.0754	0.0400	0.0060	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:30	7040307	CSW
Cadmium	0.0002	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:30	7040307	CSW
Calcium	30.9	25.0	0.522	mg/L	EPA 6020B		50	04/11/17 12:10	04/12/17 00:35	7040307	CSW
Chromium	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:30	7040307	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:30	7040307	CSW
Lead	0.0003	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:30	7040307	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:30	7040307	CSW
Selenium	0.0195	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:30	7040307	CSW
Thallium	0.00006	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:30	7040307	CSW
Vanadium	0.0025	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:30	7040307	CSW
Zinc	0.0040	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:30	7040307	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:30	7040307	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 14:40	04/11/17 10:14	7040255	MTC



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

April 14, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0272

Project: CCR Event

Client ID: GWC-5

Lab Number ID: AAD0272-06

Date/Time Sampled: 4/6/2017 11:55:00AM

Date/Time Received: 4/7/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	279	25	10	mg/L	SM 2540 C		1	04/11/17 17:10	04/11/17 17:10	7040299	JPT
Inorganic Anions											
Chloride	27	0.25	0.01	mg/L	EPA 300.0	B-01	1	04/09/17 14:01	04/12/17 03:04	7040248	RLC
Fluoride	0.006	0.30	0.004	mg/L	EPA 300.0	J	1	04/09/17 14:01	04/12/17 03:04	7040248	RLC
Sulfate	140	10	0.92	mg/L	EPA 300.0	B-01	10	04/09/17 14:01	04/12/17 14:22	7040248	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:52	7040307	CSW
Arsenic	0.0006	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:52	7040307	CSW
Barium	0.162	0.0100	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:52	7040307	CSW
Beryllium	0.0003	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:52	7040307	CSW
Boron	2.76	2.00	0.302	mg/L	EPA 6020B		50	04/11/17 12:10	04/12/17 00:58	7040307	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:52	7040307	CSW
Calcium	16.2	5.00	0.522	mg/L	EPA 6020B		50	04/11/17 12:10	04/12/17 00:58	7040307	CSW
Chromium	0.0013	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:52	7040307	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:52	7040307	CSW
Lead	0.0003	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:52	7040307	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:52	7040307	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:52	7040307	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 00:52	7040307	CSW
Vanadium	0.0063	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:52	7040307	CSW
Zinc	0.0023	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:52	7040307	CSW
Lithium	0.0051	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 00:52	7040307	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 14:40	04/11/17 10:16	7040255	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 14, 2017

Report No.: AAD0272

Project: CCR Event

Client ID: GWC-9

Lab Number ID: AAD0272-07

Date/Time Sampled: 4/6/2017 1:40:00PM

Date/Time Received: 4/7/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	169	25	10	mg/L	SM 2540 C		1	04/11/17 17:10	04/11/17 17:10	7040299	JPT
Inorganic Anions											
Chloride	17	0.25	0.01	mg/L	EPA 300.0	B-01	1	04/09/17 14:01	04/12/17 03:25	7040248	RLC
Fluoride	0.16	0.30	0.004	mg/L	EPA 300.0	J	1	04/09/17 14:01	04/12/17 03:25	7040248	RLC
Sulfate	79	10	0.92	mg/L	EPA 300.0	B-01	10	04/09/17 14:01	04/12/17 14:43	7040248	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:04	7040307	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:04	7040307	CSW
Barium	0.249	0.100	0.0027	mg/L	EPA 6020B		10	04/11/17 12:10	04/13/17 16:44	7040307	CSW
Beryllium	0.0003	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:04	7040307	CSW
Boron	0.0181	0.0400	0.0060	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:04	7040307	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:04	7040307	CSW
Calcium	7.95	0.500	0.0104	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:04	7040307	CSW
Chromium	0.0019	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:04	7040307	CSW
Cobalt	0.0017	0.0100	0.0005	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:04	7040307	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:04	7040307	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:04	7040307	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:04	7040307	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:04	7040307	CSW
Vanadium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:04	7040307	CSW
Zinc	0.0047	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:04	7040307	CSW
Lithium	0.0021	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:04	7040307	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 14:40	04/11/17 10:18	7040255	MTC



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 14, 2017

Report No.: AAD0272

Project: CCR Event

Client ID: GWA-7

Lab Number ID: AAD0272-08

Date/Time Sampled: 4/6/2017 3:00:00PM

Date/Time Received: 4/7/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	3170	25	10	mg/L	SM 2540 C		1	04/11/17 17:10	04/11/17 17:10	7040299	JPT
Inorganic Anions											
Chloride	200	2.5	0.13	mg/L	EPA 300.0	B-01	10	04/09/17 14:01	04/12/17 15:03	7040248	RLC
Fluoride	0.05	0.30	0.004	mg/L	EPA 300.0	J	1	04/09/17 14:01	04/12/17 03:46	7040248	RLC
Sulfate	25	1.0	0.09	mg/L	EPA 300.0	B-01	1	04/09/17 14:01	04/12/17 03:46	7040248	RLC
Metals, Total											
Antimony	ND	0.0050	0.0016	mg/L	EPA 6020B	R-01	5	04/11/17 12:10	04/12/17 03:33	7040307	CSW
Arsenic	0.0104	0.0050	0.0021	mg/L	EPA 6020B		5	04/11/17 12:10	04/12/17 03:33	7040307	CSW
Barium	0.136	0.0500	0.0013	mg/L	EPA 6020B		5	04/11/17 12:10	04/12/17 03:33	7040307	CSW
Beryllium	0.0004	0.0030	0.0003	mg/L	EPA 6020B	J	5	04/11/17 12:10	04/12/17 03:33	7040307	CSW
Boron	21.8	2.00	0.302	mg/L	EPA 6020B		50	04/11/17 12:10	04/12/17 03:39	7040307	CSW
Cadmium	ND	0.0050	0.0003	mg/L	EPA 6020B		5	04/11/17 12:10	04/12/17 03:33	7040307	CSW
Calcium	7.72	2.50	0.0522	mg/L	EPA 6020B		5	04/11/17 12:10	04/12/17 03:33	7040307	CSW
Chromium	0.0447	0.0500	0.0017	mg/L	EPA 6020B	J	5	04/11/17 12:10	04/12/17 03:33	7040307	CSW
Cobalt	0.0060	0.0500	0.0023	mg/L	EPA 6020B	J	5	04/11/17 12:10	04/12/17 03:33	7040307	CSW
Lead	0.0109	0.0050	0.0003	mg/L	EPA 6020B		5	04/11/17 12:10	04/12/17 03:33	7040307	CSW
Molybdenum	ND	0.0100	0.0030	mg/L	EPA 6020B		5	04/11/17 12:10	04/12/17 03:33	7040307	CSW
Selenium	0.0188	0.0500	0.0070	mg/L	EPA 6020B	J	5	04/11/17 12:10	04/12/17 03:33	7040307	CSW
Thallium	ND	0.0020	0.0002	mg/L	EPA 6020B	R-01	5	04/11/17 12:10	04/12/17 03:33	7040307	CSW
Vanadium	0.297	0.0500	0.0068	mg/L	EPA 6020B		5	04/11/17 12:10	04/12/17 03:33	7040307	CSW
Zinc	0.0829	0.0500	0.0063	mg/L	EPA 6020B		5	04/11/17 12:10	04/13/17 16:49	7040307	CSW
Lithium	ND	0.250	0.0053	mg/L	EPA 6020B		5	04/11/17 12:10	04/12/17 03:33	7040307	CSW
Mercury	0.00004	0.00050	0.000041	mg/L	EPA 7470A	J	1	04/10/17 14:40	04/11/17 10:21	7040255	MTC



PACE ANALYTICAL SERVICES, LLC.

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 2480 Maner Road
 Atlanta GA, 30339

April 14, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0272

Project: CCR Event

Client ID: GWC-22

Lab Number ID: AAD0272-09

Date/Time Sampled: 4/6/2017 12:50:00PM

Date/Time Received: 4/7/2017 9:20:00AM

Matrix: Ground Water

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	04/11/17 17:10	04/11/17 17:10	7040299	JPT
Inorganic Anions											
Chloride	50	0.25	0.01	mg/L	EPA 300.0	B-01	1	04/09/17 14:01	04/12/17 04:07	7040248	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/09/17 14:01	04/12/17 04:07	7040248	RLC
Sulfate	220	20	1.8	mg/L	EPA 300.0	B-01	20	04/09/17 14:01	04/12/17 15:24	7040248	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:15	7040307	CSW
Arsenic	0.0006	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:15	7040307	CSW
Barium	0.0640	0.0100	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:15	7040307	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:15	7040307	CSW
Boron	0.733	0.0400	0.0060	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:15	7040307	CSW
Cadmium	0.0001	0.0010	0.00006	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:15	7040307	CSW
Calcium	42.7	25.0	0.522	mg/L	EPA 6020B		50	04/11/17 12:10	04/12/17 01:21	7040307	CSW
Chromium	0.0006	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:15	7040307	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:15	7040307	CSW
Lead	0.0003	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:15	7040307	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:15	7040307	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:15	7040307	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:15	7040307	CSW
Vanadium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:15	7040307	CSW
Zinc	0.0031	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:15	7040307	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:15	7040307	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 14:40	04/11/17 10:23	7040255	MTC



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 14, 2017

Report No.: AAD0272

Project: CCR Event

Client ID: FB-2-4-17

Lab Number ID: AAD0272-10

Date/Time Sampled: 4/5/2017 5:15:00PM

Date/Time Received: 4/7/2017 9:20:00AM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	04/11/17 17:10	04/11/17 17:10	7040299	JPT
Inorganic Anions											
Chloride	0.16	0.25	0.01	mg/L	EPA 300.0	B-01, J	1	04/09/17 14:01	04/12/17 04:29	7040248	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/09/17 14:01	04/12/17 04:29	7040248	RLC
Sulfate	0.15	1.0	0.09	mg/L	EPA 300.0	B-01, J	1	04/09/17 14:01	04/12/17 04:29	7040248	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:27	7040307	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:27	7040307	CSW
Barium	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:27	7040307	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:27	7040307	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:27	7040307	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:27	7040307	CSW
Calcium	0.0263	0.500	0.0104	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:27	7040307	CSW
Chromium	0.0006	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:27	7040307	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:27	7040307	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:27	7040307	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:27	7040307	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:27	7040307	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:27	7040307	CSW
Vanadium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:27	7040307	CSW
Zinc	ND	0.0100	0.0013	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:27	7040307	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:27	7040307	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 14:40	04/11/17 10:25	7040255	MTC



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 14, 2017

Report No.: AAD0272

Project: CCR Event

Client ID: EB-2-4-5-17

Lab Number ID: AAD0272-11

Date/Time Sampled: 4/5/2017 6:15:00PM

Date/Time Received: 4/7/2017 9:20:00AM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	19	25	10	mg/L	SM 2540 C	J	1	04/11/17 17:10	04/11/17 17:10	7040299	JPT
Inorganic Anions											
Chloride	0.08	0.25	0.01	mg/L	EPA 300.0	B-01, J	1	04/09/17 14:01	04/12/17 04:51	7040248	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/09/17 14:01	04/12/17 04:51	7040248	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	04/09/17 14:01	04/12/17 04:51	7040248	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:32	7040307	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:32	7040307	CSW
Barium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:32	7040307	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:32	7040307	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:32	7040307	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:32	7040307	CSW
Calcium	0.0436	0.500	0.0104	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:32	7040307	CSW
Chromium	0.0006	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:32	7040307	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:32	7040307	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:32	7040307	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:32	7040307	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:32	7040307	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:32	7040307	CSW
Vanadium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:32	7040307	CSW
Zinc	0.0026	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:32	7040307	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:32	7040307	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 14:40	04/11/17 10:28	7040255	MTC



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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 14, 2017

Report No.: AAD0272

Project: CCR Event

Client ID: EB-1-4-5-17

Lab Number ID: AAD0272-12

Date/Time Sampled: 4/5/2017 5:20:00PM

Date/Time Received: 4/7/2017 9:20:00AM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	04/11/17 17:10	04/11/17 17:10	7040299	JPT
Inorganic Anions											
Chloride	0.08	0.25	0.01	mg/L	EPA 300.0	B-01, J	1	04/09/17 14:01	04/12/17 06:40	7040248	RLC
Fluoride	0.02	0.30	0.004	mg/L	EPA 300.0	J	1	04/09/17 14:01	04/12/17 06:40	7040248	RLC
Sulfate	ND	1.0	0.09	mg/L	EPA 300.0		1	04/09/17 14:01	04/12/17 06:40	7040248	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:38	7040307	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:38	7040307	CSW
Barium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:38	7040307	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:38	7040307	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:38	7040307	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:38	7040307	CSW
Calcium	0.0249	0.500	0.0104	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:38	7040307	CSW
Chromium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:38	7040307	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:38	7040307	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:38	7040307	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:38	7040307	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:38	7040307	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:38	7040307	CSW
Vanadium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:38	7040307	CSW
Zinc	ND	0.0100	0.0013	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:38	7040307	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:38	7040307	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	04/10/17 14:40	04/11/17 10:30	7040255	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

April 14, 2017

Attention: Mr. Joju Abraham

Report No.: AAD0272
Client ID: Dup-2-4-5-17
Date/Time Sampled: 4/5/2017 12:00:00AM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: AAD0272-13
Date/Time Received: 4/7/2017 9:20:00AM

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	04/11/17 17:10	04/11/17 17:10	7040299	JPT
Inorganic Anions											
Chloride	150	12	0.65	mg/L	EPA 300.0	B-01	50	04/09/17 14:01	04/12/17 15:45	7040248	RLC
Fluoride	0.62	0.30	0.004	mg/L	EPA 300.0		1	04/09/17 14:01	04/12/17 07:02	7040248	RLC
Sulfate	950	50	4.6	mg/L	EPA 300.0	B-01	50	04/09/17 14:01	04/12/17 15:45	7040248	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:55	7040307	CSW
Arsenic	0.0008	0.0050	0.0004	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:55	7040307	CSW
Barium	0.0164	0.0100	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:55	7040307	CSW
Beryllium	0.0008	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:55	7040307	CSW
Boron	6.75	2.00	0.302	mg/L	EPA 6020B		50	04/11/17 12:10	04/12/17 02:01	7040307	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:55	7040307	CSW
Calcium	92.3	25.0	0.522	mg/L	EPA 6020B		50	04/11/17 12:10	04/12/17 02:01	7040307	CSW
Chromium	0.0012	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:55	7040307	CSW
Cobalt	0.0014	0.0100	0.0005	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:55	7040307	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:55	7040307	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:55	7040307	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 01:55	7040307	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:55	7040307	CSW
Vanadium	0.0040	0.0100	0.0014	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:55	7040307	CSW
Zinc	0.0033	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:55	7040307	CSW
Lithium	0.0013	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 01:55	7040307	CSW
Mercury	0.00019	0.00050	0.000041	mg/L	EPA 7470A	J	1	04/10/17 14:40	04/11/17 10:33	7040255	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 14, 2017

Report No.: AAD0272

Project: CCR Event

Client ID: GWC-13

Lab Number ID: AAD0272-14

Date/Time Sampled: 4/6/2017 5:45:00PM

Date/Time Received: 4/7/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	23	25	10	mg/L	SM 2540 C	J	1	04/11/17 17:10	04/11/17 17:10	7040299	JPT
Inorganic Anions											
Chloride	3.7	0.25	0.01	mg/L	EPA 300.0	B-01	1	04/09/17 14:01	04/12/17 07:23	7040248	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	04/09/17 14:01	04/12/17 07:23	7040248	RLC
Sulfate	49	1.0	0.09	mg/L	EPA 300.0	B-01	1	04/09/17 14:01	04/12/17 07:23	7040248	RLC
Metals, Total											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 02:07	7040307	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 02:07	7040307	CSW
Barium	0.0204	0.0100	0.0003	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 02:07	7040307	CSW
Beryllium	ND	0.0030	0.00007	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 02:07	7040307	CSW
Boron	0.112	0.0400	0.0060	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 02:07	7040307	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 02:07	7040307	CSW
Calcium	2.04	0.500	0.0104	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 02:07	7040307	CSW
Chromium	0.0011	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 02:07	7040307	CSW
Cobalt	ND	0.0100	0.0005	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 02:07	7040307	CSW
Lead	0.0005	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 02:07	7040307	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 02:07	7040307	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 02:07	7040307	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 02:07	7040307	CSW
Vanadium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 02:07	7040307	CSW
Zinc	0.0027	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/11/17 12:10	04/12/17 02:07	7040307	CSW
Lithium	ND	0.0500	0.0011	mg/L	EPA 6020B		1	04/11/17 12:10	04/12/17 02:07	7040307	CSW
Mercury	0.00013	0.00050	0.000041	mg/L	EPA 7470A	J	1	04/10/17 14:40	04/11/17 10:42	7040255	MTC



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Attention: Mr. Joju Abraham

April 14, 2017

Report No.: AAD0272

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040299 - SM 2540 C											
Blank (7040299-BLK1)						Prepared & Analyzed: 04/11/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7040299-BS1)						Prepared & Analyzed: 04/11/17					
Total Dissolved Solids	405	25	10	mg/L	400.00		101	84-108			
Duplicate (7040299-DUP1)						Source: AAD0272-08 Prepared & Analyzed: 04/11/17					
Total Dissolved Solids	3170	25	10	mg/L		3170			0	10	
Duplicate (7040299-DUP2)						Source: AAD0272-12 Prepared & Analyzed: 04/11/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 14, 2017

Report No.: AAD0272

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040248 - EPA 300.0											
Blank (7040248-BLK1)						Prepared: 04/09/17 Analyzed: 04/11/17					
Chloride	0.05	0.25	0.01	mg/L							J
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	0.59	1.0	0.09	mg/L							J
LCS (7040248-BS1)						Prepared: 04/09/17 Analyzed: 04/11/17					
Chloride	10.7	0.25	0.01	mg/L	10.010		107	90-110			
Fluoride	10.7	0.30	0.004	mg/L	10.020		107	90-110			
Sulfate	10.7	1.0	0.09	mg/L	10.020		107	90-110			
Duplicate (7040248-DUP1)						Source: AAD0271-05RE1			Prepared: 04/09/17 Analyzed: 04/14/17		
Chloride	1.16	0.25	0.01	mg/L		1.18			2	15	
Fluoride	ND	0.30	0.004	mg/L		ND				15	
Sulfate	0.98	1.0	0.09	mg/L		0.88			11	15	J
Matrix Spike (7040248-MS1)						Source: AAD0271-01			Prepared: 04/09/17 Analyzed: 04/11/17		
Chloride	11.3	0.25	0.01	mg/L	10.010	1.10	102	90-110			
Fluoride	10.5	0.30	0.004	mg/L	10.020	ND	105	90-110			
Sulfate	12.7	1.0	0.09	mg/L	10.020	2.50	102	90-110			
Matrix Spike (7040248-MS2)						Source: AAD0271-05RE1			Prepared: 04/09/17 Analyzed: 04/11/17		
Chloride	10.9	0.25	0.01	mg/L	10.010	1.18	97	90-110			QM-02
Fluoride	10.6	0.30	0.004	mg/L	10.020	ND	106	90-110			QM-02
Sulfate	11.1	1.0	0.09	mg/L	10.020	0.88	102	90-110			QM-02
Matrix Spike Dup (7040248-MSD1)						Source: AAD0271-01			Prepared: 04/09/17 Analyzed: 04/11/17		
Chloride	11.2	0.25	0.01	mg/L	10.010	1.10	101	90-110	0.9	15	
Fluoride	10.5	0.30	0.004	mg/L	10.020	ND	105	90-110	0.2	15	
Sulfate	12.6	1.0	0.09	mg/L	10.020	2.50	101	90-110	0.9	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

April 14, 2017

Report No.: AAD0272

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040220 - EPA 7470A											
Blank (7040220-BLK1)						Prepared & Analyzed: 04/10/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7040220-BS1)						Prepared & Analyzed: 04/10/17					
Mercury	0.00251	0.00050	0.000041	mg/L	2.5000E-3		100	80-120			
Matrix Spike (7040220-MS1)						Source: AAD0166-01 Prepared & Analyzed: 04/10/17					
Mercury	0.00256	0.00050	0.000041	mg/L	2.5000E-3	ND	102	75-125			
Matrix Spike Dup (7040220-MSD1)						Source: AAD0166-01 Prepared & Analyzed: 04/10/17					
Mercury	0.00241	0.00050	0.000041	mg/L	2.5000E-3	ND	96	75-125	6	20	
Post Spike (7040220-PS1)						Source: AAD0166-01 Prepared & Analyzed: 04/10/17					
Mercury	1.70			ug/L	1.6667	0.0107	102	80-120			
Batch 7040255 - EPA 7470A											
Blank (7040255-BLK1)						Prepared: 04/10/17 Analyzed: 04/11/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7040255-BS1)						Prepared: 04/10/17 Analyzed: 04/11/17					
Mercury	0.00241	0.00050	0.000041	mg/L	2.5000E-3		96	80-120			
Matrix Spike (7040255-MS1)						Source: AAD0272-03 Prepared: 04/10/17 Analyzed: 04/11/17					
Mercury	0.00229	0.00050	0.000041	mg/L	2.5000E-3	ND	92	75-125			
Matrix Spike Dup (7040255-MSD1)						Source: AAD0272-03 Prepared: 04/10/17 Analyzed: 04/11/17					
Mercury	0.00235	0.00050	0.000041	mg/L	2.5000E-3	ND	94	75-125	2	20	



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Attention: Mr. Joju Abraham

April 14, 2017

Report No.: AAD0272

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7040255 - EPA 7470A

Post Spike (7040255-PS1)		Source: AAD0272-03			Prepared: 04/10/17 Analyzed: 04/11/17						
Mercury	1.64			ug/L	1.6667	0.00666	98	80-120			

Batch 7040307 - EPA 3005A

Blank (7040307-BLK1)					Prepared & Analyzed: 04/11/17						
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 (7040307-BS1)					Prepared & Analyzed: 04/11/17						
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	0.102	0.0100	0.0003	mg/L	0.10000		102	80-120			
Beryllium	0.108	0.0030	0.00007	mg/L	0.10000		108	80-120			
Boron	1.09	0.0400	0.0060	mg/L	1.0000		109	80-120			
Cadmium	0.105	0.0010	0.00006	mg/L	0.10000		105	80-120			
Calcium	1.01	0.500	0.0104	mg/L	1.0000		101	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	0.103	0.0250	0.0003	mg/L	0.10000		103	80-120			
Lead	0.0982	0.0050	0.00007	mg/L	0.10000		98	80-120			
Molybdenum	0.103	0.0100	0.0006	mg/L	0.10000		103	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	0.101	0.0100	0.0003	mg/L	0.10000		101	80-120			



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April 14, 2017

Report No.: AAD0272

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040307 - EPA 3005A											
LCS (7040307-BS1)						Prepared & Analyzed: 04/11/17					
Thallium	0.0989	0.0010	0.00005	mg/L	0.10000		99	80-120			
Vanadium	0.100	0.0100	0.0014	mg/L	0.10000		100	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 (7040307-MS1)						Source: AAD0271-06 Prepared & Analyzed: 04/11/17					
Antimony	0.105	0.0030	0.0003	mg/L	0.10000	0.0005	105	75-125			
Arsenic	0.103	0.0050	0.0004	mg/L	0.10000	0.0026	100	75-125			
Barium	0.124	0.0100	0.0003	mg/L	0.10000	0.0238	100	75-125			
Beryllium	0.110	0.0030	0.00007	mg/L	0.10000	ND	110	75-125			
Boron	1.05	0.0400	0.0060	mg/L	1.0000	ND	105	75-125			
Cadmium	0.103	0.0010	0.00006	mg/L	0.10000	ND	103	75-125			
Calcium	24.8	25.0	0.522	mg/L	1.0000	23.7	108	75-125			J
Chromium	0.106	0.0100	0.0003	mg/L	0.10000	0.0005	106	75-125			
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	0.0008	102	75-125			
Copper	0.0991	0.0250	0.0003	mg/L	0.10000	0.0004	99	75-125			
Lead	0.0983	0.0050	0.00007	mg/L	0.10000	0.0002	98	75-125			
Molybdenum	0.110	0.0100	0.0006	mg/L	0.10000	0.0019	108	75-125			
Nickel	0.106	0.0100	0.0003	mg/L	0.10000	0.0014	105	75-125			
Selenium	0.0996	0.0100	0.0014	mg/L	0.10000	ND	100	75-125			
Silver	0.100	0.0100	0.0003	mg/L	0.10000	ND	100	75-125			
Thallium	0.0987	0.0010	0.00005	mg/L	0.10000	ND	99	75-125			
Vanadium	0.102	0.0100	0.0014	mg/L	0.10000	ND	102	75-125			
Zinc	0.102	0.0100	0.0013	mg/L	0.10000	0.0024	99	75-125			
Lithium	0.110	0.0500	0.0011	mg/L	0.10000	ND	110	75-125			
Matrix Spike Dup (7040307-MSD1)						Source: AAD0271-06 Prepared & Analyzed: 04/11/17					
Antimony	0.104	0.0030	0.0003	mg/L	0.10000	0.0005	104	75-125	1	20	
Arsenic	0.104	0.0050	0.0004	mg/L	0.10000	0.0026	101	75-125	1	20	
Barium	0.124	0.0100	0.0003	mg/L	0.10000	0.0238	100	75-125	0.04	20	
Beryllium	0.103	0.0030	0.00007	mg/L	0.10000	ND	103	75-125	6	20	
Boron	1.04	0.0400	0.0060	mg/L	1.0000	ND	104	75-125	0.2	20	
Cadmium	0.103	0.0010	0.00006	mg/L	0.10000	ND	103	75-125	0.3	20	
Calcium	24.5	25.0	0.522	mg/L	1.0000	23.7	76	75-125	1	20	J
Chromium	0.109	0.0100	0.0003	mg/L	0.10000	0.0005	108	75-125	3	20	
Cobalt	0.102	0.0100	0.0005	mg/L	0.10000	0.0008	101	75-125	0.5	20	
Copper	0.0991	0.0250	0.0003	mg/L	0.10000	0.0004	99	75-125	0.008	20	
Lead	0.0988	0.0050	0.00007	mg/L	0.10000	0.0002	99	75-125	0.5	20	
Molybdenum	0.110	0.0100	0.0006	mg/L	0.10000	0.0019	108	75-125	0.5	20	
Nickel	0.103	0.0100	0.0003	mg/L	0.10000	0.0014	101	75-125	3	20	



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 14, 2017

Report No.: AAD0272

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040307 - EPA 3005A											
Matrix Spike Dup (7040307-MSD1)			Source: AAD0271-06			Prepared & Analyzed: 04/11/17					
Selenium	0.101	0.0100	0.0014	mg/L	0.10000	ND	101	75-125	0.9	20	
Silver	0.101	0.0100	0.0003	mg/L	0.10000	ND	101	75-125	0.7	20	
Thallium	0.100	0.0010	0.00005	mg/L	0.10000	ND	100	75-125	2	20	
Vanadium	0.101	0.0100	0.0014	mg/L	0.10000	ND	101	75-125	2	20	
Zinc	0.103	0.0100	0.0013	mg/L	0.10000	0.0024	101	75-125	1	20	
Lithium	0.107	0.0500	0.0011	mg/L	0.10000	ND	107	75-125	3	20	
Post Spike (7040307-PS1)			Source: AAD0271-06			Prepared & Analyzed: 04/11/17					
Antimony	97.3			ug/L	100.00	0.549	97	80-120			
Arsenic	104			ug/L	100.00	2.61	101	80-120			
Barium	124			ug/L	100.00	23.8	101	80-120			
Beryllium	92.8			ug/L	100.00	0.0275	93	80-120			
Boron	970			ug/L	1000.0	4.76	97	80-120			
Cadmium	101			ug/L	100.00	0.0388	101	80-120			
Calcium	24100			ug/L	1000.0	23700	43	80-120			QM-02
Chromium	109			ug/L	100.00	0.520	108	80-120			
Cobalt	104			ug/L	100.00	0.830	103	80-120			
Copper	99.8			ug/L	100.00	0.410	99	80-120			
Lead	97.3			ug/L	100.00	0.170	97	80-120			
Molybdenum	108			ug/L	100.00	1.93	106	80-120			
Nickel	104			ug/L	100.00	1.43	103	80-120			
Selenium	99.5			ug/L	100.00	0.277	99	80-120			
Silver	103			ug/L	100.00	0.182	103	80-120			
Thallium	98.0			ug/L	100.00	0.0308	98	80-120			
Vanadium	102			ug/L	100.00	0.213	102	80-120			
Zinc	101			ug/L	100.00	2.45	99	80-120			
Lithium	98.0			ug/L	100.00	0.796	97	80-120			



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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 14, 2017

Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

- R-01** Elevated reporting limit due to matrix interference.
- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).
- B-01** Analyte was detected in the associated method blank at an estimated level equal to or greater than the MDL. Sample values reported as greater than the MDL and less than 10x the method blank value are reported as estimated values.

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



Pace Analytical Services, Inc.
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PAGE: / OF /

CHAIN OF CUSTODY RECORD

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 Health McCorkle PO #: laburch@southernco.com PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase 2 CCR & State D&O		CONTAINER TYPE: PRESERVATION # of CONTAINERS		ANALYSIS REQUESTED			CONTAINER TYPE PRESERVATION P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤8°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen	
Collection DATE 4-5-17	Collection TIME 1425	MATRIX CODE* GW	COMPARISON Y	SAMPLE IDENTIFICATION GWL-16 State 7-26-17	Metals App. III & IV (FPA 6020/7470) Metals (See attached) EPA 6020 Cl, F, SO ₄ & TDS (FPA 300.0 & SM 2540C) Radium 226 & 228 (SW-846 9315/9320)	P 3 P 3 P 7 P 3	L A B N U M B E R	
SAMPLED BY AND TITLE: O. FURBER (ACC)		DATE/TIME: 4-5-17 1425	RELINQUISHED BY: [Signature]	DATE/TIME: 4/17/17 0920	LAB #: AAD 0272	REMARKS/ADDITIONAL INFORMATION		
RECEIVED BY: [Signature]		DATE/TIME: 4/17/17 0920	RELINQUISHED BY: [Signature]	DATE/TIME: 4/17/17 0920	FOR LAB USE ONLY Entered into LIMS: Tracking #:			
RECEIVED BY LAB: [Signature]		DATE/TIME: 4/17/17 0920	UPS Intact Broken Not Present	FED-EX Intact Broken Not Present	USPS Intact Broken Not Present	COURIER Intact Broken Not Present	OTHER Intact Broken Not Present	

Plant Kraft - Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR & State



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CHAIN OF CUSTODY RECORD

PAGE: _____ OF _____

CLIENT NAME:		ANALYSIS REQUESTED		CONTAINER TYPE		PRESERVATION	
Georgia Power		P P P P P P P P		P - PLASTIC		1 - HCl, ≤6°C	
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:		P P P P P P P P		A - AMBER GLASS		2 - H ₂ SO ₄ , ≤6°C	
241 Ralph McGill Blvd SE B10185		P P P P P P P P		G - CLEAR GLASS		3 - HNO ₃	
Atlanta, GA 30308		P P P P P P P P		V - VOA VIAL		4 - NaOH, ≤6°C	
404-506-7239		P P P P P P P P		S - STERILE		5 - NaOH/ZnAc, ≤6°C	
REPORT TO:		P P P P P P P P		O - OTHER		6 - Na ₂ S ₂ O ₃ , ≤6°C	
Lauren Petty		P P P P P P P P				7 - ≤6°C not frozen	
HEALTH McCorkle		P P P P P P P P					
PO #:		P P P P P P P P					
laburch@southernco.com		P P P P P P P P					
PROJECT NAME/STATE:		P P P P P P P P					
Plant Kraft Grumman Road		P P P P P P P P					
Phase 2 CCR & State D&O		P P P P P P P P					
PROJECT #:		P P P P P P P P					
		P P P P P P P P					
Collection DATE	Collection TIME	MATRIX CODE*	C O M P	G R A B	SAMPLE IDENTIFICATION	CONTAINER TYPE	PRESERVATION
4-5-17	1306	GW	X	X	GWC-17	A	
4-5-17	1630	GW	X	X	GWC-12	B	
4-6-17	1025	GW	X	X	GWC-6	D	
4-6-17	1245	GW	X	X	GWC-11	N	
4-6-17	1158	GW	X	X	GWC-5	U	
4-6-17	1340	GW	X	X	GWC-9	M	
4-6-17	1500	GW	X	X	GWA-7	B	
4-6-17	1250	GW	X	X	GWC-22	8	
4-5-17	1715	W	X	X	FB-2-4-17	9	
4-5-17	1815	W	X	X	EB-2-4-5-17	10	
4-5-17	1720	W	X	X	EB-1-4-5-17	11	
4-5-17	---	GW	X	X	DIP-2-4-5-17	12	
SAMPLED BY AND TITLE:						LAB #:	
D. ELLIOTT (see)						AADO272	
RECEIVED BY:						Entered into LIMS:	
						Tracking #:	
DATE/TIME:						DATE/TIME:	
4/17/17						0920	
RELINQUISHED BY:						DATE/TIME:	
						4/17/17	
RELINQUISHED BY:						DATE/TIME:	
SAMPLE SHIPPED VIA:						CLIENT:	
UPS						ES	
FED-EX						Cooler ID:	
USPS						Cooler ID:	
COURIER						Cooler ID:	
# of Coolers							
Intact							
Broken							
Not Present							

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR & State



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PAGE: _____ OF _____

CHAIN OF CUSTODY RECORD

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: Mania Padilla Heath McCorkle REQUESTED COMPLETION DATE: PO #: laburch@southernco.com		PROJECT NAME/STATE: Plant Kraft Grumman Road Phase 2 CCR & State D&O	
CONTAINER TYPE: PRESERVATION # of CONTAINERS	P 3 P 3 P 7 P 3	ANALYSIS REQUESTED Metals App. III & IV Metals (See attached) EPA 6020 Cl, F, SO ₄ & TDS (FPA 300.0 & SM 2540C) Radium 226 & 228 (SW-846 9315/9320)	ANALYSIS REQUESTED METALS P 3 P 7 P 3	CONTAINER TYPE PRESERVATION # of CONTAINERS	P 3 P 3 P 7 P 3
COLLECTION DATE 4-6-17 COLLECTION TIME 1745 MATRIX CODE* 6N SAMPLE IDENTIFICATION GNC-13	C O R A M P B X	DATE/TIME 4-6-17 1745 RECEIVED BY O. HIGUITA	DATE/TIME 4-6-17 1745 RECEIVED BY O. HIGUITA	DATE/TIME 4/17/17 0920 RECEIVED BY Charles Hombach	DATE/TIME 4/17/17 0920 RECEIVED BY Charles Hombach
CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		PRESERVATION 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen		*MATRIX CODES: DW - DRINKING WATER S - SOIL MW - WASTEWATER SL - SLUDGE GW - GROUNDWATER SD - SOLID SW - SURFACE WATER A - AIR ST - STORM WATER L - LIQUID W - WATER P - PRODUCT	
LABORATORY INFORMATION LAB #: AAD0272 Entered into LIMS: [Signature] Tracking #: [Signature]		REMARKS/ADDITIONAL INFORMATION			

Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd CCR Phase 2 CCR & State



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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LOG-IN CHECKLIST

Printed: 4/10/2017 9:20:50AM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 04/07/17 09:20

Work Order: AAD0272

Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 14

#Containers: 56

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:

May 02, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAD0272 Plant Kraft
Pace Project No.: 30215621

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on April 10, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AAD0272 Plant Kraft
Pace Project No.: 30215621

Pennsylvania Certification IDs

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: AAD0272 Plant Kraft

Pace Project No.: 30215621

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30215621001	GWC-16	Water	04/05/17 14:25	04/10/17 09:45
30215621002	GWC-17	Water	04/05/17 13:06	04/10/17 09:45
30215621003	GWC-12	Water	04/05/17 16:30	04/10/17 09:45
30215621004	GWC-6	Water	04/06/17 10:25	04/10/17 09:45
30215621005	GWC-11	Water	04/06/17 12:45	04/10/17 09:45
30215621006	GWC-5	Water	04/06/17 11:55	04/10/17 09:45
30215621007	GWC-9	Water	04/06/17 13:40	04/10/17 09:45
30215621008	GWA-7	Water	04/06/17 15:00	04/10/17 09:45
30215621009	GWC-22	Water	04/06/17 12:50	04/10/17 09:45
30215621010	FB-2-4-17	Water	04/05/17 17:15	04/10/17 09:45
30215621011	EB-2-4-5-17	Water	04/05/17 18:15	04/10/17 09:45
30215621012	EB-1-4-5-17	Water	04/05/17 17:20	04/10/17 09:45
30215621013	Dup-2-4-5-17	Water	04/05/17 00:00	04/10/17 09:45
30215621014	GWC-13	Water	04/06/17 17:45	04/10/17 09:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AAD0272 Plant Kraft
Pace Project No.: 30215621

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30215621001	GWC-16	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215621002	GWC-17	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215621003	GWC-12	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215621004	GWC-6	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215621005	GWC-11	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215621006	GWC-5	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215621007	GWC-9	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215621008	GWA-7	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215621009	GWC-22	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215621010	FB-2-4-17	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215621011	EB-2-4-5-17	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215621012	EB-1-4-5-17	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30215621013	Dup-2-4-5-17	EPA 9315	JC2	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AAD0272 Plant Kraft
Pace Project No.: 30215621

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30215621014	GWC-13	EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
		EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAD0272 Plant Kraft
Pace Project No.: 30215621

Sample: GWC-16		Lab ID: 30215621001	Collected: 04/05/17 14:25	Received: 04/10/17 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	0.791 ± 0.355 (0.481) C:94% T:NA	pCi/L	04/20/17 10:57	13982-63-3	
Radium-228	EPA 9320	0.932 ± 0.435 (0.753) C:77% T:90%	pCi/L	04/25/17 12:12	15262-20-1	
Total Radium	Total Radium Calculation	1.72 ± 0.790 (1.23)	pCi/L	05/02/17 16:17	7440-14-4	

Sample: GWC-17		Lab ID: 30215621002	Collected: 04/05/17 13:06	Received: 04/10/17 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	2.64 ± 0.664 (0.405) C:89% T:NA	pCi/L	04/20/17 10:57	13982-63-3	
Radium-228	EPA 9320	1.75 ± 0.543 (0.695) C:80% T:84%	pCi/L	04/25/17 12:12	15262-20-1	
Total Radium	Total Radium Calculation	4.39 ± 1.21 (1.10)	pCi/L	05/02/17 16:17	7440-14-4	

Sample: GWC-12		Lab ID: 30215621003	Collected: 04/05/17 16:30	Received: 04/10/17 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	0.979 ± 0.351 (0.261) C:92% T:NA	pCi/L	04/20/17 12:18	13982-63-3	
Radium-228	EPA 9320	2.27 ± 0.656 (0.782) C:80% T:79%	pCi/L	04/25/17 12:12	15262-20-1	
Total Radium	Total Radium Calculation	3.25 ± 1.01 (1.04)	pCi/L	05/02/17 16:17	7440-14-4	

Sample: GWC-6		Lab ID: 30215621004	Collected: 04/06/17 10:25	Received: 04/10/17 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	1.52 ± 0.462 (0.368) C:91% T:NA	pCi/L	04/20/17 10:58	13982-63-3	
Radium-228	EPA 9320	0.838 ± 0.442 (0.795) C:81% T:79%	pCi/L	04/25/17 12:12	15262-20-1	
Total Radium	Total Radium Calculation	2.36 ± 0.904 (1.16)	pCi/L	05/02/17 16:17	7440-14-4	

Sample: GWC-11		Lab ID: 30215621005	Collected: 04/06/17 12:45	Received: 04/10/17 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	0.0596 ± 0.152 (0.369) C:83% T:NA	pCi/L	04/20/17 10:58	13982-63-3	
Radium-228	EPA 9320	0.833 ± 0.446 (0.803) C:77% T:79%	pCi/L	04/25/17 12:12	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAD0272 Plant Kraft

Pace Project No.: 30215621

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-11 Lab ID: 30215621005 Collected: 04/06/17 12:45 Received: 04/10/17 09:45 Matrix: Water						
PWS: Site ID: Sample Type:						
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	0.893 ± 0.598 (1.17)	pCi/L	05/02/17 16:17	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-5 Lab ID: 30215621006 Collected: 04/06/17 11:55 Received: 04/10/17 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	1.17 ± 0.424 (0.470) C:89% T:NA	pCi/L	04/20/17 10:58	13982-63-3	
Radium-228	EPA 9320	1.49 ± 0.500 (0.698) C:80% T:87%	pCi/L	04/25/17 12:12	15262-20-1	
Total Radium	Total Radium Calculation	2.66 ± 0.924 (1.17)	pCi/L	05/02/17 16:17	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-9 Lab ID: 30215621007 Collected: 04/06/17 13:40 Received: 04/10/17 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	1.43 ± 0.441 (0.309) C:91% T:NA	pCi/L	04/20/17 10:58	13982-63-3	
Radium-228	EPA 9320	1.67 ± 0.537 (0.704) C:83% T:77%	pCi/L	04/25/17 12:12	15262-20-1	
Total Radium	Total Radium Calculation	3.10 ± 0.978 (1.01)	pCi/L	05/02/17 16:17	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWA-7 Lab ID: 30215621008 Collected: 04/06/17 15:00 Received: 04/10/17 09:45 Matrix: Water						
PWS: Site ID: Sample Type:						
Comments: • Upon receipt at the laboratory, 3 mls of nitric acid were added to the samples to meet the sample preservation requirement of pH <2 for radiological analyses.						
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	7.47 ± 1.68 (0.687) C:99% T:NA	pCi/L	04/27/17 08:21	13982-63-3	
Radium-228	EPA 9320	1.46 ± 0.635 (1.05) C:81% T:78%	pCi/L	04/25/17 12:12	15262-20-1	
Total Radium	Total Radium Calculation	8.93 ± 2.32 (1.74)	pCi/L	05/02/17 16:17	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-22 Lab ID: 30215621009 Collected: 04/06/17 12:50 Received: 04/10/17 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	1.48 ± 0.465 (0.408) C:85% T:NA	pCi/L	04/20/17 10:58	13982-63-3	
Radium-228	EPA 9320	1.52 ± 0.514 (0.735) C:84% T:83%	pCi/L	04/25/17 12:12	15262-20-1	
Total Radium	Total Radium Calculation	3.00 ± 0.979 (1.14)	pCi/L	05/02/17 16:17	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAD0272 Plant Kraft

Pace Project No.: 30215621

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FB-2-4-17 Lab ID: 30215621010 Collected: 04/05/17 17:15 Received: 04/10/17 09:45 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	-0.0681 ± 0.181 (0.534) C:85% T:NA	pCi/L	04/20/17 10:58	13982-63-3	
Radium-228	EPA 9320	0.0261 ± 0.277 (0.639) C:85% T:89%	pCi/L	04/25/17 12:12	15262-20-1	
Total Radium	Total Radium Calculation	0.0261 ± 0.458 (1.17)	pCi/L	05/02/17 16:17	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EB-2-4-5-17 Lab ID: 30215621011 Collected: 04/05/17 18:15 Received: 04/10/17 09:45 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.174 ± 0.243 (0.531) C:91% T:NA	pCi/L	04/20/17 10:58	13982-63-3	
Radium-228	EPA 9320	0.221 ± 0.330 (0.713) C:81% T:81%	pCi/L	04/25/17 12:12	15262-20-1	
Total Radium	Total Radium Calculation	0.395 ± 0.573 (1.24)	pCi/L	05/02/17 16:17	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EB-1-4-5-17 Lab ID: 30215621012 Collected: 04/05/17 17:20 Received: 04/10/17 09:45 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.0158 ± 0.111 (0.310) C:83% T:NA	pCi/L	04/20/17 12:18	13982-63-3	
Radium-228	EPA 9320	0.0367 ± 0.276 (0.638) C:80% T:84%	pCi/L	04/25/17 12:13	15262-20-1	
Total Radium	Total Radium Calculation	0.0525 ± 0.387 (0.948)	pCi/L	05/02/17 16:17	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: Dup-2-4-5-17 Lab ID: 30215621013 Collected: 04/05/17 00:00 Received: 04/10/17 09:45 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.770 ± 0.314 (0.324) C:94% T:NA	pCi/L	04/20/17 12:18	13982-63-3	
Radium-228	EPA 9320	2.63 ± 0.702 (0.784) C:83% T:86%	pCi/L	04/25/17 12:16	15262-20-1	
Total Radium	Total Radium Calculation	3.40 ± 1.02 (1.11)	pCi/L	05/02/17 16:17	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-13 Lab ID: 30215621014 Collected: 04/06/17 17:45 Received: 04/10/17 09:45 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.164 ± 0.208 (0.438) C:86% T:NA	pCi/L	04/20/17 12:18	13982-63-3	
Radium-228	EPA 9320	0.275 ± 0.347 (0.736) C:78% T:75%	pCi/L	04/25/17 12:14	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAD0272 Plant Kraft

Pace Project No.: 30215621

Sample: GWC-13 **Lab ID: 30215621014** Collected: 04/06/17 17:45 Received: 04/10/17 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	0.439 ± 0.555 (1.17)	pCi/L	05/02/17 16:17	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAD0272 Plant Kraft

Pace Project No.: 30215621

QC Batch:	255526	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	30215621001, 30215621002, 30215621003, 30215621004, 30215621005, 30215621006, 30215621007, 30215621008, 30215621009, 30215621010, 30215621011, 30215621012, 30215621013		

METHOD BLANK:	1258753	Matrix:	Water
Associated Lab Samples:	30215621001, 30215621002, 30215621003, 30215621004, 30215621005, 30215621006, 30215621007, 30215621008, 30215621009, 30215621010, 30215621011, 30215621012, 30215621013		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.234 ± 0.336 (0.721) C:80% T:78%	pCi/L	04/25/17 12:14	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAD0272 Plant Kraft

Pace Project No.: 30215621

QC Batch: 255575

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30215621014

METHOD BLANK: 1258859

Matrix: Water

Associated Lab Samples: 30215621014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0683 ± 0.141 (0.329) C:84% T:NA	pCi/L	04/20/17 12:18	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAD0272 Plant Kraft

Pace Project No.: 30215621

QC Batch: 255528

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30215621014

METHOD BLANK: 1258756

Matrix: Water

Associated Lab Samples: 30215621014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.133 ± 0.282 (0.625) C:82% T:83%	pCi/L	04/25/17 12:14	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAD0272 Plant Kraft

Pace Project No.: 30215621

QC Batch:	255574	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	30215621001, 30215621002, 30215621003, 30215621004, 30215621005, 30215621006, 30215621007, 30215621008, 30215621009, 30215621010, 30215621011, 30215621012, 30215621013		

METHOD BLANK:	1258858	Matrix:	Water
Associated Lab Samples:	30215621001, 30215621002, 30215621003, 30215621004, 30215621005, 30215621006, 30215621007, 30215621008, 30215621009, 30215621010, 30215621011, 30215621012, 30215621013		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.128 ± 0.159 (0.319) C:92% T:NA	pCi/L	04/20/17 10:56	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: AAD0272 Plant Kraft

Pace Project No.: 30215621

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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WO#: 30215621



Chain of Custody



Results Requested By: 5/2/2017

Owner Received Date:

Workorder Name: Plant Kraft

Workorder: AAD0272

Report To: Betsy McDaniel
 Pace Analytical Atlanta
 110 Technology Parkway
 Peachtree Corners, GA 30092
 Phone (770)-734-4200

Subcontract To: Pace - Pittsburgh
 1638 Roseytown Road
 Stes. 2,3,4
 Greensburg, PA 15601
 Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		Date/Time	Comments
						NO	3		
1	GWC-16	G	4/5/2017 14:25	AAD0272-01	GW	2			
2	GWC-17	G	4/5/2017 13:06	AAD0272-02	GW	2			
3	GWC-12	G	4/5/2017 16:30	AAD0272-03	GW	2			
4	GWC-6	G	4/6/2017 10:25	AAD0272-04	GW	2			
5	GWC-11	G	4/6/2017 12:45	AAD0272-05	GW	2			
6	GWC-5	G	4/6/2017 11:55	AAD0272-06	GW	2			
7	GWC-9	G	4/6/2017 13:40	AAD0272-07	GW	2			
8	GWA-7	G	4/6/2017 15:00	AAD0272-08	GW	2			
9	GWC-22	G	4/6/2017 12:50	AAD0272-09	GW	2			
10	FB-2-4-17	G	4/5/2017 17:15	AAD0272-10	W	2			

Transfers Released By		Date/Time	Received By	Date/Time	Comments
1	<i>McDaniel</i>	4/7/17	<i>Wahly-Pace</i>	4-10-17	PAUS
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.

30215621



Chain of Custody

Workorder: AAD0272 Workorder Name: Plant Kraft Owner Received Date: Results Requested By: 5/2/2017
 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		LAB USE ONLY
						HNO3		
11	EB-2-4-5-17	G	4/5/2017 18:15	AAD0272-11	W	2		011
12	EB-1-4-5-17	G	4/5/2017 17:20	AAD0272-12	W	2		012
13	Dup-2-4-5-17	G	4/5/2017 0:00	AAD0272-13	GW	2		013
14	GWC-13	G	4/6/2017 17:45	AAD0272-14	GW	2		014
15								
16								
17								
18								
19								
20								

Radium 226, 228, Total

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			<i>Michelle Pace</i>	4-10-17/0945	
2					
3					

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

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

30215621

PAGE: 1 OF 1

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



CHAIN OF CUSTODY RECORD

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
 Health McCorkle
 PO #: laburch@southermco.com
 PROJECT NAME/STATE: Plant Kraft Grumman Road
 PROJECT #: Phase 2 CCR & State D&O

CONTAINER TYPE PRESERVATION	ANALYSIS REQUESTED						
	P	P	P	P	P	P	P
# of CONTAINERS	3	3	3	7	3		
	Metals App. III & IV (EPA 6020/7470)	Metals (See attached) EPA 6020	Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)			

CONTAINER TYPE: P - PLASTIC, A - AMBER GLASS, G - CLEAR GLASS, V - VOA VIAL, S - STERILE, O - OTHER
 PRESERVATION: 1 - HCl, 56°C, 2 - H₂SO₄, 56°C, 3 - HNO₃, 4 - NaOH, 56°C, 5 - NaOH/ZnAc, 56°C, 6 - Na₂S₂O₈, 56°C, 7 - 56°C not frozen
 MATRIX CODES:
 DW - DRINKING WATER, 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. FURBER (HCL)
 RECEIVED BY: [Signature]
 DATE/TIME: 4-5-17 1425
 DATE/TIME: 4-5-17 0920
 RECEIVED BY: [Signature]

RELINQUISHED BY: [Signature]
 DATE/TIME: 4/17/17 0920
 RELINQUISHED BY: [Signature]
 DATE/TIME: [Blank]

LAB #: AAD 0272
 Entered into LIMS: [Signature]
 Tracking #: [Blank]

Plant Kraft Grumman Road State constituents: As, Ba, Cd, Pb, Cr, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR & State
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Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.ash-lab.com



CHAIN OF CUSTODY RECORD

CLIENT NAME: Lauren Peity
 CLIENT ADDRESS: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308
 CLIENT PHONE: 404-506-7239
 REPORT TO: Lauren Peity
 CC: Maria Padilla
Heath McCorkle
 REQUESTED COMPLETION DATE: laburch@southemco.com
 PROJECT NAME/STATE: Plant Kraft Grumman Road
Phase 2 CCR & State D&O

CONTAINER TYPE	ANALYSIS REQUESTED			CONTAINER TYPE	PRESERVATION
	P	B	P		
# of CONTAINERS	1	1	1	2	
	Metals App. III & IV (EPA 6020/7470)	Metals (See attached) EPA 6020	Cl ⁻ , SO ₄ & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SM-846 9315/9320)	

Collection DATE	Collection TIME	MATRIX CODE*	C O M P	SAMPLE IDENTIFICATION	CONTAINER TYPE	PRESERVATION
4-5-17	1306	GW	X	GW-17	P - PLASTIC	1 - HCl, 56°C
4-5-17	1630	GW	X	GW-12	A - AMBER GLASS	2 - H ₂ SO ₄ , 56°C
4-6-17	1025	GW	X	GW-6	G - CLEAR GLASS	3 - HNO ₃
4-6-17	1245	GW	X	GW-11	V - VOA VIAL	4 - NaOH, 56°C
4-6-17	1158	GW	X	GW-5	S - STERILE	5 - NaOH/ZnAg, 56°C
4-6-17	1340	GW	X	GW-9	O - OTHER	6 - Na ₂ S ₂ O ₃ , 56°C
4-6-17	1500	GW	X	GWA-7		7 - 56°C not frozen
4-6-17	1250	GW	X	GW-22		
4-5-17	1715	W	X	FB-2-4-17		
4-5-17	1815	W	X	EB-2-4-5-17		
4-5-17	1720	W	X	EB-1-4-5-17		
4-5-17	---	GW	X	DMP-2-4-5-17		

RELINQUISHED BY: [Signature] DATE/TIME: 4/17/17 0920
 RELINQUISHED BY: [Signature] DATE/TIME: 4/17/17 0920
 SAMPLE SHIPPED VIA: UPS EX USPS COURIER CLIENT OTHER FS
 CUSTODY BEAT: Unass. Broken Not Preserved NA
 DATE/TIME: 4/17/17 0920
 RECEIVED BY: [Signature] DATE/TIME: 4/17/17 0920
 LAB # AAD0272
 Entered Into LIS: [Signature]
 Tracking #

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR & State

30215621

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

PAGE: 01

CLIENT NAME: Pace Analytical 241 Ralph McGill Blvd SE B10163 Atlanta, GA 30308 404-505-7238		CONTACT: Lauren Petty CC: Maria Padilla Heath McCorkle PO #: laburch@southernco.com		PROJECT NAME/STATE: Plant Kraft Grumman Road Phase 2 CCR & State D&O	
REPORT TO: Lauren Petty		PROJECT #: Phase 2 CCR & State D&O		CONTAINER #: 4	
REQUESTED COMPLETION DATE: 4-6-17 1745		DATE/TIME: 4-6-17 1745		DATE/TIME: 4-6-17 0920	
PROJECT #: Phase 2 CCR & State D&O		DATE/TIME: 4-6-17 1745		DATE/TIME: 4-6-17 0920	
Collection DATE 4-6-17		Collection TIME 1745		DATE/TIME 4-6-17 0920	
MATRIX CODE* BW		DATE/TIME 4-6-17 1745		DATE/TIME 4-6-17 0920	
GRAB X		DATE/TIME 4-6-17 1745		DATE/TIME 4-6-17 0920	
Sample Identification GNL-13		DATE/TIME 4-6-17 1745		DATE/TIME 4-6-17 0920	
CONTAINER # 4		DATE/TIME 4-6-17 1745		DATE/TIME 4-6-17 0920	
Metals App. III & IV (EPA 6020/7470)		DATE/TIME 4-6-17 1745		DATE/TIME 4-6-17 0920	
Metals (See attached) EPA 6020		DATE/TIME 4-6-17 1745		DATE/TIME 4-6-17 0920	
Cl, F, SO₄ & TDS (EPA 300.0 & SM 2540C)		DATE/TIME 4-6-17 1745		DATE/TIME 4-6-17 0920	
Radium 226 & 228 (SW-846 9315/9320)		DATE/TIME 4-6-17 1745		DATE/TIME 4-6-17 0920	
REMARKS/ADDITIONAL INFORMATION DW - DRINKING WATER S - SOIL WW - WASTEWATER SL - SLUDGE GW - GROUNDWATER SD - SOLID SW - SURFACE WATER A - AIR ST - STORM WATER L - LIQUID W - WATER P - PRODUCT		DATE/TIME 4-6-17 1745		DATE/TIME 4-6-17 0920	
COMPOSER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		DATE/TIME 4-6-17 1745		DATE/TIME 4-6-17 0920	
PRESERVATION 1 - HCl, 20°C 2 - HNO ₃ , 50°C 3 - HNO ₃ 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na ₂ S ₂ O ₃ , 56°C 7 - 56°C not frozen		DATE/TIME 4-6-17 1745		DATE/TIME 4-6-17 0920	
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		DATE/TIME 4-6-17 1745		DATE/TIME 4-6-17 0920	
REMARKS/ADDITIONAL INFORMATION AAD00272		DATE/TIME 4-6-17 1745		DATE/TIME 4-6-17 0920	

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
Plant Kraft - Grumman Rd COC Phase 2 CCR & State

Sample Condition Upon Receipt Pittsburgh

ANL



Client Name: Pace, GA

Project # 30 2 15 6 2 1

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 6812 5103 5148

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 4-10-17

Comments:

	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC:	X			5.
-Includes date/time/ID Matrix: <u>MT</u>				
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used:	X			
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Organic Samples checked for dechlorination:			X	13.
Filtered volume received for Dissolved tests			X	14.
All containers have been checked for preservation.	X			15. <u>Added 3ml of HNO₃ to 008 2-ILIS</u>
All containers needing preservation are found to be in compliance with EPA recommendation.		X		
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>AGR</u> Date/time of preservation: <u>4-10-17/1130</u>
				Lot # of added preservative: <u>DL17-0359</u>
Headspace in VOA Vials (>6mm):			X	16.
Trip Blank Present:		X		17.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: <u>AGR</u> Date: <u>4-10-17</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JCZ
Date: 4/19/2017
Worklist: 35144
Matrix: DW

Method Blank Assessment	
MB Sample ID	1258858
MB concentration:	0.128
M/B Counting Uncertainty:	0.157
MB MDC:	0.319
MB Numerical Performance Indicator:	1.59
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	4/20/2017
Spike I.D.:	17-003
Spike Concentration (pCi/mL):	38.229
Volume Used (mL):	0.25
Aliquot Volume (L, g, F):	0.503
Target Conc. (pCi/L, g, F):	19.013
Uncertainty (Calculated):	0.894
Result (pCi/L, g, F):	16.733
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.287
Numerical Performance Indicator:	-2.85
Percent Recovery:	88.01%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30215341007
Duplicate Sample I.D.:	30215341007DUP
Sample Result Counting Uncertainty (pCi/L, g, F):	0.106
Sample Duplicate Result (pCi/L, g, F):	0.154
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	-0.056
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.115
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	1.651
Duplicate Status vs Numerical Indicator:	650.79%
Duplicate Status vs RPD:	N/A
Duplicate Status vs Recovery:	Fail***

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

Comments:

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

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

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

TAR DW QC

Printed: 5/2/2017 8:30 AM

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JC2
Date: 4/19/2017
Worklist: 35145
Matrix: DW

Method Blank Assessment	
MB Sample ID	1258859
MB concentration:	0.068
M/B Counting Uncertainty:	0.140
MB MDC:	0.329
MB Numerical Performance Indicator:	0.95
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	4/21/2017
Spike I.D.:	LCSD35145
Spike Concentration (pCi/mL):	17.003
Volume Used (mL):	38.229
Aliquot Volume (L, g, F):	0.25
Target Conc. (pCi/L, g, F):	0.501
Uncertainty (Calculated):	19.062
Result (pCi/L, g, F):	0.897
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	16.721
Numerical Performance Indicator:	1.175
Percent Recovery:	-3.10
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30215621014
Duplicate Sample I.D.:	30215621014DUP
Sample Result Counting Uncertainty (pCi/L, g, F):	0.164
Sample Duplicate Result (pCi/L, g, F):	0.207
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.204
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-0.306
Duplicate RPD:	21.75%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

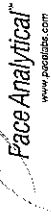
Comments:

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

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: J.L.W
Date: 4/20/2017
Worklist: 35140
Matrix: DW

Method Blank Assessment	
MB Sample ID	1258753
MB concentration:	0.234
MB Counting Uncertainty:	0.333
MB MDC:	0.721
MB Numerical Performance Indicator:	1.38
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS (Y or N)?
Count Date:	4/25/2017	LCS D35140
Spike I.D.:	17-005	4/25/2017
Spike Concentration (pCi/mL):	24.697	17-005
Volume Used (mL):	0.20	24.697
Alliquot Volume (L, g, F):	0.800	0.20
Target Conc. (pCi/L, g, F):	6.171	0.800
Uncertainty (Calculated):	0.444	6.171
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	6.013	0.444
Numerical Performance Indicator:	-0.37	6.013
Percent Recovery:	97.43%	0.444
Status vs Numerical Indicator:	N/A	103.10%
Status vs Recovery:	Pass	N/A

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS35140	
Duplicate Sample I.D.:	LCS D35140	
Sample Result (pCi/L, g, F):	6.013	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.707	
Sample Duplicate Result (pCi/L, g, F):	6.362	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.721	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-0.678	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	5.66%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

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

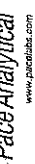
Comments:

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

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 4/20/2017
Worklist: 35141
Matrix: DW

Method Blank Assessment	
MB Sample ID	1258756
MB Concentration:	0.133
M/B Counting Uncertainty:	0.281
MB MDC:	0.625
MB Numerical Performance Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	4/25/2017
Spike I.D.:	17-005
Spike Concentration (pCi/mL):	24.697
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.801
Target Conc. (pCi/L, g, F):	6.170
Uncertainty (Calculated):	0.444
Result (pCi/L, g, F):	5.998
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.703
Numerical Performance Indicator:	-0.41
Percent Recovery:	97.21%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30215625004
Duplicate Sample I.D.:	30215625004DUP
Sample Result (pCi/L, g, F):	0.133
Sample Duplicate Result (pCi/L, g, F):	0.277
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.166
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.303
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-0.158
Duplicate RPD:	22.19%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

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

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



PACE ANALYTICAL SERVICES, LLC.

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

Laboratory Report

Prepared For:

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

Attention: Mr. Joju Abraham

Report Number: AAD0274

April 17, 2017

Project: CCR Event

Project #: Plant Kraft Grumman Road

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

Approved:

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

Project Manager

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All test results relate only to the samples analyzed.



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

Attention: Mr. Joju Abraham

April 17, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-9 (Filtered)	AAD0274-01	Ground Water	04/06/17 13:50	04/07/17 09:20
GWA-7 (Filtered)	AAD0274-02	Ground Water	04/06/17 15:10	04/07/17 09:20



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 17, 2017

Report No.: AAD0274

Project: CCR Event

Client ID: GWC-9 (Filtered)

Lab Number ID: AAD0274-01

Date/Time Sampled: 4/6/2017 1:50:00PM

Date/Time Received: 4/7/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Metals, Dissolved											
Antimony	ND	0.0030	0.0003	mg/L	EPA 6020B		1	04/10/17 09:40	04/14/17 01:42	7040224	CSW
Arsenic	ND	0.0050	0.0004	mg/L	EPA 6020B		1	04/10/17 09:40	04/14/17 01:42	7040224	CSW
Barium	0.258	0.250	0.0133	mg/L	EPA 6020B		50	04/10/17 09:40	04/14/17 01:48	7040224	CSW
Beryllium	0.0003	0.0030	0.00007	mg/L	EPA 6020B	J	1	04/10/17 09:40	04/14/17 01:42	7040224	CSW
Boron	0.0184	0.0400	0.0060	mg/L	EPA 6020B	J	1	04/10/17 09:40	04/14/17 01:42	7040224	CSW
Cadmium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	04/10/17 09:40	04/14/17 01:42	7040224	CSW
Calcium	7.96	0.500	0.0104	mg/L	EPA 6020B	B-01	1	04/10/17 09:40	04/14/17 01:42	7040224	CSW
Chromium	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	04/10/17 09:40	04/14/17 01:42	7040224	CSW
Cobalt	0.0018	0.0100	0.0005	mg/L	EPA 6020B	J	1	04/10/17 09:40	04/14/17 01:42	7040224	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	04/10/17 09:40	04/14/17 01:42	7040224	CSW
Molybdenum	ND	0.0100	0.0006	mg/L	EPA 6020B		1	04/10/17 09:40	04/14/17 01:42	7040224	CSW
Selenium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/10/17 09:40	04/14/17 01:42	7040224	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	04/10/17 09:40	04/14/17 01:42	7040224	CSW
Vanadium	ND	0.0100	0.0014	mg/L	EPA 6020B		1	04/10/17 09:40	04/14/17 01:42	7040224	CSW
Zinc	0.0055	0.0100	0.0013	mg/L	EPA 6020B	J	1	04/10/17 09:40	04/14/17 01:42	7040224	CSW
Lithium	0.0023	0.0500	0.0011	mg/L	EPA 6020B	J	1	04/10/17 09:40	04/14/17 01:42	7040224	CSW
Mercury	ND	0.0005	0.00004	mg/L	EPA 7470A		1	04/10/17 11:45	04/10/17 19:29	7040221	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 17, 2017

Report No.: AAD0274

Project: CCR Event

Client ID: GWA-7 (Filtered)

Lab Number ID: AAD0274-02

Date/Time Sampled: 4/6/2017 3:10:00PM

Date/Time Received: 4/7/2017 9:20:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Metals, Dissolved											
Antimony	ND	0.0150	0.0016	mg/L	EPA 6020B	R-01	5	04/10/17 09:40	04/14/17 01:54	7040224	CSW
Arsenic	0.0041	0.0250	0.0021	mg/L	EPA 6020B	R-01, J	5	04/10/17 09:40	04/14/17 01:54	7040224	CSW
Barium	0.107	0.0500	0.0013	mg/L	EPA 6020B		5	04/10/17 09:40	04/14/17 01:54	7040224	CSW
Beryllium	ND	0.0150	0.0003	mg/L	EPA 6020B	R-01	5	04/10/17 09:40	04/14/17 01:54	7040224	CSW
Boron	23.4	2.00	0.302	mg/L	EPA 6020B		50	04/10/17 09:40	04/14/17 02:00	7040224	CSW
Cadmium	ND	0.0050	0.0003	mg/L	EPA 6020B	R-01	5	04/10/17 09:40	04/14/17 01:54	7040224	CSW
Calcium	7.80	2.50	0.0522	mg/L	EPA 6020B	B-01	5	04/10/17 09:40	04/14/17 01:54	7040224	CSW
Chromium	0.0384	0.0500	0.0017	mg/L	EPA 6020B	R-01, J	5	04/10/17 09:40	04/14/17 01:54	7040224	CSW
Cobalt	0.0051	0.0500	0.0023	mg/L	EPA 6020B	R-01, J	5	04/10/17 09:40	04/14/17 01:54	7040224	CSW
Lead	0.0009	0.0250	0.0003	mg/L	EPA 6020B	R-01, J	5	04/10/17 09:40	04/14/17 01:54	7040224	CSW
Molybdenum	ND	0.0500	0.0030	mg/L	EPA 6020B	R-01	5	04/10/17 09:40	04/14/17 01:54	7040224	CSW
Selenium	0.0183	0.0500	0.0070	mg/L	EPA 6020B	R-01, J	5	04/10/17 09:40	04/14/17 01:54	7040224	CSW
Thallium	ND	0.0050	0.0002	mg/L	EPA 6020B	R-01	5	04/10/17 09:40	04/14/17 01:54	7040224	CSW
Vanadium	0.320	0.0500	0.0068	mg/L	EPA 6020B		5	04/10/17 09:40	04/14/17 01:54	7040224	CSW
Zinc	0.0069	0.0500	0.0063	mg/L	EPA 6020B	R-01, J	5	04/10/17 09:40	04/14/17 01:54	7040224	CSW
Lithium	ND	0.250	0.0053	mg/L	EPA 6020B	R-01	5	04/10/17 09:40	04/14/17 01:54	7040224	CSW
Mercury	ND	0.0005	0.00004	mg/L	EPA 7470A		1	04/10/17 11:45	04/10/17 19:31	7040221	MTC



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Georgia Power
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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 17, 2017

Report No.: AAD0274

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040221 - EPA 7470A											
Blank (7040221-BLK1)						Prepared & Analyzed: 04/10/17					
Mercury	ND	0.0005	0.00004	mg/L							
LCS (7040221-BS1)						Prepared & Analyzed: 04/10/17					
Mercury	0.0025	0.0005	0.00004	mg/L	2.5000E-3		99	80-120			
Matrix Spike (7040221-MS1)						Source: AAD0168-01 Prepared & Analyzed: 04/10/17					
Mercury	0.0021	0.0005	0.00004	mg/L	2.5000E-3	ND	86	75-125			
Matrix Spike Dup (7040221-MSD1)						Source: AAD0168-01 Prepared & Analyzed: 04/10/17					
Mercury	0.0022	0.0005	0.00004	mg/L	2.5000E-3	ND	86	75-125	0.3	20	
Post Spike (7040221-PS1)						Source: AAD0168-01 Prepared & Analyzed: 04/10/17					
Mercury	1.58			ug/L	1.6667	0.0109	94	80-120			
Batch 7040224 - EPA 3005A											
Blank (7040224-BLK1)						Prepared: 04/10/17 Analyzed: 04/13/17					
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	0.0524	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							



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Georgia Power
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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

April 17, 2017

Report No.: AAD0274

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7040224 - EPA 3005A

Blank (7040224-BLK2)

Prepared: 04/10/17 Analyzed: 04/13/17

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 (7040224-BS1)

Prepared: 04/10/17 Analyzed: 04/13/17

Antimony	0.0914	0.0030	0.0003	mg/L	0.10000		91	80-120			
Arsenic	0.0838	0.0050	0.0004	mg/L	0.10000		84	80-120			
Barium	0.0982	0.0100	0.0003	mg/L	0.10000		98	80-120			
Beryllium	0.0901	0.0030	0.00007	mg/L	0.10000		90	80-120			
Boron	0.978	0.0400	0.0060	mg/L	1.0000		98	80-120			
Cadmium	0.0909	0.0010	0.00006	mg/L	0.10000		91	80-120			
Calcium	1.03	0.500	0.0104	mg/L	1.0000		103	80-120			
Chromium	0.109	0.0100	0.0003	mg/L	0.10000		109	80-120			
Cobalt	0.106	0.0100	0.0005	mg/L	0.10000		106	80-120			
Copper	0.104	0.0250	0.0003	mg/L	0.10000		104	80-120			
Lead	0.0934	0.0050	0.00007	mg/L	0.10000		93	80-120			
Molybdenum	0.109	0.0100	0.0006	mg/L	0.10000		109	80-120			
Nickel	0.106	0.0100	0.0003	mg/L	0.10000		106	80-120			
Selenium	0.0810	0.0100	0.0014	mg/L	0.10000		81	80-120			
Silver	0.0966	0.0100	0.0003	mg/L	0.10000		97	80-120			
Thallium	0.0967	0.0010	0.00005	mg/L	0.10000		97	80-120			
Vanadium	0.111	0.0100	0.0014	mg/L	0.10000		111	80-120			
Zinc	0.0898	0.0100	0.0013	mg/L	0.10000		90	80-120			
Lithium	0.115	0.0500	0.0011	mg/L	0.10000		115	80-120			



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April 17, 2017

Report No.: AAD0274

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7040224 - EPA 3005A

LCS (7040224-BS2)

Prepared: 04/10/17 Analyzed: 04/13/17

Antimony	0.106	0.0030	0.0003	mg/L	0.10000		106	80-120			
Arsenic	0.105	0.0050	0.0004	mg/L	0.10000		105	80-120			
Barium	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Beryllium	0.107	0.0030	0.00007	mg/L	0.10000		107	80-120			
Boron	1.08	0.0400	0.0060	mg/L	1.0000		108	80-120			
Cadmium	0.108	0.0010	0.00006	mg/L	0.10000		108	80-120			
Calcium	1.02	0.500	0.0104	mg/L	1.0000		102	80-120			
Chromium	0.106	0.0100	0.0003	mg/L	0.10000		106	80-120			
Cobalt	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Copper	0.104	0.0250	0.0003	mg/L	0.10000		104	80-120			
Lead	0.100	0.0050	0.00007	mg/L	0.10000		100	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	0.105	0.0100	0.0014	mg/L	0.10000		105	80-120			
Silver	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Thallium	0.100	0.0010	0.00005	mg/L	0.10000		100	80-120			
Vanadium	0.109	0.0100	0.0014	mg/L	0.10000		109	80-120			
Zinc	0.106	0.0100	0.0013	mg/L	0.10000		106	80-120			
Lithium	0.117	0.0500	0.0011	mg/L	0.10000		117	80-120			

Matrix Spike (7040224-MS1)

Source: AAD0274-01

Prepared: 04/10/17 Analyzed: 04/13/17

Antimony	0.105	0.0030	0.0003	mg/L	0.10000	ND	105	75-125			
Arsenic	0.103	0.0050	0.0004	mg/L	0.10000	ND	103	75-125			
Barium	0.372	0.500	0.0133	mg/L	0.10000	0.258	114	75-125			J
Beryllium	0.110	0.0030	0.00007	mg/L	0.10000	0.0003	110	75-125			
Boron	1.09	0.0400	0.0060	mg/L	1.0000	0.0184	107	75-125			
Cadmium	0.105	0.0010	0.00006	mg/L	0.10000	ND	105	75-125			
Calcium	9.17	0.500	0.0104	mg/L	1.0000	7.96	121	75-125			
Chromium	0.107	0.0100	0.0003	mg/L	0.10000	0.0007	106	75-125			
Cobalt	0.106	0.0100	0.0005	mg/L	0.10000	0.0018	104	75-125			
Copper	0.105	0.0250	0.0003	mg/L	0.10000	0.0012	104	75-125			
Lead	0.0986	0.0050	0.00007	mg/L	0.10000	0.0001	99	75-125			
Molybdenum	0.109	0.0100	0.0006	mg/L	0.10000	ND	109	75-125			
Nickel	0.105	0.0100	0.0003	mg/L	0.10000	0.0016	104	75-125			
Selenium	0.104	0.0100	0.0014	mg/L	0.10000	ND	104	75-125			
Silver	0.101	0.0100	0.0003	mg/L	0.10000	ND	101	75-125			
Thallium	0.0966	0.0010	0.00005	mg/L	0.10000	ND	97	75-125			
Vanadium	0.108	0.0100	0.0014	mg/L	0.10000	ND	108	75-125			
Zinc	0.110	0.0100	0.0013	mg/L	0.10000	0.0055	104	75-125			
Lithium	0.122	0.0500	0.0011	mg/L	0.10000	0.0023	120	75-125			



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Attention: Mr. Joju Abraham

April 17, 2017

Report No.: AAD0274

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7040224 - EPA 3005A											
Matrix Spike Dup (7040224-MSD1)			Source: AAD0274-01			Prepared: 04/10/17 Analyzed: 04/13/17					
Antimony	0.103	0.0030	0.0003	mg/L	0.10000	ND	103	75-125	2	20	
Arsenic	0.102	0.0050	0.0004	mg/L	0.10000	ND	102	75-125	1	20	
Barium	0.382	0.500	0.0133	mg/L	0.10000	0.258	124	75-125	3	20	J
Beryllium	0.105	0.0030	0.00007	mg/L	0.10000	0.0003	105	75-125	5	20	
Boron	1.02	0.0400	0.0060	mg/L	1.0000	0.0184	100	75-125	7	20	
Cadmium	0.107	0.0010	0.00006	mg/L	0.10000	ND	107	75-125	2	20	
Calcium	8.73	0.500	0.0104	mg/L	1.0000	7.96	77	75-125	5	20	
Chromium	0.104	0.0100	0.0003	mg/L	0.10000	0.0007	104	75-125	3	20	
Cobalt	0.105	0.0100	0.0005	mg/L	0.10000	0.0018	103	75-125	1	20	
Copper	0.103	0.0250	0.0003	mg/L	0.10000	0.0012	102	75-125	2	20	
Lead	0.0975	0.0050	0.00007	mg/L	0.10000	0.0001	97	75-125	1	20	
Molybdenum	0.109	0.0100	0.0006	mg/L	0.10000	ND	109	75-125	0.8	20	
Nickel	0.103	0.0100	0.0003	mg/L	0.10000	0.0016	101	75-125	2	20	
Selenium	0.101	0.0100	0.0014	mg/L	0.10000	ND	101	75-125	3	20	
Silver	0.0992	0.0100	0.0003	mg/L	0.10000	ND	99	75-125	2	20	
Thallium	0.0959	0.0010	0.00005	mg/L	0.10000	ND	96	75-125	0.7	20	
Vanadium	0.104	0.0100	0.0014	mg/L	0.10000	ND	104	75-125	5	20	
Zinc	0.108	0.0100	0.0013	mg/L	0.10000	0.0055	102	75-125	2	20	
Lithium	0.118	0.0500	0.0011	mg/L	0.10000	0.0023	116	75-125	3	20	
Post Spike (7040224-PS1)											
Source: AAD0274-01			Prepared: 04/10/17 Analyzed: 04/13/17								
Antimony	101			ug/L	100.00	0.0627	101	80-120			
Arsenic	102			ug/L	100.00	-0.0486	102	80-120			
Barium	379			ug/L	100.00	258	121	80-120			QM-02
Beryllium	110			ug/L	100.00	0.265	110	80-120			
Boron	1110			ug/L	1000.0	18.4	109	80-120			
Cadmium	105			ug/L	100.00	0.0035	105	80-120			
Calcium	8920			ug/L	1000.0	7960	96	80-120			
Chromium	111			ug/L	100.00	0.665	110	80-120			
Cobalt	109			ug/L	100.00	1.76	107	80-120			
Copper	106			ug/L	100.00	1.18	105	80-120			
Lead	97.3			ug/L	100.00	0.0977	97	80-120			
Molybdenum	107			ug/L	100.00	0.151	107	80-120			
Nickel	109			ug/L	100.00	1.60	108	80-120			
Selenium	104			ug/L	100.00	-0.101	104	80-120			
Silver	98.3			ug/L	100.00	0.0014	98	80-120			
Thallium	98.2			ug/L	100.00	0.0126	98	80-120			
Vanadium	112			ug/L	100.00	-0.148	112	80-120			
Zinc	113			ug/L	100.00	5.54	108	80-120			
Lithium	116			ug/L	100.00	2.34	114	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 17, 2017

Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

- R-01** Elevated reporting limit due to matrix interference.
- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).
- B-01** Analyte was detected in the associated method blank at an estimated level equal to or greater than the MDL. Sample values reported as greater than the MDL and less than 10x the method blank value are reported as estimated values.

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



PACE ANALYTICAL SERVICES, LLC.

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

LOG-IN CHECKLIST

Printed: 4/10/2017 9:29:19AM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 04/07/17 09:20

Work Order: AAD0274

Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 2

#Containers: 2

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:

Product Name: Low-Flow System

Date: 2017-07-13 10:41:16

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407446
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .375 in
Tubing Length 21 ft

Pump placement from TOC 18 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 21.1 ft
Screen Length 5 ft
Depth to Water 5.27 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.9410915 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 0
Last 5	10:20:04	600.02	27.89	6.05	2432.88	51.00	5.80	0.28	202.01
Last 5	10:25:04	900.02	28.02	6.00	2442.88	87.00	5.80	0.05	189.22
Last 5	10:30:04	1200.02	27.64	5.98	2462.02	147.00	5.80	0.01	182.44
Last 5	10:35:04	1500.02	27.19	5.99	2505.32	292.00	5.80	0.02	178.59
Last 5	10:40:04	1800.02	27.09	5.99	2553.35	409.00	5.80	0.01	170.08
Variance 0			-0.38	-0.02	19.14			-0.04	-6.77
Variance 1			-0.45	0.01	43.29			0.00	-3.85
Variance 2			-0.09	0.00	48.04			-0.01	-8.52

Notes

Sunny, 90's, sample time -1040, field filter metals here

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 10:40:25

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O Plant Kraft
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407446
Turbidity Make/Model Have 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 15 ft

Pump placement from TOC ft

Well Information:

Well ID GWA-8
Well diameter 2 in
Well Total Depth 20.9 ft
Screen Length 10 ft
Depth to Water 6.32 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.1569514 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 15 in
Total Volume Pumped 17.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:15:05	7501.02	26.03	4.35	324.07	6.01	7.60	0.08	228.69
Last 5	10:20:05	7801.02	25.88	4.35	324.81	5.72	7.60	0.07	228.73
Last 5	10:25:05	8101.02	26.05	4.35	325.94	5.13	7.60	0.07	229.39
Last 5	10:30:05	8401.02	26.15	4.35	323.82	5.01	7.60	0.07	227.14
Last 5	10:35:05	8701.02	25.83	4.35	330.67	4.85	7.60	0.07	228.10
Variance 0			0.17	-0.01	1.13			-0.00	0.67
Variance 1			0.10	0.00	-2.12			-0.00	-2.25
Variance 2			-0.31	-0.00	6.84			0.00	0.96

Notes

Sunny, 80's, sample time 1035

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 10:02:16

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407446
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .375 in
Tubing Length 28 ft

Pump placement from TOC 25 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.1 ft
Screen Length 5 ft
Depth to Water 17.2 ft

Pumping Information:

Final Pumping Rate 300 mL/min
Total System Volume 1.093122 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7 in
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 0
Last 5	09:40:25	600.02	22.45	5.45	465.12	2.51	17.80	0.27	219.34
Last 5	09:45:25	900.02	22.32	5.47	468.34	3.61	17.80	0.17	211.99
Last 5	09:50:25	1200.02	22.32	5.47	468.40	3.20	17.80	0.15	206.72
Last 5	09:55:25	1500.02	22.31	5.45	473.16	2.52	17.80	0.14	204.82
Last 5	10:00:25	1800.02	22.23	5.46	468.88	2.18	17.80	0.13	202.80
Variance 0			0.00	0.00	0.06			-0.02	-5.27
Variance 1			-0.00	-0.02	4.77			-0.01	-1.90
Variance 2			-0.09	0.02	-4.28			-0.01	-2.02

Notes

Sunny 80's, sample time 1000, FB-2-7-12-17poured here

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-13 11:25:50

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 20.74"
Longitude -81° -11' -1.75"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 33 ft

Pump placement from TOC 29.2 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 31.4 ft
Screen Length 5 ft
Depth to Water 14.3 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.632293 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 19.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 100
Last 5	11:05:11	6299.93	22.68	4.75	73.07	5.74	14.30	0.20	104.36
Last 5	11:10:11	6599.96	22.80	4.75	73.64	6.01	14.30	0.20	104.70
Last 5	11:15:11	6899.93	22.72	4.75	72.30	5.23	14.30	0.21	104.36
Last 5	11:20:11	7199.92	22.78	4.75	72.63	5.28	14.30	0.20	104.71
Last 5	11:25:11	7499.90	22.85	4.74	72.94	4.56	14.30	0.21	105.43
Variance 0			-0.08	0.01	-1.34			0.01	-0.34
Variance 1			0.06	-0.00	0.33			-0.01	0.35
Variance 2			0.07	-0.01	0.31			0.02	0.72

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 13:48:28

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 20.21"
Longitude -81° -10' -55.13"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 20 ft

Pump placement from TOC 21 ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 22.8 ft
Screen Length 5 ft
Depth to Water 19.33 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1792685 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 100	pH +/- 0.1	SpCond µS/cm +/- 5%	Turb NTU +/- 10	DTW ft	RDO mg/L +/- 0.5	ORP mV +/- 10
Stabilization									
Last 5	13:25:12	1500.02	24.11	6.02	395.80	1.82	19.50	0.57	100.77
Last 5	13:30:12	1800.02	23.79	6.05	409.39	1.35	19.50	0.59	100.56
Last 5	13:35:12	2100.02	24.01	6.09	427.96	1.42	19.50	0.53	99.75
Last 5	13:40:12	2400.02	24.18	6.11	441.81	1.51	19.50	0.57	99.21
Last 5	13:45:12	2700.02	24.24	6.13	449.48	1.67	19.50	0.49	98.74
Variance 0			0.22	0.04	18.57			-0.05	-0.80
Variance 1			0.17	0.02	13.85			0.04	-0.54
Variance 2			0.07	0.02	7.68			-0.08	-0.48

Notes

Sampled collected @ 1345. Partly cloudy 92F.

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 17:03:49

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 26.17"
Longitude -81° -10' -56.79"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 23.9 ft

Well Information:

Well ID GWC-4
Well diameter 2 in
Well Total Depth 26.4 ft
Screen Length 5 ft
Depth to Water 13.66 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.6055124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 10
Last 5	16:40:04	2399.99	22.71	6.02	1420.96	312.00	15.50	0.10	126.66
Last 5	16:45:04	2699.99	22.72	5.99	1442.47	310.00	15.50	0.10	124.55
Last 5	16:50:04	2999.99	22.73	5.98	1453.82	302.00	15.50	0.10	121.44
Last 5	16:55:04	3299.97	22.80	5.96	1466.29	287.00	15.50	0.10	119.24
Last 5	17:00:04	3599.97	22.67	5.93	1486.72	293.00	15.50	0.10	117.79
Variance 0			0.00	-0.01	11.35			-0.00	-3.11
Variance 1			0.08	-0.02	12.47			0.00	-2.20
Variance 2			-0.13	-0.02	20.44			-0.00	-1.44

Notes

Sampled at 1700. Partly 93F. Field filtered sample collected

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 11:16:22

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 29.61"
Longitude -81° -10' -57.88"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 24.2 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 5 ft
Depth to Water 9.71 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.6055124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 11 in
Total Volume Pumped 28.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 100
Last 5	10:55:43	6299.92	22.10	5.36	531.99	109.00	10.60	0.11	91.89
Last 5	11:00:43	6599.91	22.18	5.36	530.76	105.00	10.60	0.12	90.87
Last 5	11:05:43	6899.91	22.10	5.36	529.43	100.00	10.60	0.11	89.90
Last 5	11:10:43	7199.90	22.15	5.36	527.99	103.00	10.60	0.11	88.83
Last 5	11:15:43	7499.90	22.17	5.36	528.55	95.00	10.60	0.11	88.05
Variance 0			-0.08	0.00	-1.33			-0.00	-0.97
Variance 1			0.05	-0.01	-1.44			-0.00	-1.07
Variance 2			0.02	0.00	0.57			0.00	-0.77

Notes

No sample collected. Pump pulled and bagged.

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 12:33:07

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 29.5"
Longitude -81° -10' -57.88"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 24.2 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 5 ft
Depth to Water 9.71 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 8 in
Total Volume Pumped 45.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	12:10:04	600.01	22.86	5.30	502.82	9.25	10.50	0.04	123.33
Last 5	12:15:04	900.01	22.63	5.30	508.89	8.38	10.50	0.04	122.65
Last 5	12:20:04	1200.00	22.72	5.29	501.20	7.84	10.50	0.04	120.47
Last 5	12:25:04	1500.00	22.80	5.30	511.61	6.88	10.50	0.04	120.26
Last 5	12:30:04	1800.00	22.74	5.29	494.15	6.95	10.50	0.04	118.46
Variance 0			0.09	-0.01	-7.69			-0.00	-2.18
Variance 1			0.09	0.01	10.41			-0.00	-0.21
Variance 2			-0.06	-0.02	-17.47			-0.00	-1.80

Notes

Started purge @ 0810. Monitored WL, vol., & NTU. Sample collected at 1230. Partly cloudy 90F.

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 13:51:09

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407446
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .375 in
Tubing Length 22 ft

Pump placement from TOC 19 ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 22.8 ft
Screen Length 5 ft
Depth to Water 7.24 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.9628102 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5 in
Total Volume Pumped 36 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 0
Last 5	13:30:05	9600.02	23.37	5.23	691.95	7.43	7.80	0.11	141.62
Last 5	13:35:05	9900.02	23.26	5.23	688.77	7.35	7.80	0.11	143.00
Last 5	13:40:05	10200.02	23.04	5.24	688.72	7.10	7.80	0.11	145.20
Last 5	13:45:05	10500.09	23.41	5.23	692.57	5.34	7.80	0.11	147.35
Last 5	13:50:05	10800.05	23.44	5.24	690.85	4.68	7.80	0.12	148.30
Variance 0			-0.23	0.00	-0.05			-0.00	2.20
Variance 1			0.37	-0.00	3.85			-0.00	2.15
Variance 2			0.03	0.00	-1.72			0.01	0.95

Notes

Sunny, 90's, sample time- 1350

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 17:31:52

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407446
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .375 in
Tubing Length 25 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 25.7 ft
Screen Length 5 ft
Depth to Water 6.82 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 1.027966 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 0
Last 5	17:10:04	300.02	24.65	4.50	235.82	11.50	8.70	1.48	201.08
Last 5	17:15:04	600.02	24.41	4.62	239.72	3.00	10.10	0.75	189.87
Last 5	17:20:04	900.02	24.61	4.17	242.43	4.56	11.30	1.40	278.98
Last 5	17:25:04	1200.02	24.83	3.87	255.57	2.04	0.00	3.21	331.35
Last 5	17:30:04	1500.02	25.66	3.94	213.45	3.40	--	6.39	290.24
Variance 0			0.20	-0.44	2.71			0.64	89.11
Variance 1			0.23	-0.30	13.14			1.82	52.37
Variance 2			0.82	0.07	-42.12			3.18	-41.11

Notes

No sample collected. Well pumped dry. Allowing for recharge. Collecting after recharge.

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 08:43:29

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407446
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .375 in
Tubing Length 25 ft

Pump placement from TOC 22 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 25.7 ft
Screen Length 5 ft
Depth to Water 7.10 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 1.027966 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 36 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 0
Last 5	08:25:47	300.03	24.28	5.01	231.16	0.86	8.60	1.82	127.54
Last 5	08:30:47	600.02	26.01	4.57	233.95	0.70	9.10	1.03	164.52
Last 5	08:35:47	900.02	26.65	4.55	233.21	1.39	9.50	0.85	190.81
Last 5	08:40:47	1200.02	26.84	4.56	232.74	0.85	9.90	0.83	221.61
Last 5									
Variance 0			1.73	-0.44	2.79			-0.79	36.98
Variance 1			0.64	-0.02	-0.74			-0.18	26.29
Variance 2			0.19	0.01	-0.47			-0.01	30.80

Notes

Sunny, well purged dry. Allowed for recharge, sample collected at 0840

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 13:01:40

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407446
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .375 in
Tubing Length 22 ft

Pump placement from TOC 20 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 22.5 ft
Screen Length 5 ft
Depth to Water 9.73 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.9628102 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 16 in
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 0
Last 5	12:40:12	599.94	28.27	5.28	148.61	4.84	10.70	1.79	556.65
Last 5	12:45:12	899.94	28.13	5.28	147.93	1.94	10.90	1.88	557.40
Last 5	12:50:12	1199.95	27.99	5.21	148.24	1.59	11.00	1.84	539.94
Last 5	12:55:12	1500.01	28.08	5.26	149.97	1.42	11.10	1.69	543.68
Last 5	13:00:12	1799.97	28.04	5.26	146.32	1.49	11.10	1.50	564.57
Variance 0			-0.14	-0.08	0.32			-0.04	-17.47
Variance 1			0.09	0.05	1.73			-0.16	3.75
Variance 2			-0.04	0.00	-3.65			-0.19	20.89

Notes

Sunny,90's, sample time- 1300

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-10 16:52:34

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O Plant Kraft
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407446
Turbidity Make/Model Have 2100Q

Pump Information:

Pump Model/Type Ded QED Bladder
Tubing Type poly
Tubing Diameter .375 in
Tubing Length 26 ft
Pump placement from TOC 21 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 16.7 ft
Depth to Water 9.92 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 1.049685 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5 in
Total Volume Pumped 36 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:30:37	9600.02	22.66	3.88	1594.69	9.59	10.30	0.10	174.16
Last 5	16:35:37	9900.02	22.58	3.89	1591.38	9.05	10.30	0.10	172.25
Last 5	16:40:37	10200.02	22.45	3.89	1589.88	8.99	10.30	0.10	170.77
Last 5	16:45:37	10500.02	22.36	3.89	1603.63	9.26	10.30	0.10	167.99
Last 5	16:50:37	10800.02	22.27	3.89	1611.84	9.47	10.30	0.10	165.07
Variance 0			-0.14	0.00	-1.51			-0.00	-1.48
Variance 1			-0.09	-0.00	13.75			0.00	-2.78
Variance 2			-0.09	0.00	8.21			0.00	-2.92

Notes

Rain, 70's, sample time-1650

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 16:23:57

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 24.03"
Longitude -81° -11' -2.94"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 21.6 ft

Well Information:

Well ID GWC-13
Well diameter 2 in
Well Total Depth 24.1 ft
Screen Length 5 ft
Depth to Water 12.19 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 142.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	16:02:46	5099.94	23.39	4.85	64.77	11.10	12.20	0.33	78.98
Last 5	16:07:46	5399.94	23.32	4.85	66.00	11.80	12.20	0.35	79.19
Last 5	16:12:46	5699.94	23.21	4.84	68.73	17.70	12.20	0.09	80.86
Last 5	16:17:46	5999.95	23.11	4.86	72.57	15.00	12.20	0.40	82.88
Last 5	16:22:46	6299.93	23.09	4.85	66.85	15.00	12.20	0.30	81.70
Variance 0			-0.10	-0.01	2.73			-0.26	1.67
Variance 1			-0.11	0.01	3.84			0.31	2.01
Variance 2			-0.02	-0.01	-5.72			-0.11	-1.17

Notes

No sample collected

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 15:06:44

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 24.07"
Longitude -81° -11' -2.97"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 21.6 ft

Well Information:

Well ID GWC-13
Well diameter 2 in
Well Total Depth 24.1 ft
Screen Length 5 ft
Depth to Water 11.42 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 10 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	14:45:17	300.02	24.58	4.81	51.21	7.22	12.20	1.87	55.36
Last 5	14:50:17	600.02	24.42	4.83	54.33	7.92	12.20	1.73	58.00
Last 5	14:55:17	900.02	24.10	4.83	58.17	7.60	12.20	1.53	61.29
Last 5	15:00:17	1200.00	24.47	4.82	57.99	29.20	12.20	1.33	63.47
Last 5	15:05:17	1500.00	24.73	4.83	58.09	5.12	12.20	1.18	65.15
Variance 0			-0.32	0.00	3.84			-0.20	3.29
Variance 1			0.36	-0.01	-0.18			-0.20	2.18
Variance 2			0.27	0.01	0.10			-0.15	1.69

Notes

Well previously purged 142 L.
Previously purged 142L. Sample collected @ 1505. Partly cloudy 92F.

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 15:57:10

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407446
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 24 ft

Pump placement from TOC ft

Well Information:

Well ID GWC-14
Well diameter 2 in
Well Total Depth 27.05 ft
Screen Length 5 ft
Depth to Water 17.66 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.1971222 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 7.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 0
Last 5	15:35:02	1500.02	23.07	4.72	919.82	10.90	17.60	0.15	298.89
Last 5	15:40:02	1800.02	22.94	4.71	925.57	7.25	17.60	0.14	297.14
Last 5	15:45:02	2100.02	23.27	4.72	929.19	6.01	17.60	0.14	291.47
Last 5	15:50:02	2400.02	23.16	4.72	926.30	5.06	17.60	0.13	290.23
Last 5	15:55:02	2700.02	22.96	4.72	925.18	3.48	17.60	0.13	289.60
Variance 0			0.32	0.00	3.63			-0.01	-5.66
Variance 1			-0.10	0.00	-2.89			-0.01	-1.24
Variance 2			-0.21	-0.00	-1.12			-0.00	-0.63

Notes

Sunny, 90's, sample time 1555, dup2 here

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 14:21:16

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407446
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 26 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWC-15
Well diameter 2 in
Well Total Depth 26.8 ft
Screen Length 5 ft
Depth to Water 18.11 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.601049 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 0
Last 5	14:00:02	600.02	24.43	6.53	992.24	10.20	18.20	0.25	311.28
Last 5	14:05:02	900.02	24.56	6.53	985.63	8.21	18.20	0.19	241.06
Last 5	14:10:02	1200.02	24.28	6.51	978.13	7.89	18.20	0.17	203.40
Last 5	14:15:02	1500.02	24.29	6.51	973.85	5.71	18.20	0.14	197.70
Last 5	14:20:02	1800.02	24.20	6.50	951.63	4.45	18.20	0.12	182.93
Variance 0			-0.29	-0.01	-7.50			-0.02	-37.66
Variance 1			0.01	-0.01	-4.28			-0.03	-5.70
Variance 2			-0.09	-0.01	-22.22			-0.01	-14.77

Notes

Sunny, 90's, sample time- 1420

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 14:21:02

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 17.1"
Longitude -81° -10' -55.16"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 29 ft

Pump placement from TOC 25.7 ft

Well Information:

Well ID GWC-16
Well diameter 2 in
Well Total Depth 28.2 ft
Screen Length 5 ft
Depth to Water 23.57 ft

Pumping Information:

Final Pumping Rate 0 mL/min
Total System Volume 0.6144392 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 34 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 100	pH +/- 0.1	SpCond µS/cm +/- 5%	Turb NTU +/- 0	DTW ft	RDO mg/L +/- 10	ORP mV +/- 100
Stabilization									
Last 5	14:00:10	8999.89	24.65	5.81	1212.89	34.60	19.50	0.61	124.65
Last 5	14:05:10	9299.89	24.47	5.81	1213.53	32.70	19.50	0.61	125.19
Last 5	14:10:10	9599.88	24.42	5.81	1210.90	33.80	19.50	0.60	125.49
Last 5	14:15:10	9899.89	24.97	5.81	1215.80	33.70	19.50	0.58	126.18
Last 5	14:20:13	10202.88	24.96	5.81	1209.37	31.40	19.50	0.59	126.76
Variance 0			-0.05	0.00	-2.63			-0.01	0.29
Variance 1			0.54	0.00	4.90			-0.01	0.69
Variance 2			-0.01	-0.00	-6.44			0.01	0.59

Notes

No sampled collected.

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 10:31:18

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 29 ft

Pump placement from TOC 25.7 ft

Well Information:

Well ID GWC-16
Well diameter 2 in
Well Total Depth 28.2 ft
Screen Length 5 ft
Depth to Water 23.57 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2194393 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 27 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 10
Last 5	10:10:03	8702.85	25.76	5.83	1234.95	6.35	19.50	0.42	130.67
Last 5	10:15:03	9002.85	25.45	5.83	1235.90	6.19	19.50	0.42	133.11
Last 5	10:20:03	9302.84	26.01	5.83	1229.23	5.61	19.50	0.41	135.46
Last 5	10:25:03	9602.84	26.11	5.83	1234.55	6.47	19.50	0.41	137.96
Last 5	10:30:03	9902.85	26.19	5.84	1228.84	5.95	19.50	0.41	140.60
Variance 0			0.56	0.00	-6.67			-0.01	2.35
Variance 1			0.10	-0.00	5.33			-0.00	2.50
Variance 2			0.07	0.00	-5.72			-0.00	2.64

Notes

Sampled collected @ 1030. Fair 87F

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-12 16:46:48

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407446
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .375 in
Tubing Length 23 ft

Pump placement from TOC 20 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 23.20 ft
Screen Length 5 ft
Depth to Water 4.87 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.9845288 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 18 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 0
Last 5	16:25:22	1802.02	24.76	4.21	3611.34	13.00	6.30	0.09	225.92
Last 5	16:30:22	2102.02	24.61	4.21	3612.29	14.00	6.30	0.09	227.38
Last 5	16:35:22	2402.02	24.72	4.21	3581.66	14.00	6.30	0.09	226.91
Last 5	16:40:22	2702.02	24.70	4.21	3573.55	13.00	6.30	0.08	227.86
Last 5	16:45:22	3002.02	24.97	4.21	3571.49	14.00	6.30	0.08	230.69
Variance 0			0.12	0.00	-30.62			0.00	-0.47
Variance 1			-0.03	0.00	-8.11			-0.01	0.95
Variance 2			0.27	-0.00	-2.06			-0.00	2.83

Notes

Continue from previous reading , rental iPod overheated and shut off.
Sunny 90's, no sample collected. Could not lower turbidity, pump pulled.

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-13 09:17:28

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 407446
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 23 ft

Pump placement from TOC 20 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 23.20 ft
Screen Length 5 ft
Depth to Water 5.04 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 19 in
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 0
Last 5	08:56:33	2400.02	25.15	4.19	3357.10	9.67	6.60	0.07	554.09
Last 5	09:01:33	2700.02	25.01	4.16	3449.61	7.77	6.60	0.07	629.97
Last 5	09:06:33	3000.02	25.33	4.13	3501.26	5.87	6.60	0.07	624.34
Last 5	09:11:33	3300.02	25.14	4.11	3559.80	4.84	6.60	0.07	602.54
Last 5	09:16:33	3600.02	25.42	4.11	3567.19	3.48	6.60	0.06	587.29
Variance 0			0.32	-0.03	51.65			-0.01	-5.63
Variance 1			-0.19	-0.03	58.54			0.00	-21.80
Variance 2			0.28	0.00	7.39			-0.01	-15.25

Notes

Sunny , 80's , sample time - 0916

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 17:20:57

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft Grumman Rd.
Latitude 32° 8' 19.57"
Longitude -81° -10' -55.15"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 22.4 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 24.9 ft
Screen Length 5 ft
Depth to Water 19.82 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 3.1 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 0.5	+/- 100
Last 5	17:00:07	300.02	25.17	5.97	1133.67	2.48	--	0.31	146.89
Last 5	17:05:07	600.02	24.83	6.00	1094.33	1.53	20.10	0.24	140.79
Last 5	17:10:07	900.00	24.84	6.00	1086.46	2.05	20.10	0.20	136.80
Last 5	17:15:07	1200.00	24.69	6.01	1085.83	1.03	20.10	0.19	133.76
Last 5	17:20:07	1500.00	24.88	5.96	1125.25	0.97	20.10	0.19	132.10
Variance 0			0.01	0.00	-7.87			-0.03	-3.99
Variance 1			-0.15	0.01	-0.64			-0.01	-3.04
Variance 2			0.18	-0.05	39.43			-0.01	-1.66

Notes

Sampled @ 1720. Mostly cloudy 89F.

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-13 08:32:33

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 17.13"
Longitude -81° -10' -55.18"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 24 ft

Pump placement from TOC 21.3 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 23.8 ft
Screen Length 5 ft
Depth to Water 19.27 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.5921222 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 13.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 10
Last 5	08:10:13	3299.96	23.18	5.43	112.73	4.49	19.50	7.05	100.98
Last 5	08:15:13	3599.95	23.21	5.48	116.42	4.18	19.50	6.93	102.25
Last 5	08:20:13	3899.95	23.25	5.56	119.72	4.03	19.50	6.82	101.75
Last 5	08:25:13	4199.95	23.54	5.60	123.71	3.94	19.50	6.75	103.07
Last 5	08:30:13	4499.93	23.84	5.60	122.37	3.94	19.50	6.73	103.63
Variance 0			0.05	0.08	3.30			-0.11	-0.50
Variance 1			0.28	0.04	3.99			-0.08	1.32
Variance 2			0.30	0.01	-1.34			-0.01	0.56

Notes

Sample collected at 0830. Fair 80F.

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 07:58:02

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 33.64"
Longitude -81° -11' -5.4"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED Bladder Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 17 ft

Pump placement from TOC 16.1 ft

Well Information:

Well ID GWC-22
Well diameter 2 in
Well Total Depth 18.6 ft
Screen Length 5 ft
Depth to Water 6.04 ft

Pumping Information:

Final Pumping Rate 180 mL/min
Total System Volume 0.5608782 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7 in
Total Volume Pumped 3.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 100
Last 5	07:40:19	300.12	24.15	4.69	493.30	37.00	6.80	0.21	123.48
Last 5	07:45:19	600.03	24.06	4.71	513.98	6.13	6.80	0.14	125.31
Last 5	07:50:19	900.03	23.98	4.72	522.50	4.03	6.80	0.11	126.35
Last 5	07:55:19	1200.03	24.06	4.73	523.41	3.05	6.80	0.11	127.11
Last 5									
Variance 0			-0.09	0.01	20.69			-0.07	1.83
Variance 1			-0.08	0.01	8.52			-0.02	1.05
Variance 2			0.08	0.01	0.91			-0.00	0.76

Notes

SAMPLED ON 7-11-17 @ 0755. MOSTLY CLOUDY 77F

Grab Samples



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: AAG0383

November 01, 2017

Project: CCR Event

Project #:Plant Kraft

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

Approved:

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

Project Manager

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



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 01, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Dup-1-7-12-17	AAG0383-01	Ground Water	07/12/17 00:00	07/14/17 08:00
GWC-16	AAG0383-02	Ground Water	07/12/17 10:30	07/14/17 08:00
GWC-5	AAG0383-03	Ground Water	07/12/17 12:30	07/14/17 08:00
GWC-3	AAG0383-04	Ground Water	07/12/17 13:45	07/14/17 08:00
GWC-13	AAG0383-05	Ground Water	07/12/17 15:05	07/14/17 08:00
GWC-4	AAG0383-06	Ground Water	07/12/17 17:00	07/14/17 08:00
GWC-21	AAG0383-07	Ground Water	07/13/17 08:30	07/14/17 08:00
GWC-2	AAG0383-08	Ground Water	07/13/17 11:25	07/14/17 08:00
FB-2-7-12-17	AAG0383-09	Water	07/12/17 09:50	07/14/17 08:00
GWC-6	AAG0383-10	Ground Water	07/12/17 13:50	07/14/17 08:00
GWC-9	AAG0383-11	Ground Water	07/12/17 08:40	07/14/17 08:00
GWC-1	AAG0383-12	Ground Water	07/12/17 10:00	07/14/17 08:00
GWC-17	AAG0383-13	Ground Water	07/13/17 09:16	07/14/17 08:00
GWA-7	AAG0383-14	Ground Water	07/13/17 10:40	07/14/17 08:00
EB-2-7-13-17	AAG0383-15	Water	07/13/17 10:30	07/14/17 08:00



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November 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.

CCR Plant Kraft report AAG0383 11/1/2017

This revised report replaces the original report submitted on 7/25/2017.

The analysis date for TDS was mistakenly entered as 7/18/2017. The following changes were made: upon further review of the batch data, the analysis date for TDS on samples AAG0383-01 (Dup-1-7-12-17), -02 (GWC-16), -03 (GWC-5), -04 (GWC-3), -05 (GWC-13), -06 (GWC-4), -07 (GWC-21), -08 (GWC-2), -09 (FB-2-7-12-17), -10 (GWC-6), -11 (GWC-9), and -12 (GWC-1) was corrected to 7/19/2017. No other changes were made to this report.



PACE ANALYTICAL SERVICES, LLC.

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

November 01, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0383

Project: CCR Event

Client ID: Dup-1-7-12-17

Lab Number ID: AAG0383-01

Date/Time Sampled: 7/12/2017 12:00:00AM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	947	25	10	mg/L	SM 2540 C		1	07/19/17 16:15	07/19/17 16:15	7070411	JPT
Inorganic Anions											
Chloride	44	0.25	0.02	mg/L	EPA 300.0	B-01	1	07/19/17 14:00	07/19/17 18:22	7070471	RLC
Fluoride	0.18	0.30	0.03	mg/L	EPA 300.0	J	1	07/19/17 14:00	07/19/17 18:22	7070471	RLC
Sulfate	500	10	0.17	mg/L	EPA 300.0		10	07/19/17 14:00	07/22/17 19:33	7070471	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:05	7070337	CSW
Arsenic	0.0763	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:05	7070337	CSW
Barium	0.0935	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:05	7070337	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:05	7070337	CSW
Boron	2.99	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:05	7070337	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:05	7070337	CSW
Calcium	151	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 19:11	7070337	CSW
Chromium	0.0011	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:05	7070337	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:05	7070337	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:05	7070337	CSW
Molybdenum	0.174	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:05	7070337	CSW
Selenium	0.0050	0.0100	0.0018	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:05	7070337	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:05	7070337	CSW
Vanadium	0.0038	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:05	7070337	CSW
Zinc	0.0020	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:05	7070337	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:05	7070337	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/20/17 14:55	7070379	MTC



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Georgia Power
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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 01, 2017

Report No.: AAG0383

Project: CCR Event

Client ID: GWC-16

Lab Number ID: AAG0383-02

Date/Time Sampled: 7/12/2017 10:30:00AM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	962	25	10	mg/L	SM 2540 C		1	07/19/17 16:15	07/19/17 16:15	7070411	JPT
Inorganic Anions											
Chloride	44	0.25	0.02	mg/L	EPA 300.0	B-01	1	07/19/17 14:00	07/19/17 18:43	7070471	RLC
Fluoride	0.04	0.30	0.03	mg/L	EPA 300.0	J	1	07/19/17 14:00	07/19/17 18:43	7070471	RLC
Sulfate	490	10	0.17	mg/L	EPA 300.0		10	07/19/17 14:00	07/22/17 19:53	7070471	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:28	7070337	CSW
Arsenic	0.0776	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:28	7070337	CSW
Barium	0.0944	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:28	7070337	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:28	7070337	CSW
Boron	2.95	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:28	7070337	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:28	7070337	CSW
Calcium	149	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 19:34	7070337	CSW
Chromium	0.0011	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:28	7070337	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:28	7070337	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:28	7070337	CSW
Molybdenum	0.178	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:28	7070337	CSW
Selenium	0.0048	0.0100	0.0018	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:28	7070337	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:28	7070337	CSW
Vanadium	0.0037	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:28	7070337	CSW
Zinc	0.0020	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:28	7070337	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:28	7070337	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/20/17 14:57	7070379	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

November 01, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0383

Project: CCR Event

Client ID: GWC-5

Lab Number ID: AAG0383-03

Date/Time Sampled: 7/12/2017 12:30:00PM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	308	25	10	mg/L	SM 2540 C		1	07/19/17 16:15	07/19/17 16:15	7070411	JPT
Inorganic Anions											
Chloride	31	0.25	0.02	mg/L	EPA 300.0	B-01	1	07/19/17 14:00	07/19/17 19:03	7070471	RLC
Fluoride	0.05	0.30	0.03	mg/L	EPA 300.0	J	1	07/19/17 14:00	07/19/17 19:03	7070471	RLC
Sulfate	140	10	0.17	mg/L	EPA 300.0		10	07/19/17 14:00	07/22/17 20:14	7070471	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:40	7070337	CSW
Arsenic	0.0009	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:40	7070337	CSW
Barium	0.157	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:40	7070337	CSW
Beryllium	0.0002	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:40	7070337	CSW
Boron	3.55	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:40	7070337	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:40	7070337	CSW
Calcium	18.1	5.00	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 19:45	7070337	CSW
Chromium	0.0011	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:40	7070337	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:40	7070337	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:40	7070337	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:40	7070337	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:40	7070337	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:40	7070337	CSW
Vanadium	0.0064	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:40	7070337	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:40	7070337	CSW
Lithium	0.0031	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:40	7070337	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/20/17 15:00	7070379	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

November 01, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0383

Project: CCR Event

Client ID: GWC-3

Lab Number ID: AAG0383-04

Date/Time Sampled: 7/12/2017 1:45:00PM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	314	25	10	mg/L	SM 2540 C		1	07/19/17 16:15	07/19/17 16:15	7070411	JPT
Inorganic Anions											
Chloride	2.5	0.25	0.02	mg/L	EPA 300.0	B-01	1	07/19/17 14:00	07/19/17 19:24	7070471	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	07/19/17 14:00	07/19/17 19:24	7070471	RLC
Sulfate	21	1.0	0.02	mg/L	EPA 300.0		1	07/19/17 14:00	07/19/17 19:24	7070471	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:51	7070337	CSW
Arsenic	0.315	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:51	7070337	CSW
Barium	0.0697	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:51	7070337	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:51	7070337	CSW
Boron	0.780	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:51	7070337	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:51	7070337	CSW
Calcium	61.8	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 19:57	7070337	CSW
Chromium	0.0019	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:51	7070337	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:51	7070337	CSW
Lead	0.00008	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:51	7070337	CSW
Molybdenum	0.0977	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:51	7070337	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:51	7070337	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:51	7070337	CSW
Vanadium	0.0057	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:51	7070337	CSW
Zinc	0.0016	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 19:51	7070337	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 19:51	7070337	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/20/17 15:02	7070379	MTC



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Georgia Power
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 Atlanta GA, 30339

November 01, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0383

Project: CCR Event

Client ID: GWC-13

Lab Number ID: AAG0383-05

Date/Time Sampled: 7/12/2017 3:05:00PM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	39	25	10	mg/L	SM 2540 C		1	07/19/17 16:15	07/19/17 16:15	7070411	JPT
Inorganic Anions											
Chloride	2.6	0.25	0.02	mg/L	EPA 300.0	B-01	1	07/19/17 14:00	07/19/17 19:45	7070471	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	07/19/17 14:00	07/19/17 19:45	7070471	RLC
Sulfate	16	1.0	0.02	mg/L	EPA 300.0		1	07/19/17 14:00	07/19/17 19:45	7070471	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:03	7070337	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:03	7070337	CSW
Barium	0.0161	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:03	7070337	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:03	7070337	CSW
Boron	0.0882	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:03	7070337	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:03	7070337	CSW
Calcium	2.25	0.500	0.0404	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:03	7070337	CSW
Chromium	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:03	7070337	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:03	7070337	CSW
Lead	0.0005	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:03	7070337	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:03	7070337	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:03	7070337	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:03	7070337	CSW
Vanadium	0.0016	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:03	7070337	CSW
Zinc	0.0043	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:03	7070337	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:03	7070337	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/20/17 15:05	7070379	MTC



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

November 01, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0383

Project: CCR Event

Client ID: GWC-4

Lab Number ID: AAG0383-06

Date/Time Sampled: 7/12/2017 5:00:00PM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1070	25	10	mg/L	SM 2540 C		1	07/19/17 16:15	07/19/17 16:15	7070411	JPT
Inorganic Anions											
Chloride	120	2.5	0.24	mg/L	EPA 300.0	B-01	10	07/19/17 14:00	07/22/17 20:35	7070471	RLC
Fluoride	0.38	0.30	0.03	mg/L	EPA 300.0		1	07/19/17 14:00	07/19/17 20:05	7070471	RLC
Sulfate	210	10	0.17	mg/L	EPA 300.0		10	07/19/17 14:00	07/22/17 20:35	7070471	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:14	7070337	CSW
Arsenic	0.0015	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:14	7070337	CSW
Barium	0.0941	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:14	7070337	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:14	7070337	CSW
Boron	7.51	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:14	7070337	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:14	7070337	CSW
Calcium	8.00	0.500	0.0404	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:14	7070337	CSW
Chromium	0.0096	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:14	7070337	CSW
Cobalt	0.0008	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:14	7070337	CSW
Lead	0.0060	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:14	7070337	CSW
Molybdenum	0.0209	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:14	7070337	CSW
Selenium	0.0033	0.0100	0.0018	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:14	7070337	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:14	7070337	CSW
Vanadium	0.0399	0.0100	0.0012	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:14	7070337	CSW
Zinc	0.0046	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:14	7070337	CSW
Lithium	0.0035	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:14	7070337	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/20/17 15:12	7070379	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

November 01, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0383

Project: CCR Event

Client ID: GWC-21

Lab Number ID: AAG0383-07

Date/Time Sampled: 7/13/2017 8:30:00AM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	86	25	10	mg/L	SM 2540 C		1	07/19/17 16:15	07/19/17 16:15	7070411	JPT
Inorganic Anions											
Chloride	5.4	0.25	0.02	mg/L	EPA 300.0	B-01	1	07/19/17 14:00	07/19/17 20:26	7070471	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	07/19/17 14:00	07/19/17 20:26	7070471	RLC
Sulfate	33	1.0	0.02	mg/L	EPA 300.0		1	07/19/17 14:00	07/19/17 20:26	7070471	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:37	7070337	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:37	7070337	CSW
Barium	0.0428	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:37	7070337	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:37	7070337	CSW
Boron	0.126	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:37	7070337	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:37	7070337	CSW
Calcium	8.92	0.500	0.0404	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:37	7070337	CSW
Chromium	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:37	7070337	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:37	7070337	CSW
Lead	0.00007	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:37	7070337	CSW
Molybdenum	0.0105	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:37	7070337	CSW
Selenium	0.0130	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:37	7070337	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:37	7070337	CSW
Vanadium	0.0019	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:37	7070337	CSW
Zinc	0.0020	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:37	7070337	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:37	7070337	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/20/17 15:14	7070379	MTC



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 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 01, 2017

Report No.: AAG0383

Project: CCR Event

Client ID: GWC-2

Lab Number ID: AAG0383-08

Date/Time Sampled: 7/13/2017 11:25:00AM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	50	25	10	mg/L	SM 2540 C		1	07/19/17 16:15	07/19/17 16:15	7070411	JPT
Inorganic Anions											
Chloride	8.3	0.25	0.02	mg/L	EPA 300.0	B-01	1	07/19/17 14:00	07/19/17 20:47	7070471	RLC
Fluoride	0.06	0.30	0.03	mg/L	EPA 300.0	J	1	07/19/17 14:00	07/19/17 20:47	7070471	RLC
Sulfate	20	1.0	0.02	mg/L	EPA 300.0		1	07/19/17 14:00	07/19/17 20:47	7070471	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:48	7070337	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:48	7070337	CSW
Barium	0.0529	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:48	7070337	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:48	7070337	CSW
Boron	0.0230	0.0400	0.0060	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/20/17 14:04	7070337	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:48	7070337	CSW
Calcium	0.388	0.500	0.0404	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:48	7070337	CSW
Chromium	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:48	7070337	CSW
Cobalt	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:48	7070337	CSW
Lead	0.0003	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:48	7070337	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:48	7070337	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:48	7070337	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:48	7070337	CSW
Vanadium	ND	0.0100	0.0012	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:48	7070337	CSW
Zinc	0.0014	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 20:48	7070337	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 20:48	7070337	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/20/17 15:16	7070379	MTC



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November 01, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0383

Project: CCR Event

Client ID: FB-2-7-12-17

Lab Number ID: AAG0383-09

Date/Time Sampled: 7/12/2017 9:50:00AM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	13	25	10	mg/L	SM 2540 C	J	1	07/19/17 16:15	07/19/17 16:15	7070411	JPT
Inorganic Anions											
Chloride	0.12	0.25	0.02	mg/L	EPA 300.0	B-01, J	1	07/19/17 14:00	07/19/17 21:07	7070471	RLC
Fluoride	0.07	0.30	0.03	mg/L	EPA 300.0	J	1	07/19/17 14:00	07/19/17 21:07	7070471	RLC
Sulfate	4.4	1.0	0.02	mg/L	EPA 300.0		1	07/19/17 14:00	07/19/17 21:07	7070471	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:00	7070337	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:00	7070337	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:00	7070337	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:00	7070337	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 13:20	07/20/17 14:10	7070337	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:00	7070337	CSW
Calcium	0.0837	0.500	0.0404	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:00	7070337	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:00	7070337	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:00	7070337	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:00	7070337	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:00	7070337	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:00	7070337	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:00	7070337	CSW
Vanadium	ND	0.0100	0.0012	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:00	7070337	CSW
Zinc	0.0012	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:00	7070337	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:00	7070337	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/20/17 15:19	7070379	MTC



PACE ANALYTICAL SERVICES, LLC.

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 Atlanta GA, 30339

November 01, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0383

Project: CCR Event

Client ID: GWC-6

Lab Number ID: AAG0383-10

Date/Time Sampled: 7/12/2017 1:50:00PM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	454	25	10	mg/L	SM 2540 C		1	07/19/17 16:15	07/19/17 16:15	7070411	JPT
Inorganic Anions											
Chloride	64	2.5	0.24	mg/L	EPA 300.0	B-01	10	07/19/17 14:00	07/22/17 20:55	7070471	RLC
Fluoride	0.15	0.30	0.03	mg/L	EPA 300.0	J	1	07/19/17 14:00	07/19/17 22:51	7070471	RLC
Sulfate	140	10	0.17	mg/L	EPA 300.0		10	07/19/17 14:00	07/22/17 20:55	7070471	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:05	7070337	CSW
Arsenic	0.0014	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:05	7070337	CSW
Barium	0.106	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:05	7070337	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:05	7070337	CSW
Boron	3.06	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:05	7070337	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:05	7070337	CSW
Calcium	4.81	0.500	0.0404	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:05	7070337	CSW
Chromium	0.0024	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:05	7070337	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:05	7070337	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:05	7070337	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:05	7070337	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:05	7070337	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:05	7070337	CSW
Vanadium	0.0098	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:05	7070337	CSW
Zinc	0.0020	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:05	7070337	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:05	7070337	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/20/17 15:21	7070379	MTC



PACE ANALYTICAL SERVICES, LLC.

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Attention: Mr. Joju Abraham

November 01, 2017

Report No.: AAG0383

Project: CCR Event

Client ID: GWC-9

Lab Number ID: AAG0383-11

Date/Time Sampled: 7/12/2017 8:40:00AM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	163	25	10	mg/L	SM 2540 C		1	07/19/17 16:15	07/19/17 16:15	7070411	JPT
Inorganic Anions											
Chloride	18	0.25	0.02	mg/L	EPA 300.0	B-01	1	07/19/17 14:00	07/19/17 23:11	7070471	RLC
Fluoride	0.20	0.30	0.03	mg/L	EPA 300.0	J	1	07/19/17 14:00	07/19/17 23:11	7070471	RLC
Sulfate	75	5.0	0.08	mg/L	EPA 300.0		5	07/19/17 14:00	07/22/17 21:16	7070471	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:17	7070337	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:17	7070337	CSW
Barium	0.256	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:17	7070337	CSW
Beryllium	0.0003	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:17	7070337	CSW
Boron	0.0211	0.0400	0.0060	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/20/17 14:16	7070337	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:17	7070337	CSW
Calcium	8.37	0.500	0.0404	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:17	7070337	CSW
Chromium	0.0011	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:17	7070337	CSW
Cobalt	0.0016	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:17	7070337	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:17	7070337	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:17	7070337	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:17	7070337	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:17	7070337	CSW
Vanadium	0.0013	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:17	7070337	CSW
Zinc	0.0030	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:17	7070337	CSW
Lithium	0.0017	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:17	7070337	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/20/17 15:24	7070379	MTC



PACE ANALYTICAL SERVICES, LLC.

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

November 01, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0383

Project: CCR Event

Client ID: GWC-1

Lab Number ID: AAG0383-12

Date/Time Sampled: 7/12/2017 10:00:00AM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Ground Water

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	07/19/17 16:15	07/19/17 16:15	7070411	JPT
Inorganic Anions											
Chloride	6.5	0.25	0.02	mg/L	EPA 300.0	B-01	1	07/19/17 14:00	07/19/17 23:32	7070471	RLC
Fluoride	0.04	0.30	0.03	mg/L	EPA 300.0	J	1	07/19/17 14:00	07/19/17 23:32	7070471	RLC
Sulfate	100	5.0	0.08	mg/L	EPA 300.0		5	07/19/17 14:00	07/22/17 21:37	7070471	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:40	7070337	CSW
Arsenic	0.0015	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:40	7070337	CSW
Barium	0.0614	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:40	7070337	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:40	7070337	CSW
Boron	1.37	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:40	7070337	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:40	7070337	CSW
Calcium	38.0	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 21:45	7070337	CSW
Chromium	0.0021	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:40	7070337	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:40	7070337	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:40	7070337	CSW
Molybdenum	0.182	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:40	7070337	CSW
Selenium	0.0024	0.0100	0.0018	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:40	7070337	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:40	7070337	CSW
Vanadium	0.0067	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:40	7070337	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:40	7070337	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:40	7070337	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/20/17 15:26	7070379	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

November 01, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0383

Project: CCR Event

Client ID: GWC-17

Lab Number ID: AAG0383-13

Date/Time Sampled: 7/13/2017 9:16:00AM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1940	25	10	mg/L	SM 2540 C		1	07/20/17 18:53	07/20/17 18:53	7070489	JPT
Inorganic Anions											
Chloride	860	25	2.4	mg/L	EPA 300.0	B-01	100	07/19/17 14:00	07/22/17 21:57	7070471	RLC
Fluoride	1.7	0.30	0.03	mg/L	EPA 300.0		1	07/19/17 14:00	07/19/17 23:53	7070471	RLC
Sulfate	490	100	1.7	mg/L	EPA 300.0		100	07/19/17 14:00	07/22/17 21:57	7070471	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:51	7070337	CSW
Arsenic	0.0016	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:51	7070337	CSW
Barium	0.0686	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:51	7070337	CSW
Beryllium	0.0034	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:51	7070337	CSW
Boron	0.888	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:51	7070337	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:51	7070337	CSW
Calcium	124	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 21:57	7070337	CSW
Chromium	0.0012	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:51	7070337	CSW
Cobalt	0.0077	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:51	7070337	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:51	7070337	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:51	7070337	CSW
Selenium	0.0018	0.0100	0.0018	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:51	7070337	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:51	7070337	CSW
Vanadium	0.0037	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:51	7070337	CSW
Zinc	0.0126	0.0100	0.0012	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 21:51	7070337	CSW
Lithium	0.0069	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 21:51	7070337	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/20/17 15:28	7070379	MTC



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November 01, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0383

Project: CCR Event

Client ID: GWA-7

Lab Number ID: AAG0383-14

Date/Time Sampled: 7/13/2017 10:40:00AM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	2280	25	10	mg/L	SM 2540 C		1	07/20/17 18:53	07/20/17 18:53	7070489	JPT
Inorganic Anions											
Chloride	200	2.5	0.24	mg/L	EPA 300.0	B-01	10	07/19/17 14:00	07/22/17 22:18	7070471	RLC
Fluoride	0.41	0.30	0.03	mg/L	EPA 300.0		1	07/19/17 14:00	07/20/17 00:13	7070471	RLC
Sulfate	65	10	0.17	mg/L	EPA 300.0		10	07/19/17 14:00	07/22/17 22:18	7070471	RLC
Metals, Total											
Antimony	0.0013	0.0030	0.0006	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 22:20	7070337	CSW
Arsenic	0.0064	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:20	7070337	CSW
Barium	0.0891	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:20	7070337	CSW
Beryllium	0.0010	0.0030	0.0005	mg/L	EPA 6020B	J	5	07/14/17 13:20	07/19/17 22:31	7070337	CSW
Boron	16.3	2.00	0.298	mg/L	EPA 6020B		50	07/14/17 13:20	07/19/17 22:25	7070337	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:20	7070337	CSW
Calcium	4.57	2.50	0.202	mg/L	EPA 6020B		5	07/14/17 13:20	07/19/17 22:31	7070337	CSW
Chromium	0.0269	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:20	7070337	CSW
Cobalt	0.0037	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 22:20	7070337	CSW
Lead	0.0070	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:20	7070337	CSW
Molybdenum	0.0013	0.0100	0.0010	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 22:20	7070337	CSW
Selenium	0.0118	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:20	7070337	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:20	7070337	CSW
Vanadium	0.194	0.0100	0.0012	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:20	7070337	CSW
Zinc	0.0853	0.0100	0.0012	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:20	7070337	CSW
Lithium	ND	0.0500	0.0075	mg/L	EPA 6020B		5	07/14/17 13:20	07/19/17 22:31	7070337	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/20/17 15:31	7070379	MTC



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 Atlanta GA, 30339

November 01, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0383

Project: CCR Event

Client ID: EB-2-7-13-17

Lab Number ID: AAG0383-15

Date/Time Sampled: 7/13/2017 10:30:00AM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	07/20/17 18:53	07/20/17 18:53	7070489	JPT
Inorganic Anions											
Chloride	0.13	0.25	0.02	mg/L	EPA 300.0	B-01, J	1	07/19/17 14:00	07/20/17 01:15	7070471	RLC
Fluoride	0.36	0.30	0.03	mg/L	EPA 300.0		1	07/19/17 14:00	07/20/17 01:15	7070471	RLC
Sulfate	0.17	1.0	0.02	mg/L	EPA 300.0	J	1	07/19/17 14:00	07/20/17 01:15	7070471	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:03	7070337	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:03	7070337	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:03	7070337	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:03	7070337	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 13:20	07/20/17 14:21	7070337	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:03	7070337	CSW
Calcium	0.0537	0.500	0.0404	mg/L	EPA 6020B	J	1	07/14/17 13:20	07/19/17 22:03	7070337	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:03	7070337	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:03	7070337	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:03	7070337	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:03	7070337	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:03	7070337	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:03	7070337	CSW
Vanadium	ND	0.0100	0.0012	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:03	7070337	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:03	7070337	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 13:20	07/19/17 22:03	7070337	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/20/17 10:30	07/20/17 15:33	7070379	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 01, 2017

Report No.: AAG0383

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070411 - SM 2540 C											
Blank (7070411-BLK1)						Prepared & Analyzed: 07/19/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7070411-BS1)						Prepared & Analyzed: 07/19/17					
Total Dissolved Solids	430	25	10	mg/L	400.00		108	84-108			
Duplicate (7070411-DUP1)						Source: AAG0383-06 Prepared & Analyzed: 07/19/17					
Total Dissolved Solids	1100	25	10	mg/L		1070			3	10	
Duplicate (7070411-DUP2)						Source: AAG0383-09 Prepared & Analyzed: 07/19/17					
Total Dissolved Solids	ND	25	10	mg/L		13				10	
Batch 7070489 - SM 2540 C											
Blank (7070489-BLK1)						Prepared & Analyzed: 07/20/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7070489-BS1)						Prepared & Analyzed: 07/20/17					
Total Dissolved Solids	406	25	10	mg/L	400.00		102	84-108			
Duplicate (7070489-DUP1)						Source: AAG0383-14 Prepared & Analyzed: 07/20/17					
Total Dissolved Solids	2280	25	10	mg/L		2280			0.2	10	
Duplicate (7070489-DUP2)						Source: AAG0387-07 Prepared & Analyzed: 07/20/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	



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Attention: Mr. Joju Abraham

November 01, 2017

Report No.: AAG0383

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070471 - EPA 300.0											
Blank (7070471-BLK1)						Prepared & Analyzed: 07/19/17					
Chloride	0.11	0.25	0.02	mg/L							J
Fluoride	ND	0.30	0.03	mg/L							
Sulfate	ND	1.0	0.02	mg/L							
LCS (7070471-BS1)						Prepared & Analyzed: 07/19/17					
Chloride	10.2	0.25	0.02	mg/L	10.020		102	90-110			
Fluoride	10.1	0.30	0.03	mg/L	10.020		101	90-110			
Sulfate	10.3	1.0	0.02	mg/L	10.050		103	90-110			
Matrix Spike (7070471-MS1)						Source: AAG0383-14 Prepared: 07/19/17 Analyzed: 07/20/17					
Chloride	146	0.25	0.02	mg/L	10.020	151	NR	90-110			QM-02
Fluoride	11.0	0.30	0.03	mg/L	10.020	0.41	106	90-110			
Sulfate	70.7	1.0	0.02	mg/L	10.050	69.4	13	90-110			QM-02
Matrix Spike (7070471-MS2)						Source: AAG0432-03 Prepared: 07/19/17 Analyzed: 07/20/17					
Chloride	11.4	0.25	0.02	mg/L	10.020	1.83	96	90-110			
Fluoride	10.1	0.30	0.03	mg/L	10.020	0.04	100	90-110			
Sulfate	16.4	1.0	0.02	mg/L	10.050	6.86	95	90-110			
Matrix Spike Dup (7070471-MSD1)						Source: AAG0383-14 Prepared: 07/19/17 Analyzed: 07/20/17					
Chloride	146	0.25	0.02	mg/L	10.020	151	NR	90-110	0.3	15	QM-02
Fluoride	11.5	0.30	0.03	mg/L	10.020	0.41	110	90-110	4	15	
Sulfate	70.8	1.0	0.02	mg/L	10.050	69.4	13	90-110	0.05	15	QM-02



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 01, 2017

Report No.: AAG0383

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7070337 - EPA 3005A

Blank (7070337-BLK1)

Prepared: 07/14/17 Analyzed: 07/19/17

Antimony	ND	0.0030	0.0006	mg/L							
Arsenic	ND	0.0050	0.0005	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	ND	0.500	0.0404	mg/L							
Chromium	ND	0.0100	0.0005	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	0.0003	0.0250	0.0003	mg/L							J
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0012	mg/L							
Zinc	ND	0.0100	0.0012	mg/L							
Lithium	ND	0.0500	0.0015	mg/L							

LCS (7070337-BS1)

Prepared: 07/14/17 Analyzed: 07/19/17

Antimony	0.105	0.0030	0.0006	mg/L	0.10000		105	80-120			
Arsenic	0.101	0.0050	0.0005	mg/L	0.10000		101	80-120			
Barium	0.106	0.0100	0.0004	mg/L	0.10000		106	80-120			
Beryllium	0.104	0.0030	0.00009	mg/L	0.10000		104	80-120			
Cadmium	0.109	0.0010	0.0001	mg/L	0.10000		109	80-120			
Chromium	0.106	0.0100	0.0005	mg/L	0.10000		106	80-120			
Cobalt	0.102	0.0100	0.0003	mg/L	0.10000		102	80-120			
Copper	0.103	0.0250	0.0003	mg/L	0.10000		103	80-120			
Lead	0.102	0.0050	0.00007	mg/L	0.10000		102	80-120			
Nickel	0.105	0.0100	0.0005	mg/L	0.10000		105	80-120			
Selenium	0.100	0.0100	0.0018	mg/L	0.10000		100	80-120			
Silver	0.105	0.0100	0.0002	mg/L	0.10000		105	80-120			
Thallium	0.104	0.0010	0.00005	mg/L	0.10000		104	80-120			
Vanadium	0.105	0.0100	0.0012	mg/L	0.10000		105	80-120			
Zinc	0.103	0.0100	0.0012	mg/L	0.10000		103	80-120			
Lithium	0.101	0.0500	0.0015	mg/L	0.10000		101	80-120			



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070337 - EPA 3005A											
Matrix Spike (7070337-MS1)			Source: AAG0383-01				Prepared: 07/14/17 Analyzed: 07/19/17				
Antimony	0.107	0.0030	0.0006	mg/L	0.10000	ND	107	75-125			
Arsenic	0.180	0.0050	0.0005	mg/L	0.10000	0.0763	104	75-125			
Barium	0.195	0.0100	0.0004	mg/L	0.10000	0.0935	101	75-125			
Beryllium	0.105	0.0030	0.00009	mg/L	0.10000	ND	105	75-125			
Cadmium	0.104	0.0010	0.0001	mg/L	0.10000	ND	104	75-125			
Chromium	0.103	0.0100	0.0005	mg/L	0.10000	0.0011	102	75-125			
Cobalt	0.0983	0.0100	0.0003	mg/L	0.10000	ND	98	75-125			
Copper	0.0955	0.0250	0.0003	mg/L	0.10000	0.0007	95	75-125			
Lead	0.0981	0.0050	0.00007	mg/L	0.10000	0.0001	98	75-125			
Nickel	0.0985	0.0100	0.0005	mg/L	0.10000	ND	99	75-125			
Selenium	0.106	0.0100	0.0018	mg/L	0.10000	0.0050	101	75-125			
Silver	0.0989	0.0100	0.0002	mg/L	0.10000	ND	99	75-125			
Thallium	0.102	0.0010	0.00005	mg/L	0.10000	ND	102	75-125			
Vanadium	0.109	0.0100	0.0012	mg/L	0.10000	0.0038	105	75-125			
Zinc	0.101	0.0100	0.0012	mg/L	0.10000	0.0020	99	75-125			
Lithium	0.105	0.0500	0.0015	mg/L	0.10000	ND	105	75-125			
Matrix Spike Dup (7070337-MSD1)			Source: AAG0383-01				Prepared: 07/14/17 Analyzed: 07/19/17				
Antimony	0.106	0.0030	0.0006	mg/L	0.10000	ND	106	75-125	0.9	20	
Arsenic	0.179	0.0050	0.0005	mg/L	0.10000	0.0763	102	75-125	0.8	20	
Barium	0.189	0.0100	0.0004	mg/L	0.10000	0.0935	96	75-125	3	20	
Beryllium	0.109	0.0030	0.00009	mg/L	0.10000	ND	109	75-125	3	20	
Cadmium	0.104	0.0010	0.0001	mg/L	0.10000	ND	104	75-125	0.4	20	
Chromium	0.108	0.0100	0.0005	mg/L	0.10000	0.0011	107	75-125	5	20	
Cobalt	0.101	0.0100	0.0003	mg/L	0.10000	ND	101	75-125	3	20	
Copper	0.0974	0.0250	0.0003	mg/L	0.10000	0.0007	97	75-125	2	20	
Lead	0.0981	0.0050	0.00007	mg/L	0.10000	0.0001	98	75-125	0.06	20	
Nickel	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125	2	20	
Selenium	0.104	0.0100	0.0018	mg/L	0.10000	0.0050	99	75-125	1	20	
Silver	0.0981	0.0100	0.0002	mg/L	0.10000	ND	98	75-125	0.9	20	
Thallium	0.102	0.0010	0.00005	mg/L	0.10000	ND	102	75-125	0.6	20	
Vanadium	0.115	0.0100	0.0012	mg/L	0.10000	0.0038	111	75-125	5	20	
Zinc	0.102	0.0100	0.0012	mg/L	0.10000	0.0020	100	75-125	1	20	
Lithium	0.108	0.0500	0.0015	mg/L	0.10000	ND	108	75-125	2	20	



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 01, 2017

Report No.: AAG0383

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070337 - EPA 3005A											
Post Spike (7070337-PS1)			Source: AAG0383-01			Prepared: 07/14/17 Analyzed: 07/19/17					
Antimony	105			ug/L	100.00	0.528	105	80-120			
Arsenic	182			ug/L	100.00	76.3	105	80-120			
Barium	191			ug/L	100.00	93.5	98	80-120			
Beryllium	112			ug/L	100.00	0.0710	112	80-120			
Cadmium	106			ug/L	100.00	0.0332	106	80-120			
Chromium	108			ug/L	100.00	1.12	107	80-120			
Cobalt	102			ug/L	100.00	0.109	102	80-120			
Copper	98.4			ug/L	100.00	0.669	98	80-120			
Lead	99.9			ug/L	100.00	0.115	100	80-120			
Nickel	102			ug/L	100.00	0.468	101	80-120			
Selenium	109			ug/L	100.00	5.00	104	80-120			
Silver	102			ug/L	100.00	-0.0022	102	80-120			
Thallium	102			ug/L	100.00	-0.0329	102	80-120			
Vanadium	115			ug/L	100.00	3.77	111	80-120			
Zinc	102			ug/L	100.00	1.98	100	80-120			
Lithium	109			ug/L	100.00	-0.0992	109	80-120			

Batch 7070379 - EPA 7470A

Blank (7070379-BLK1)					Prepared & Analyzed: 07/20/17						
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7070379-BS1)					Prepared & Analyzed: 07/20/17						
Mercury	0.00229	0.00050	0.000041	mg/L	2.5000E-3		92	80-120			
Matrix Spike (7070379-MS1)					Prepared & Analyzed: 07/20/17						
Mercury	0.00215	0.00050	0.000041	mg/L	2.5000E-3	ND	86	75-125			



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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 01, 2017

Report No.: AAG0383

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070379 - EPA 7470A											
Matrix Spike Dup (7070379-MSD1)			Source: AAG0383-02			Prepared & Analyzed: 07/20/17					
Mercury	0.00224	0.00050	0.000041	mg/L	2.5000E-3	ND	89	75-125	4	20	
Post Spike (7070379-PS1)			Source: AAG0383-02			Prepared & Analyzed: 07/20/17					
Mercury	1.66			ug/L	1.6667	0.00794	99	80-120			



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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 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-Nitrosodiphenylamine. Pace is not NELAC certified for N-Nitrosodiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).
- 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 404-505-7239		REPORT TO: Lauren Petty CC: Maria Padilla Heath McCorkle PO #: laburch@southernco.com		PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase 2 CCR & State D&O / Background #5	
Collection DATE	Collection TIME	MATRIX CODE*	C O M P	G R A B	SAMPLE IDENTIFICATION
7-12-17	---	GW	X	X	DUP-1-7-12-17
7-12-17	1030	GW	X	X	GWC-16
7-12-17	1230	GW	X	X	GWC-5
7-12-17	1345	GW	X	X	GWC-3
7-12-17	1505	GW	X	X	GWC-13
7-12-17	1700	GW	X	X	GWC-4
7-13-17	0830	GW	X	X	GWC-21
7-13-17	1125	GW	X	X	GWC-2
SAMPLED BY AND TITLE: George Z (ACC)		DATE/TIME: 7-13-17 1125		RELINQUISHED BY: <i>[Signature]</i>	
RECEIVED BY: [Signature]		DATE/TIME: 7-13-17 1125		RELINQUISHED BY: [Signature]	
RECEIVED BY LAB: [Signature]		DATE/TIME: 7-17-17 0800		RELINQUISHED BY: [Signature]	
No NA Yes No NA Temperature: Min. 0.5°C Max.		SAMPLE SHIPPED VIA UPS FED-EX USPS COURIER OTHER FS Custody Seal: Intact Broken Not Preserved		DATE/TIME: 7-14-17 0500 DATE/TIME:	
CONTAINER TYPE: P - PLASTIC PRESERVATION: 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen		ANALYSIS REQUESTED P 3 P 3 P 7 P 3 Metals App. III & IV (EPA 6020/7470) Metals (See attached) (EPA 6020) Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SW-846 9315/9320)		CONTAINER TYPE: P - PLASTIC PRESERVATION: 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen	
CONTAINER TYPE: P - PLASTIC PRESERVATION: 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O 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 Level IV deliverable ZND RAD COLLECTED	
L A B I D N U M B E R → 1 2 3 4 5 6 7 8		CONTAINER TYPE: P - PLASTIC PRESERVATION: 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen		CONTAINER TYPE: P - PLASTIC PRESERVATION: 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen	

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR & State

CHAIN OF CUSTODY RECORD

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

PAGE: 2 OF 3

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
 PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Kraft Grumman Road
 Phase 2 CCR & State D&O / Background #5

CONTAINER TYPE	ANALYSIS REQUESTED									
	P	P	P	P	P	P	P	P	P	P
# of	3	3	7	3						
CONTAINERS	Metals App. III & IV (EPA 6020/7470)	Metals (See attached) EPA 6020	Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)						

L	A	B	I	D	N	U	M	B	E	R
9	10	11	12	13	14	15				

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H ₂ SO 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 ₂ S ₂ O 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: J. Bradford (ACC)
 RECEIVED BY: [Signature]
 DATE/TIME: 7-13-17 1040
 RELINQUISHED BY: [Signature]
 DATE/TIME: 7-11-17 0300

RECEIVED BY LAB: [Signature]
 DATE/TIME: 7/14/17 0806
 Temperature: 0.5 Min. Max.

LAB #: AA-6-0383
 Entered into LIMS: [Signature]
 Tracking #: [Signature]



Sample Condition Upon Receipt

Client Name: GA Power

Project # AA6-0383

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: _____

Optional
Proj. Due Date:
Proj. Name:

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

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used IR-2 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 0.5 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: GH 7/14/17

Temp should be above freezing to 6°C

Comments:

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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LOG-IN CHECKLIST

Printed: 7/17/2017 10:47:31AM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 07/14/17 08:00

Work Order: AAG0383

Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 15

#Containers: 62

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	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:

August 08, 2017

Ms. Lauren Petty
GA Power
42 Inverness Center Parkway
Birmingham, AL 35242

RE: Project: AAG0383 Plant Kraft
Pace Project No.: 30224381

Dear Ms. Petty:

Enclosed are the analytical results for sample(s) received by the laboratory on July 17, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: AAG0383 Plant Kraft
Pace Project No.: 30224381

Pennsylvania Certification IDs

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: AAG0383 Plant Kraft
Pace Project No.: 30224381

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30224381001	Dup-1-7-12-17	Water	07/12/17 00:00	07/17/17 09:30
30224381002	GWC-16	Water	07/12/17 10:30	07/17/17 09:30
30224381003	GWC-5	Water	07/12/17 12:30	07/17/17 09:30
30224381004	GWC-3	Water	07/12/17 13:45	07/17/17 09:30
30224381005	GWC-13	Water	07/12/17 15:05	07/17/17 09:30
30224381006	GWC-4	Water	07/12/17 17:00	07/17/17 09:30
30224381007	GWC-21	Water	07/13/17 08:30	07/17/17 09:30
30224381008	GWC-2	Water	07/13/17 11:25	07/17/17 09:30
30224381009	FB-2-7-12-17	Water	07/12/17 09:50	07/17/17 09:30
30224381010	GWC-6	Water	07/12/17 13:50	07/17/17 09:30
30224381011	GWC-9	Water	07/12/17 08:40	07/17/17 09:30
30224381012	GWC-1	Water	07/12/17 10:00	07/17/17 09:30
30224381013	GWC-17	Water	07/13/17 09:16	07/17/17 09:30
30224381014	GWA-7	Water	07/13/17 10:40	07/17/17 09:30
30224381015	EB-2-7-13-17	Water	07/13/17 10:30	07/17/17 09:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AAG0383 Plant Kraft
Pace Project No.: 30224381

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30224381001	Dup-1-7-12-17	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224381002	GWC-16	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224381003	GWC-5	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224381004	GWC-3	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224381005	GWC-13	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224381006	GWC-4	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224381007	GWC-21	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224381008	GWC-2	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224381009	FB-2-7-12-17	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224381010	GWC-6	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224381011	GWC-9	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224381012	GWC-1	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30224381013	GWC-17	EPA 9315	JC2	1

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SAMPLE ANALYTE COUNT

Project: AAG0383 Plant Kraft

Pace Project No.: 30224381

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30224381014	GWA-7	EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
		EPA 9315	LAL	1
		EPA 9320	JLW	1
30224381015	EB-2-7-13-17	Total Radium Calculation	RMK	1
		EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0383 Plant Kraft

Pace Project No.: 30224381

Sample: Dup-1-7-12-17		Lab ID: 30224381001	Collected: 07/12/17 00:00	Received: 07/17/17 09:30	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.731 ± 0.232 (0.222) C:88% T:NA	pCi/L	08/02/17 07:39	13982-63-3	
Radium-228	EPA 9320	0.425 ± 0.386 (0.786) C:79% T:78%	pCi/L	08/01/17 15:16	15262-20-1	
Total Radium	Total Radium Calculation	1.16 ± 0.618 (1.01)	pCi/L	08/04/17 11:52	7440-14-4	

Sample: GWC-16		Lab ID: 30224381002	Collected: 07/12/17 10:30	Received: 07/17/17 09:30	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.638 ± 0.218 (0.198) C:83% T:NA	pCi/L	08/02/17 07:39	13982-63-3	
Radium-228	EPA 9320	0.469 ± 0.395 (0.797) C:81% T:79%	pCi/L	08/01/17 15:16	15262-20-1	
Total Radium	Total Radium Calculation	1.11 ± 0.613 (0.995)	pCi/L	08/04/17 11:52	7440-14-4	

Sample: GWC-5		Lab ID: 30224381003	Collected: 07/12/17 12:30	Received: 07/17/17 09:30	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.937 ± 0.276 (0.183) C:76% T:NA	pCi/L	08/02/17 07:39	13982-63-3	
Radium-228	EPA 9320	1.16 ± 0.497 (0.800) C:78% T:72%	pCi/L	08/01/17 15:16	15262-20-1	
Total Radium	Total Radium Calculation	2.10 ± 0.773 (0.983)	pCi/L	08/04/17 11:52	7440-14-4	

Sample: GWC-3		Lab ID: 30224381004	Collected: 07/12/17 13:45	Received: 07/17/17 09:30	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.651 ± 0.208 (0.163) C:92% T:NA	pCi/L	08/02/17 07:39	13982-63-3	
Radium-228	EPA 9320	0.120 ± 0.275 (0.610) C:83% T:88%	pCi/L	08/01/17 15:16	15262-20-1	
Total Radium	Total Radium Calculation	0.771 ± 0.483 (0.773)	pCi/L	08/04/17 11:52	7440-14-4	

Sample: GWC-13		Lab ID: 30224381005	Collected: 07/12/17 15:05	Received: 07/17/17 09:30	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.414 ± 0.161 (0.135) C:88% T:NA	pCi/L	08/02/17 08:07	13982-63-3	
Radium-228	EPA 9320	-0.195 ± 0.368 (0.884) C:84% T:78%	pCi/L	08/01/17 15:16	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0383 Plant Kraft
Pace Project No.: 30224381

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-13 Lab ID: 30224381005 Collected: 07/12/17 15:05 Received: 07/17/17 09:30 Matrix: Water						
PWS: Site ID: Sample Type:						
Total Radium	Total Radium Calculation	0.414 ± 0.529 (1.02)	pCi/L	08/04/17 11:52	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-4 Lab ID: 30224381006 Collected: 07/12/17 17:00 Received: 07/17/17 09:30 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	1.95 ± 0.428 (0.230) C:93% T:NA	pCi/L	08/02/17 08:05	13982-63-3	
Radium-228	EPA 9320	0.739 ± 0.400 (0.713) C:80% T:79%	pCi/L	08/01/17 15:16	15262-20-1	
Total Radium	Total Radium Calculation	2.69 ± 0.828 (0.943)	pCi/L	08/04/17 11:52	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-21 Lab ID: 30224381007 Collected: 07/13/17 08:30 Received: 07/17/17 09:30 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.481 ± 0.179 (0.165) C:91% T:NA	pCi/L	08/02/17 08:05	13982-63-3	
Radium-228	EPA 9320	0.0947 ± 0.375 (0.849) C:80% T:75%	pCi/L	08/01/17 15:16	15262-20-1	
Total Radium	Total Radium Calculation	0.576 ± 0.554 (1.01)	pCi/L	08/04/17 11:52	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-2 Lab ID: 30224381008 Collected: 07/13/17 11:25 Received: 07/17/17 09:30 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.326 ± 0.170 (0.231) C:79% T:NA	pCi/L	08/02/17 08:05	13982-63-3	
Radium-228	EPA 9320	0.0935 ± 0.295 (0.665) C:80% T:84%	pCi/L	08/01/17 15:16	15262-20-1	1c
Total Radium	Total Radium Calculation	0.420 ± 0.465 (0.896)	pCi/L	08/04/17 11:52	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FB-2-7-12-17 Lab ID: 30224381009 Collected: 07/12/17 09:50 Received: 07/17/17 09:30 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.246 ± 0.141 (0.213) C:87% T:NA	pCi/L	08/02/17 08:05	13982-63-3	
Radium-228	EPA 9320	0.516 ± 0.355 (0.684) C:82% T:84%	pCi/L	08/01/17 15:16	15262-20-1	
Total Radium	Total Radium Calculation	0.762 ± 0.496 (0.897)	pCi/L	08/04/17 11:52	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0383 Plant Kraft

Pace Project No.: 30224381

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	1.03 ± 0.282 (0.173) C:79% T:NA	pCi/L	08/02/17 08:08	13982-63-3	
Radium-228		EPA 9320	0.507 ± 0.375 (0.732) C:82% T:77%	pCi/L	08/01/17 15:16	15262-20-1	
Total Radium		Total Radium Calculation	1.54 ± 0.657 (0.905)	pCi/L	08/04/17 11:52	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	1.02 ± 0.274 (0.199) C:90% T:NA	pCi/L	08/02/17 08:09	13982-63-3	
Radium-228		EPA 9320	1.71 ± 0.552 (0.722) C:82% T:77%	pCi/L	08/01/17 15:16	15262-20-1	
Total Radium		Total Radium Calculation	2.73 ± 0.826 (0.921)	pCi/L	08/04/17 11:52	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	0.917 ± 0.159 (0.0451) C:78% T:NA	pCi/L	08/01/17 19:29	13982-63-3	
Radium-228		EPA 9320	0.712 ± 0.381 (0.681) C:81% T:87%	pCi/L	08/01/17 15:17	15262-20-1	
Total Radium		Total Radium Calculation	1.63 ± 0.540 (0.726)	pCi/L	08/04/17 11:52	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	1.61 ± 0.257 (0.0418) C:89% T:NA	pCi/L	08/01/17 19:29	13982-63-3	
Radium-228		EPA 9320	0.832 ± 0.394 (0.660) C:80% T:82%	pCi/L	08/01/17 15:17	15262-20-1	
Total Radium		Total Radium Calculation	2.44 ± 0.651 (0.702)	pCi/L	08/04/17 11:52	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	7.32 ± 1.31 (0.253) C:100% T:NA	pCi/L	08/08/17 08:15	13982-63-3	

Comments: • Lab requested to filter Sample GWA-7 due to sediment content. Client notified and granted permission to filter.

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	7.32 ± 1.31 (0.253) C:100% T:NA	pCi/L	08/08/17 08:15	13982-63-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0383 Plant Kraft

Pace Project No.: 30224381

Sample: GWA-7 **Lab ID: 30224381014** Collected: 07/13/17 10:40 Received: 07/17/17 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • Lab requested to filter Sample GWA-7 due to sediment content. Client notified and granted permission to filter.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-228	EPA 9320	1.19 ± 0.737 (1.36) C:77% T:79%	pCi/L	08/07/17 11:39	15262-20-1	
Total Radium	Total Radium Calculation	8.51 ± 2.05 (1.61)	pCi/L	08/08/17 12:05	7440-14-4	

Sample: EB-2-7-13-17 **Lab ID: 30224381015** Collected: 07/13/17 10:30 Received: 07/17/17 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.220 ± 0.0947 (0.118) C:84% T:NA	pCi/L	08/01/17 19:47	13982-63-3	
Radium-228	EPA 9320	0.175 ± 0.315 (0.688) C:82% T:88%	pCi/L	08/01/17 15:17	15262-20-1	
Total Radium	Total Radium Calculation	0.395 ± 0.410 (0.806)	pCi/L	08/04/17 11:52	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0383 Plant Kraft

Pace Project No.: 30224381

QC Batch: 267007

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30224381014

METHOD BLANK: 1314541

Matrix: Water

Associated Lab Samples: 30224381014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.356 ± 0.205 (0.243) C:98% T:NA	pCi/L	08/04/17 09:18	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0383 Plant Kraft

Pace Project No.: 30224381

QC Batch: 267058

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30224381014

METHOD BLANK: 1314767

Matrix: Water

Associated Lab Samples: 30224381014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.470 ± 0.374 (0.743) C:79% T:78%	pCi/L	08/07/17 11:37	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0383 Plant Kraft

Pace Project No.: 30224381

QC Batch:	265656	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	30224381001, 30224381002, 30224381003, 30224381004, 30224381005, 30224381006, 30224381007, 30224381008, 30224381009, 30224381010, 30224381011, 30224381012, 30224381013, 30224381015		

METHOD BLANK:	1308237	Matrix:	Water
Associated Lab Samples:	30224381001, 30224381002, 30224381003, 30224381004, 30224381005, 30224381006, 30224381007, 30224381008, 30224381009, 30224381010, 30224381011, 30224381012, 30224381013, 30224381015		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.258 ± 0.127 (0.131) C:87% T:NA	pCi/L	08/02/17 07:39	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0383 Plant Kraft

Pace Project No.: 30224381

QC Batch: 265652 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Associated Lab Samples: 30224381001, 30224381002, 30224381003, 30224381004, 30224381005, 30224381006, 30224381007, 30224381008, 30224381009, 30224381010, 30224381011, 30224381012, 30224381013, 30224381015

METHOD BLANK: 1308225 Matrix: Water

Associated Lab Samples: 30224381001, 30224381002, 30224381003, 30224381004, 30224381005, 30224381006, 30224381007, 30224381008, 30224381009, 30224381010, 30224381011, 30224381012, 30224381013, 30224381015

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.363 ± 0.362 (0.747) C:83% T:76%	pCi/L	08/01/17 15:15	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: AAG0383 Plant Kraft
Pace Project No.: 30224381

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
TNTC - Too Numerous To Count
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PQL - Practical Quantitation Limit.
RL - Reporting Limit.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Act - Activity
Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).
Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)
(MDC) - Minimum Detectable Concentration
Trac - Tracer Recovery (%)
Carr - Carrier Recovery (%)
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

SAMPLE QUALIFIERS

Sample: 30224381014

[2] Lab requested to filter Sample GWA-7 due to sediment content. Client notified and granted permission to filter.

ANALYTE QUALIFIERS

1c Sample 30224381008 was designated as the batch duplicate sample by the laboratory, however, the duplicate sample was inadvertently spiked as a Matrix Spike. MS recovery meets acceptance criteria, but the batch does not have a laboratory duplicate sample for precision assessment. Client samples within the analytical batch include client duplicate samples.

REPORT OF LABORATORY ANALYSIS

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WO#: 30224381



30224381

Chain of Custody



Workorder: AAG0383

Workorder Name: Plant Kraft

Owner Received Date:

Results Requested By: 8/8/2017

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		Date/Time	Comments
						CON	HNH		
1	Dup-1-7-12-17	G	7/12/2017 0:00	AAG0383-01	GW	2			
2	GWC-16	G	7/12/2017 10:30	AAG0383-02	GW	2			
3	GWC-5	G	7/12/2017 12:30	AAG0383-03	GW	2			
4	GWC-3	G	7/12/2017 13:45	AAG0383-04	GW	2			
5	GWC-13	G	7/12/2017 15:05	AAG0383-05	GW	2			
6	GWC-4	G	7/12/2017 17:00	AAG0383-06	GW	2			
7	GWC-21	G	7/13/2017 8:30	AAG0383-07	GW	4			
8	GWC-2	G	7/13/2017 11:25	AAG0383-08	GW	2			
9	FB-2-7-12-17	G	7/12/2017 9:50	AAG0383-09	W	2			
10	GWC-6	G	7/12/2017 13:50	AAG0383-10	GW	2			
Transfers Released By: <i>Charles Hanks</i> Received By: <i>John King</i> Date/Time: 7/14/17 17:30									
1	Radium 226, 228, Total								
2									
3									

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

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

Friday, June 17, 2016 11:01:34 AM

FMT-ALL-C-002 rev.00 24March2009

Page 1 of 2

30224381

Chain of Custody



Workorder: AAG0383

Workorder Name: Plant Kraft

Results Requested By: 8/8/2017

Owner Received Date:

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		Date/Time	Received By	Date/Time	Comments				
						CON	H								
11	GWC-9	G	7/12/2017 8:40	AAG0383-11	GW	2									
12	GWC-1	G	7/12/2017 10:00	AAG0383-12	GW	2									
13	GWC-17	G	7/13/2017 9:16	AAG0383-13	GW	2									
14	GWA-7	G	7/13/2017 10:40	AAG0383-14	GW	2									
15	EB-2-7-13-17	G	7/13/2017 10:30	AAG0383-15	W	2									
16															
17															
18															
19															
20															
Transfers											Released By	Date/Time	Received By	Date/Time	Comments
1											<i>[Signature]</i>	7/14/17 10:30	<i>[Signature]</i>	7/12-17/10930	
2															
3															

Report To: Betsy McDaniel
 Pace Analytical Atlanta
 110 Technology Parkway
 Peachtree Corners, GA 30092
 Phone (770)-734-4200

Subcontract To: Pace - Pittsburgh
 1638 Roseytown Road
 Stes. 2,3,4
 Greensburg, PA 15601
 Phone (724) 850-5600

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

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

Friday, June 17, 2016 11:01:34 AM

FMT-ALL-C-002rev.00 24March2009

30 224381

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project # AAG-0383

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used LR-2 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 0.5 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 0°C

Optional
Proj. Due Date:
Proj. Name:

Date and Initials of person examining contents: SLH 7/14/17

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>0-W</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, colform, TOC, O&G, Wt-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

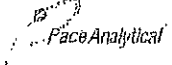
Project Manager Review: _____

Date: _____

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

F-ALLC003rev 3, 11 September 2005

Sample Condition Upon Receipt Pittsburgh



Client Name: Pace, GA

Project # 30224381

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 7413 6657 2151

Label	<u>AM</u>
LIMS Login	<u>BUM</u>

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

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

Cooler Temperature Observed Temp _____ °C Correction Factor: _____ °C Final Temp: _____ °C
Temp should be above freezing to 6°C

Date and initials of person examining contents: AMC 7-17-17

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC:	X			6.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	X			8.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used:	X			
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Organic Samples checked for dechlorination:			X	13.
Filtered volume received for Dissolved tests			X	14.
All containers have been checked for preservation.	X			15.
All containers needing preservation are found to be in compliance with EPA recommendation.	X			<u>PHL2</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed <u>AMC</u> Date/Time of preservation _____
				Lot # of added preservative _____
Headspace in VOA Vials (>6mm):			X	16.
Trip Blank Present:		X		17.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: <u>AMC</u> Date: <u>7-17-17</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

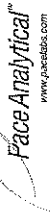
Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
 Analyst: JLW
 Date: 8/4/2017
 Worklist: 37005 / 37002
 Matrix: DW

Method Blank Assessment	
MB Sample ID	1314773
MB Concentration:	0.470
M/B Counting Uncertainty:	0.365
MB MDC:	0.743
MB Numerical Performance Indicator:	2.53
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	8/7/2017
Spike I.D.:	17-005
Spike Concentration (pCi/mL):	23.864
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.803
Target Conc. (pCi/L, g, F):	5.941
Uncertainty (Calculated):	0.428
Result (pCi/L, g, F):	4.434
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.733
Numerical Performance Indicator:	-3.48
Percent Recovery:	74.64%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	35326125005
Duplicate Sample I.D.:	35326125005DUP
Sample Result (pCi/L, g, F):	1.392
Sample Duplicate Result (pCi/L, g, F):	0.405
Sample Duplicate Result (pCi/L, g, F):	1.377
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.406
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	0.050
Duplicate RPD:	1.05%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

8/8/17

Sample Matrix Spike Control Assessment	
Sample Collection Date:	7/27/2017
Sample I.D.:	35326821001
Sample MS I.D.:	35326821001MS
Sample MSD I.D.:	17-005
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	23.952
Spike Volume Used in MS (mL):	0.30
MS Aliquot (L, g, F):	0.807
MS Target Conc. (pCi/L, g, F):	8.909
MSD Aliquot (L, g, F):	0.841
MSD Target Conc. (pCi/L, g, F):	0.297
Spike uncertainty (calculated):	0.341
Sample Result:	9.462
Sample Matrix Spike Result:	0.850
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	0.467
Sample Matrix Spike Duplicate Result:	102.99%
MS Numerical Performance Indicator:	N/A
MSD Numerical Performance Indicator:	Pass

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 8/3/2017
Worklist: 36993
Matrix: DW

Method Blank Assessment	
MB Sample ID	1314541
MB concentration:	0.356
M/B Counting Uncertainty:	0.199
MB MDC:	0.243
MB Numerical Performance Indicator:	3.51
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	See Comment

Laboratory Control Sample Assessment		Y
LCS36993		
Count Date:	8/4/2017	LCS36993
Spike I.D.:	17-030	8/4/2017
Spike Concentration (pCi/mL):	80.197	17-030
Volume Used (mL):	0.10	80.197
Aliquot Volume (L, g, F):	0.506	0.10
Target Conc. (pCi/L, g, F):	15.843	0.513
Uncertainty (Calculated):	1.459	15.646
Result (pCi/L, g, F):	12.611	1.441
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.084	12.808
Numerical Performance Indicator:	-3.48	1.092
Percent Recovery:	79.60%	-3.08
Status vs Numerical Indicator:	N/A	81.86%
Status vs Recovery:	Pass	N/A

Duplicate Sample Assessment	
Sample I.D.:	LCS36993
Duplicate Sample I.D.:	LCS36993
Sample Result (pCi/L, g, F):	12.611
Sample Duplicate Result (pCi/L, g, F):	1.084
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	12.808
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	-0.250
Duplicate RPD:	1.54%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

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

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

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

8/8/17

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 7/26/2017
Worklist: 36802
Matrix: DW

Method Blank Assessment

MB Sample ID: 1308225
MB Concentration: 0.363
M/B Counting Uncertainty: 0.356
MB MDC: 0.747
MB Numerical Performance Indicator: 2.00
MB Status vs Numerical Indicator: N/A
MB Status vs. MDC: Pass

Laboratory Control Sample Assessment

Count Date: 8/1/2017
Spike I.D.: 17-005
Spike Concentration (pCi/mL): 23.910
Volume Used (mL): 0.20
Aliquot Volume (L, g, F): 0.809
Target Conc. (pCi/L, g, F): 5.912
Uncertainty (Calculated): 0.426
Result (pCi/L, g, F): 5.066
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.651
Numerical Performance Indicator: -2.13
Percent Recovery: 85.68%
Status vs Numerical Indicator: N/A
Status vs Recovery: Pass

Duplicate Sample Assessment

Sample I.D.:
Duplicate Sample I.D.:
Sample Result (pCi/L, g, F):
Sample Duplicate Result (pCi/L, g, F):
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):
Are sample and/or duplicate results below MDC?
Duplicate Numerical Performance Indicator:
Duplicate RPD:
Duplicate Status vs Numerical Indicator:
Duplicate Status vs RPD:

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

See Below ##

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

Comments:

8/1/17

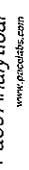
Sample Matrix Spike Control Assessment

Sample Collection Date: 7/13/2017
Sample I.D.: 30224381008
Sample MS I.D.: 30224381008MS
Sample MSD I.D.:
Spike I.D.: 17-005
MS/MSD Decay Corrected Spike Concentration (pCi/mL): 24.062
Spike Volume Used in MS (mL): 0.30
MS Aliquot (L, g, F): 0.814
MS Target Conc. (pCi/L, g, F): 8.865
MSD Target Conc. (pCi/L, g, F):
Spike uncertainty (calculated): 0.638
Sample Result Counting Uncertainty (pCi/L, g, F): 0.094
Sample Result: 0.295
Sample Matrix Spike Result: 9.451
Sample Matrix Spike Duplicate Result: 0.859
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.869
MS Numerical Performance Indicator: 105.55%
MS Percent Recovery: N/A
MS Status vs Numerical Indicator: Pass
MS Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

Quality Control Sample Performance Assessment



Analyt Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JC2
Date: 7/27/2017
Worklist: 36806
Matrix: DW

Method Blank Assessment

MB Sample ID: 1308237
MB concentration: 0.258
M/B Counting Uncertainty: 0.122
MB MDC: 0.131
MB Numerical Performance Indicator: 4.15
MB Status vs Numerical Indicator: N/A
MB Status vs. MDC: See Comment*

Laboratory Control Sample Assessment

LCS (Y or N)? N
LCS# 36806
LCS# 36806

Count Date: 8/1/2017
Spike I.D.: 17-030
Spike Concentration (pCi/L): 80.197
Volume Used (mL): 0.10
Aliquot Volume (L, g, F): 0.510
Target Conc. (pCi/L, g, F): 15.726
Uncertainty (Calculated): 1.449
Result (pCi/L, g, F): 13.513
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.592
Numerical Performance Indicator: -2.77
Percent Recovery: 85.92%
Status vs Numerical Indicator: N/A
Status vs Recovery: Pass

Duplicate Sample Assessment

Sample I.D.: 30224381007
Duplicate Sample I.D.: 30224381007DUP
Sample Result Counting Uncertainty (pCi/L, g, F): 0.481
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.436
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.118
Are sample and/or duplicate results below MDC? See Below ##
Duplicate Numerical Performance Indicator: 0.440
Duplicate RPD: 9.91%
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.
30224381007
30224381007DUP

Sample Matrix Spike Control Assessment

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

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

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

28/7/17



PACE ANALYTICAL SERVICES, LLC.

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

Laboratory Report

Prepared For:

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

Attention: Mr. Joju Abraham

Report Number: AAG0275

July 20, 2017

Project: CCR Event

Project #:Plant Kraft

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

Approved:

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

Project Manager

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



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-12	AAG0275-01	Ground Water	07/10/17 16:50	07/12/17 12:50
GWA-8	AAG0275-02	Ground Water	07/11/17 10:35	07/12/17 12:50
GWC-11	AAG0275-03	Ground Water	07/11/17 13:00	07/12/17 12:50
GWC-14	AAG0275-04	Ground Water	07/11/17 15:55	07/12/17 12:50
GWC-15	AAG0275-05	Ground Water	07/11/17 14:20	07/12/17 12:50
Dup-2-7-11-17	AAG0275-06	Ground Water	07/11/17 00:00	07/12/17 12:50
FB-1-7-10-17	AAG0275-07	Water	07/10/17 17:30	07/12/17 12:50
EB-1-7-11-17	AAG0275-08	Water	07/11/17 12:50	07/12/17 12:50
GWC-20	AAG0275-09	Ground Water	07/11/17 17:20	07/12/17 12:50
GWC-22	AAG0275-10	Ground Water	07/11/17 07:55	07/12/17 12:50



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

Case Narrative

The Radium analysis by methods EPA 9315/9320 was performed by Pace-Pittsburgh, 1638 Roseytown Road - Suites 2, 3, 4, Greensburg PA 15601. The Pace-Pittsburgh lab contact is Jacquelyn Collins at 724-850-5612.



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0275

Project: CCR Event

Client ID: GWC-12

Lab Number ID: AAG0275-01

Date/Time Sampled: 7/10/2017 4:50:00PM

Date/Time Received: 7/12/2017 12:50:00PM

Matrix: Ground Water

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	07/13/17 15:00	07/13/17 15:00	7070292	JPT
Inorganic Anions											
Chloride	88	12	0.65	mg/L	EPA 300.0	B-01	50	07/13/17 09:37	07/17/17 21:33	7070282	RLC
Fluoride	0.88	0.30	0.004	mg/L	EPA 300.0		1	07/13/17 09:37	07/13/17 12:28	7070282	RLC
Sulfate	480	50	4.6	mg/L	EPA 300.0		50	07/13/17 09:37	07/17/17 21:33	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:37	7070326	CSW
Arsenic	0.0008	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:37	7070326	CSW
Barium	0.0172	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 10:56	7070326	CSW
Beryllium	0.0008	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:37	7070326	CSW
Boron	8.13	2.00	0.298	mg/L	EPA 6020B		50	07/14/17 12:50	07/14/17 21:42	7070326	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:37	7070326	CSW
Calcium	90.3	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/14/17 21:42	7070326	CSW
Chromium	0.0014	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:37	7070326	CSW
Cobalt	0.0013	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:37	7070326	CSW
Lead	0.0003	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:37	7070326	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:37	7070326	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:37	7070326	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:37	7070326	CSW
Vanadium	0.0062	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:37	7070326	CSW
Zinc	0.0023	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:37	7070326	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:37	7070326	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:05	7070369	MTC



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

July 20, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0275

Project: CCR Event

Client ID: GWA-8

Lab Number ID: AAG0275-02

Date/Time Sampled: 7/11/2017 10:35:00AM

Date/Time Received: 7/12/2017 12:50:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	188	25	10	mg/L	SM 2540 C		1	07/13/17 15:00	07/13/17 15:00	7070292	JPT
Inorganic Anions											
Chloride	13	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/13/17 09:37	07/13/17 12:49	7070282	RLC
Fluoride	0.39	0.30	0.004	mg/L	EPA 300.0		1	07/13/17 09:37	07/13/17 12:49	7070282	RLC
Sulfate	130	10	0.92	mg/L	EPA 300.0		10	07/13/17 09:37	07/17/17 21:53	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:48	7070326	CSW
Arsenic	0.0006	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:48	7070326	CSW
Barium	0.0624	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 11:14	7070326	CSW
Beryllium	0.0002	0.0030	0.00009	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:48	7070326	CSW
Boron	0.136	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:48	7070326	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:48	7070326	CSW
Calcium	23.5	5.00	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/14/17 21:54	7070326	CSW
Chromium	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:48	7070326	CSW
Cobalt	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:48	7070326	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:48	7070326	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:48	7070326	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:48	7070326	CSW
Thallium	0.00005	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:48	7070326	CSW
Vanadium	ND	0.0100	0.0012	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:48	7070326	CSW
Zinc	0.0029	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:48	7070326	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:48	7070326	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:08	7070369	MTC



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
 110 Technology Parkway, Peachtree Corners, GA 30092
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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0275

Project: CCR Event

Client ID: GWC-11

Lab Number ID: AAG0275-03

Date/Time Sampled: 7/11/2017 1:00:00PM

Date/Time Received: 7/12/2017 12:50:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	88	25	10	mg/L	SM 2540 C		1	07/17/17 19:10	07/17/17 19:10	7070375	JPT
Inorganic Anions											
Chloride	3.1	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/13/17 09:37	07/13/17 13:09	7070282	RLC
Fluoride	ND	0.30	0.004	mg/L	EPA 300.0		1	07/13/17 09:37	07/13/17 13:09	7070282	RLC
Sulfate	49	10	0.92	mg/L	EPA 300.0		10	07/13/17 09:37	07/17/17 22:14	7070282	RLC
Metals, Total											
Antimony	0.0009	0.0030	0.0006	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:59	7070326	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:59	7070326	CSW
Barium	0.0302	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 11:19	7070326	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:59	7070326	CSW
Boron	0.0614	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:59	7070326	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:59	7070326	CSW
Calcium	17.7	5.00	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/14/17 22:05	7070326	CSW
Chromium	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:59	7070326	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:59	7070326	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:59	7070326	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:59	7070326	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:59	7070326	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:59	7070326	CSW
Vanadium	0.0027	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 21:59	7070326	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:59	7070326	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 21:59	7070326	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:10	7070369	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0275

Project: CCR Event

Client ID: GWC-14

Lab Number ID: AAG0275-04

Date/Time Sampled: 7/11/2017 3:55:00PM

Date/Time Received: 7/12/2017 12:50:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	675	25	10	mg/L	SM 2540 C		1	07/17/17 19:10	07/17/17 19:10	7070375	JPT
Inorganic Anions											
Chloride	34	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/13/17 09:37	07/13/17 13:30	7070282	RLC
Fluoride	0.41	0.30	0.004	mg/L	EPA 300.0		1	07/13/17 09:37	07/13/17 13:30	7070282	RLC
Sulfate	400	20	1.8	mg/L	EPA 300.0		20	07/13/17 09:37	07/17/17 22:35	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:22	7070326	CSW
Arsenic	0.0019	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 22:22	7070326	CSW
Barium	0.0276	0.0100	0.0004	mg/L	EPA 6020B		1	07/14/17 12:50	07/18/17 11:25	7070326	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:22	7070326	CSW
Boron	0.0734	0.0400	0.0060	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:22	7070326	CSW
Cadmium	0.0002	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 22:22	7070326	CSW
Calcium	125	25.0	2.02	mg/L	EPA 6020B		50	07/14/17 12:50	07/14/17 22:28	7070326	CSW
Chromium	0.0008	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 22:22	7070326	CSW
Cobalt	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 22:22	7070326	CSW
Lead	0.00008	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 22:22	7070326	CSW
Molybdenum	0.0024	0.0100	0.0010	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 22:22	7070326	CSW
Selenium	0.0044	0.0100	0.0018	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 22:22	7070326	CSW
Thallium	0.00006	0.0010	0.00005	mg/L	EPA 6020B	J	1	07/14/17 12:50	07/14/17 22:22	7070326	CSW
Vanadium	0.0136	0.0100	0.0012	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:22	7070326	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:22	7070326	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/14/17 12:50	07/14/17 22:22	7070326	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:13	7070369	MTC



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 Atlanta GA, 30339

July 20, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0275

Project: CCR Event

Client ID: GWC-15

Lab Number ID: AAG0275-05

Date/Time Sampled: 7/11/2017 2:20:00PM

Date/Time Received: 7/12/2017 12:50:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	569	25	10	mg/L	SM 2540 C		1	07/17/17 19:10	07/17/17 19:10	7070375	JPT
Inorganic Anions											
Chloride	5.7	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/13/17 09:37	07/13/17 13:51	7070282	RLC
Fluoride	0.06	0.30	0.004	mg/L	EPA 300.0	J	1	07/13/17 09:37	07/13/17 13:51	7070282	RLC
Sulfate	110	10	0.92	mg/L	EPA 300.0		10	07/13/17 09:37	07/18/17 00:18	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:27	7070270	CSW
Arsenic	0.0745	0.0050	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:27	7070270	CSW
Barium	0.0510	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:27	7070270	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:27	7070270	CSW
Boron	1.44	0.500	0.0060	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:27	7070270	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:27	7070270	CSW
Calcium	155	25.0	2.02	mg/L	EPA 6020B		50	07/13/17 09:45	07/13/17 19:33	7070270	CSW
Chromium	0.0013	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 19:27	7070270	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:27	7070270	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 19:27	7070270	CSW
Molybdenum	0.0938	0.0100	0.0010	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:27	7070270	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:27	7070270	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:27	7070270	CSW
Vanadium	0.0022	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 19:27	7070270	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:27	7070270	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:27	7070270	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:15	7070369	MTC



PACE ANALYTICAL SERVICES, LLC.

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 Atlanta GA, 30339

July 20, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0275

Project: CCR Event

Client ID: Dup-2-7-11-17

Lab Number ID: AAG0275-06

Date/Time Sampled: 7/11/2017 12:00:00AM

Date/Time Received: 7/12/2017 12:50:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	658	25	10	mg/L	SM 2540 C		1	07/17/17 19:10	07/17/17 19:10	7070375	JPT
Inorganic Anions											
Chloride	34	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/13/17 09:37	07/13/17 14:53	7070282	RLC
Fluoride	0.24	0.30	0.004	mg/L	EPA 300.0	J	1	07/13/17 09:37	07/13/17 14:53	7070282	RLC
Sulfate	440	20	1.8	mg/L	EPA 300.0		20	07/13/17 09:37	07/18/17 00:39	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:39	7070270	CSW
Arsenic	0.0021	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 19:39	7070270	CSW
Barium	0.0301	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:39	7070270	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:39	7070270	CSW
Boron	0.0708	0.0400	0.0060	mg/L	EPA 6020B		1	07/13/17 09:45	07/14/17 14:38	7070270	CSW
Cadmium	0.0002	0.0010	0.0001	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 19:39	7070270	CSW
Calcium	127	25.0	2.02	mg/L	EPA 6020B		50	07/13/17 09:45	07/13/17 19:44	7070270	CSW
Chromium	0.0010	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 19:39	7070270	CSW
Cobalt	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 19:39	7070270	CSW
Lead	0.00008	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 19:39	7070270	CSW
Molybdenum	0.0025	0.0100	0.0010	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 19:39	7070270	CSW
Selenium	0.0033	0.0100	0.0018	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 19:39	7070270	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:39	7070270	CSW
Vanadium	0.0137	0.0100	0.0012	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:39	7070270	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:39	7070270	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 19:39	7070270	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:22	7070369	MTC



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0275

Project: CCR Event

Client ID: FB-1-7-10-17

Lab Number ID: AAG0275-07

Date/Time Sampled: 7/10/2017 5:30:00PM

Date/Time Received: 7/12/2017 12:50:00PM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	07/17/17 19:10	07/17/17 19:10	7070375	JPT
Inorganic Anions											
Chloride	0.08	0.25	0.01	mg/L	EPA 300.0	B-01, J	1	07/13/17 09:37	07/13/17 15:13	7070282	RLC
Fluoride	0.08	0.30	0.004	mg/L	EPA 300.0	J	1	07/13/17 09:37	07/13/17 15:13	7070282	RLC
Sulfate	0.55	1.0	0.09	mg/L	EPA 300.0	J	1	07/13/17 09:37	07/13/17 15:13	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:02	7070270	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:02	7070270	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:02	7070270	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:02	7070270	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/13/17 09:45	07/14/17 14:44	7070270	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:02	7070270	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:02	7070270	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:02	7070270	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:02	7070270	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:02	7070270	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:02	7070270	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:02	7070270	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:02	7070270	CSW
Vanadium	ND	0.0100	0.0012	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:02	7070270	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:02	7070270	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:02	7070270	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:24	7070369	MTC



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

July 20, 2017

Attention: Mr. Joju Abraham

Report No.: AAG0275

Project: CCR Event

Client ID: EB-1-7-11-17

Lab Number ID: AAG0275-08

Date/Time Sampled: 7/11/2017 12:50:00PM

Date/Time Received: 7/12/2017 12:50:00PM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	15	25	10	mg/L	SM 2540 C	J	1	07/17/17 19:10	07/17/17 19:10	7070375	JPT
Inorganic Anions											
Chloride	0.08	0.25	0.01	mg/L	EPA 300.0	B-01, J	1	07/13/17 09:37	07/13/17 15:34	7070282	RLC
Fluoride	0.02	0.30	0.004	mg/L	EPA 300.0	J	1	07/13/17 09:37	07/13/17 15:34	7070282	RLC
Sulfate	0.15	1.0	0.09	mg/L	EPA 300.0	J	1	07/13/17 09:37	07/13/17 15:34	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:07	7070270	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:07	7070270	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:07	7070270	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:07	7070270	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	07/13/17 09:45	07/14/17 14:50	7070270	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:07	7070270	CSW
Calcium	0.0440	0.500	0.0404	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 20:07	7070270	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:07	7070270	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:07	7070270	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:07	7070270	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:07	7070270	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:07	7070270	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:07	7070270	CSW
Vanadium	ND	0.0100	0.0012	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:07	7070270	CSW
Zinc	0.0013	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 20:07	7070270	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:07	7070270	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:27	7070369	MTC



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

Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0275

Project: CCR Event

Client ID: GWC-20

Lab Number ID: AAG0275-09

Date/Time Sampled: 7/11/2017 5:20:00PM

Date/Time Received: 7/12/2017 12:50:00PM

Matrix: Ground Water

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	07/17/17 19:10	07/17/17 19:10	7070375	JPT
Inorganic Anions											
Chloride	31	0.25	0.01	mg/L	EPA 300.0	B-01	1	07/13/17 09:37	07/13/17 17:17	7070282	RLC
Fluoride	0.14	0.30	0.004	mg/L	EPA 300.0	J	1	07/13/17 09:37	07/13/17 17:17	7070282	RLC
Sulfate	400	20	1.8	mg/L	EPA 300.0		20	07/13/17 09:37	07/18/17 00:59	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:13	7070270	CSW
Arsenic	0.299	0.0050	0.0005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:13	7070270	CSW
Barium	0.145	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:13	7070270	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:13	7070270	CSW
Boron	4.14	0.500	0.0060	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:13	7070270	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:13	7070270	CSW
Calcium	136	25.0	2.02	mg/L	EPA 6020B		50	07/13/17 09:45	07/13/17 20:19	7070270	CSW
Chromium	0.0009	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 20:13	7070270	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:13	7070270	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:13	7070270	CSW
Molybdenum	0.136	0.0100	0.0010	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:13	7070270	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:13	7070270	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:13	7070270	CSW
Vanadium	0.0030	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 20:13	7070270	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:13	7070270	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:13	7070270	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:29	7070369	MTC



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Georgia Power
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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0275

Project: CCR Event

Client ID: GWC-22

Lab Number ID: AAG0275-10

Date/Time Sampled: 7/11/2017 7:55:00AM

Date/Time Received: 7/12/2017 12:50:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	383	25	10	mg/L	SM 2540 C		1	07/17/17 19:10	07/17/17 19:10	7070375	JPT
Inorganic Anions											
Chloride	70	2.5	0.13	mg/L	EPA 300.0	B-01	10	07/13/17 09:37	07/18/17 01:20	7070282	RLC
Fluoride	0.03	0.30	0.004	mg/L	EPA 300.0	J	1	07/13/17 09:37	07/13/17 17:38	7070282	RLC
Sulfate	210	10	0.92	mg/L	EPA 300.0		10	07/13/17 09:37	07/18/17 01:20	7070282	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:24	7070270	CSW
Arsenic	0.0012	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 20:24	7070270	CSW
Barium	0.0778	0.0100	0.0004	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:24	7070270	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:24	7070270	CSW
Boron	0.852	0.500	0.0060	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:24	7070270	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:24	7070270	CSW
Calcium	46.0	25.0	2.02	mg/L	EPA 6020B		50	07/13/17 09:45	07/13/17 20:30	7070270	CSW
Chromium	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 20:24	7070270	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:24	7070270	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 20:24	7070270	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:24	7070270	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:24	7070270	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:24	7070270	CSW
Vanadium	0.0016	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 20:24	7070270	CSW
Zinc	0.0029	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/13/17 09:45	07/13/17 20:24	7070270	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	07/13/17 09:45	07/13/17 20:24	7070270	CSW
Mercury	ND	0.00050	0.000041	mg/L	EPA 7470A		1	07/19/17 08:50	07/19/17 12:32	7070369	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0275

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070292 - SM 2540 C											
Blank (7070292-BLK1)						Prepared & Analyzed: 07/13/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7070292-BS1)						Prepared & Analyzed: 07/13/17					
Total Dissolved Solids	373	25	10	mg/L	400.00		93	84-108			
Duplicate (7070292-DUP1)						Source: AAG0261-09 Prepared & Analyzed: 07/13/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7070292-DUP2)						Source: AAG0275-01 Prepared & Analyzed: 07/13/17					
Total Dissolved Solids	1100	25	10	mg/L		1100			0.09	10	
Batch 7070375 - SM 2540 C											
Blank (7070375-BLK1)						Prepared & Analyzed: 07/17/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7070375-BS1)						Prepared & Analyzed: 07/17/17					
Total Dissolved Solids	390	25	10	mg/L	400.00		98	84-108			
Duplicate (7070375-DUP1)						Source: AAG0275-08 Prepared & Analyzed: 07/17/17					
Total Dissolved Solids	ND	25	10	mg/L		15				10	
Duplicate (7070375-DUP2)						Source: AAG0275-09 Prepared & Analyzed: 07/17/17					
Total Dissolved Solids	824	25	10	mg/L		836			1	10	



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Report No.: AAG0275

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070282 - EPA 300.0											
Blank (7070282-BLK1)						Prepared & Analyzed: 07/13/17					
Chloride	0.01	0.25	0.01	mg/L							J
Fluoride	ND	0.30	0.004	mg/L							
Sulfate	ND	1.0	0.09	mg/L							
LCS (7070282-BS1)						Prepared & Analyzed: 07/13/17					
Chloride	10.0	0.25	0.01	mg/L	10.020		100	90-110			
Fluoride	9.96	0.30	0.004	mg/L	10.020		99	90-110			
Sulfate	10.3	1.0	0.09	mg/L	10.050		103	90-110			
Matrix Spike (7070282-MS1)						Source: AAG0275-05 Prepared & Analyzed: 07/13/17					
Chloride	15.7	0.25	0.01	mg/L	10.020	5.73	100	90-110			
Fluoride	10.4	0.30	0.004	mg/L	10.020	0.06	103	90-110			
Sulfate	94.1	1.0	0.09	mg/L	10.050	94.1	NR	90-110			QM-02
Matrix Spike (7070282-MS2)						Source: AAG0277-07 Prepared & Analyzed: 07/13/17					
Chloride	16.9	0.25	0.01	mg/L	10.020	6.93	100	90-110			
Fluoride	15.1	0.30	0.004	mg/L	10.020	1.09	140	90-110			QM-05
Sulfate	210	1.0	0.09	mg/L	10.050	225	NR	90-110			QM-02
Matrix Spike Dup (7070282-MSD1)						Source: AAG0275-05 Prepared & Analyzed: 07/13/17					
Chloride	15.8	0.25	0.01	mg/L	10.020	5.73	101	90-110	0.7	15	
Fluoride	10.6	0.30	0.004	mg/L	10.020	0.06	106	90-110	2	15	
Sulfate	94.0	1.0	0.09	mg/L	10.050	94.1	NR	90-110	0.1	15	QM-02



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July 20, 2017

Report No.: AAG0275

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7070270 - EPA 3005A

Blank (7070270-BLK1)

Prepared & Analyzed: 07/13/17

Antimony	ND	0.0030	0.0006	mg/L							
Arsenic	ND	0.0050	0.0005	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	ND	0.500	0.0404	mg/L							
Chromium	ND	0.0100	0.0005	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	0.0003	0.0250	0.0003	mg/L							J
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0012	mg/L							
Zinc	ND	0.0100	0.0012	mg/L							
Lithium	ND	0.0500	0.0015	mg/L							

LCS (7070270-BS1)

Prepared & Analyzed: 07/13/17

Antimony	0.104	0.0030	0.0006	mg/L	0.10000		104	80-120			
Arsenic	0.100	0.0050	0.0005	mg/L	0.10000		100	80-120			
Barium	0.0945	0.0100	0.0004	mg/L	0.10000		94	80-120			
Beryllium	0.104	0.0030	0.00009	mg/L	0.10000		104	80-120			
Boron	1.05	0.0400	0.0060	mg/L	1.0000		105	80-120			
Cadmium	0.105	0.0010	0.0001	mg/L	0.10000		105	80-120			
Calcium	1.03	0.500	0.0404	mg/L	1.0000		103	80-120			
Chromium	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Cobalt	0.101	0.0100	0.0003	mg/L	0.10000		101	80-120			
Copper	0.100	0.0250	0.0003	mg/L	0.10000		100	80-120			
Lead	0.103	0.0050	0.00007	mg/L	0.10000		103	80-120			
Molybdenum	0.105	0.0100	0.0010	mg/L	0.10000		105	80-120			
Nickel	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Selenium	0.102	0.0100	0.0018	mg/L	0.10000		102	80-120			
Silver	0.103	0.0100	0.0002	mg/L	0.10000		103	80-120			
Thallium	0.103	0.0010	0.00005	mg/L	0.10000		103	80-120			
Vanadium	0.105	0.0100	0.0012	mg/L	0.10000		105	80-120			
Zinc	0.103	0.0100	0.0012	mg/L	0.10000		103	80-120			
Lithium	0.106	0.0500	0.0015	mg/L	0.10000		106	80-120			



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Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0275

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070270 - EPA 3005A											
Matrix Spike (7070270-MS1)			Source: AAG0230-03				Prepared & Analyzed: 07/13/17				
Antimony	0.106	0.0030	0.0006	mg/L	0.10000	ND	106	75-125			
Arsenic	0.103	0.0050	0.0005	mg/L	0.10000	0.0011	102	75-125			
Barium	0.121	0.0100	0.0004	mg/L	0.10000	0.0305	90	75-125			
Beryllium	0.0993	0.0030	0.00009	mg/L	0.10000	ND	99	75-125			
Boron	1.03	0.0400	0.0060	mg/L	1.0000	0.0534	98	75-125			
Cadmium	0.103	0.0010	0.0001	mg/L	0.10000	ND	103	75-125			
Calcium	40.3	25.0	2.02	mg/L	1.0000	39.0	136	75-125			QM-02
Chromium	0.101	0.0100	0.0005	mg/L	0.10000	0.0009	100	75-125			
Cobalt	0.0986	0.0100	0.0003	mg/L	0.10000	ND	99	75-125			
Copper	0.0966	0.0250	0.0003	mg/L	0.10000	ND	97	75-125			
Lead	0.101	0.0050	0.00007	mg/L	0.10000	ND	101	75-125			
Molybdenum	0.108	0.0100	0.0010	mg/L	0.10000	0.0013	107	75-125			
Nickel	0.0990	0.0100	0.0005	mg/L	0.10000	ND	99	75-125			
Selenium	0.102	0.0100	0.0018	mg/L	0.10000	ND	102	75-125			
Silver	0.102	0.0100	0.0002	mg/L	0.10000	ND	102	75-125			
Thallium	0.104	0.0010	0.00005	mg/L	0.10000	ND	104	75-125			
Vanadium	0.102	0.0100	0.0012	mg/L	0.10000	ND	102	75-125			
Zinc	0.101	0.0100	0.0012	mg/L	0.10000	ND	101	75-125			
Lithium	0.0972	0.0500	0.0015	mg/L	0.10000	ND	97	75-125			
Matrix Spike Dup (7070270-MSD1)			Source: AAG0230-03				Prepared & Analyzed: 07/13/17				
Antimony	0.106	0.0030	0.0006	mg/L	0.10000	ND	106	75-125	0.4	20	
Arsenic	0.103	0.0050	0.0005	mg/L	0.10000	0.0011	102	75-125	0.4	20	
Barium	0.122	0.0100	0.0004	mg/L	0.10000	0.0305	92	75-125	1	20	
Beryllium	0.0961	0.0030	0.00009	mg/L	0.10000	ND	96	75-125	3	20	
Boron	1.02	0.0400	0.0060	mg/L	1.0000	0.0534	97	75-125	1	20	
Cadmium	0.102	0.0010	0.0001	mg/L	0.10000	ND	102	75-125	1	20	
Calcium	40.9	25.0	2.02	mg/L	1.0000	39.0	190	75-125	1	20	QM-02
Chromium	0.102	0.0100	0.0005	mg/L	0.10000	0.0009	101	75-125	1	20	
Cobalt	0.0990	0.0100	0.0003	mg/L	0.10000	ND	99	75-125	0.4	20	
Copper	0.0962	0.0250	0.0003	mg/L	0.10000	ND	96	75-125	0.5	20	
Lead	0.0998	0.0050	0.00007	mg/L	0.10000	ND	100	75-125	1	20	
Molybdenum	0.107	0.0100	0.0010	mg/L	0.10000	0.0013	106	75-125	1	20	
Nickel	0.0992	0.0100	0.0005	mg/L	0.10000	ND	99	75-125	0.2	20	
Selenium	0.101	0.0100	0.0018	mg/L	0.10000	ND	101	75-125	2	20	
Silver	0.0998	0.0100	0.0002	mg/L	0.10000	ND	100	75-125	2	20	
Thallium	0.102	0.0010	0.00005	mg/L	0.10000	ND	102	75-125	2	20	
Vanadium	0.103	0.0100	0.0012	mg/L	0.10000	ND	103	75-125	1	20	
Zinc	0.101	0.0100	0.0012	mg/L	0.10000	ND	101	75-125	0.06	20	
Lithium	0.0970	0.0500	0.0015	mg/L	0.10000	ND	97	75-125	0.2	20	



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 20, 2017

Report No.: AAG0275

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070270 - EPA 3005A											
Post Spike (7070270-PS1)		Source: AAG0230-03				Prepared & Analyzed: 07/13/17					
Antimony	104			ug/L	100.00	0.235	103	80-120			
Arsenic	105			ug/L	100.00	1.07	104	80-120			
Barium	123			ug/L	100.00	30.5	93	80-120			
Beryllium	99.0			ug/L	100.00	-0.0033	99	80-120			
Boron	1040			ug/L	1000.0	53.4	99	80-120			
Cadmium	103			ug/L	100.00	0.0002	103	80-120			
Calcium	41600			ug/L	1000.0	39000	266	80-120			QM-02
Chromium	104			ug/L	100.00	0.949	103	80-120			
Cobalt	101			ug/L	100.00	-0.0112	101	80-120			
Copper	99.8			ug/L	100.00	0.0455	100	80-120			
Lead	102			ug/L	100.00	-0.0029	102	80-120			
Molybdenum	110			ug/L	100.00	1.28	108	80-120			
Nickel	103			ug/L	100.00	0.126	103	80-120			
Selenium	103			ug/L	100.00	-0.139	103	80-120			
Silver	103			ug/L	100.00	-0.0060	103	80-120			
Thallium	104			ug/L	100.00	-0.0074	104	80-120			
Vanadium	104			ug/L	100.00	1.00	103	80-120			
Zinc	103			ug/L	100.00	0.520	103	80-120			
Lithium	97.5			ug/L	100.00	0.0887	97	80-120			

Batch 7070326 - EPA 3005A

Blank (7070326-BLK1)				Prepared & Analyzed: 07/14/17							
Antimony	ND	0.0030	0.0006	mg/L							
Arsenic	ND	0.0050	0.0005	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	ND	0.500	0.0404	mg/L							
Chromium	ND	0.0100	0.0005	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	0.0003	0.0250	0.0003	mg/L							J
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0012	mg/L							



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070326 - EPA 3005A											
Blank (7070326-BLK1) Prepared & Analyzed: 07/14/17											
Zinc	ND	0.0100	0.0012	mg/L							
Lithium	ND	0.0500	0.0015	mg/L							
LCS (7070326-BS1) Prepared & Analyzed: 07/14/17											
Antimony	0.104	0.0030	0.0006	mg/L	0.10000		104	80-120			
Arsenic	0.103	0.0050	0.0005	mg/L	0.10000		103	80-120			
Barium	0.0984	0.0100	0.0004	mg/L	0.10000		98	80-120			
Beryllium	0.102	0.0030	0.00009	mg/L	0.10000		102	80-120			
Boron	1.07	0.0400	0.0060	mg/L	1.0000		107	80-120			
Cadmium	0.106	0.0010	0.0001	mg/L	0.10000		106	80-120			
Calcium	1.02	0.500	0.0404	mg/L	1.0000		102	80-120			
Chromium	0.109	0.0100	0.0005	mg/L	0.10000		109	80-120			
Cobalt	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Copper	0.104	0.0250	0.0003	mg/L	0.10000		104	80-120			
Lead	0.104	0.0050	0.00007	mg/L	0.10000		104	80-120			
Molybdenum	0.105	0.0100	0.0010	mg/L	0.10000		105	80-120			
Nickel	0.105	0.0100	0.0005	mg/L	0.10000		105	80-120			
Selenium	0.106	0.0100	0.0018	mg/L	0.10000		106	80-120			
Silver	0.101	0.0100	0.0002	mg/L	0.10000		101	80-120			
Thallium	0.105	0.0010	0.00005	mg/L	0.10000		105	80-120			
Vanadium	0.107	0.0100	0.0012	mg/L	0.10000		107	80-120			
Zinc	0.107	0.0100	0.0012	mg/L	0.10000		107	80-120			
Lithium	0.106	0.0500	0.0015	mg/L	0.10000		106	80-120			
Matrix Spike (7070326-MS1) Source: AAG0261-01 Prepared & Analyzed: 07/14/17											
Antimony	0.108	0.0030	0.0006	mg/L	0.10000	ND	108	75-125			
Arsenic	0.108	0.0050	0.0005	mg/L	0.10000	0.0044	104	75-125			
Barium	0.113	0.0100	0.0004	mg/L	0.10000	0.0137	99	75-125			
Beryllium	0.0933	0.0030	0.00009	mg/L	0.10000	0.0143	79	75-125			
Boron	14.5	2.00	0.298	mg/L	1.0000	15.2	NR	75-125			QM-02
Cadmium	0.106	0.0010	0.0001	mg/L	0.10000	0.0029	104	75-125			
Calcium	133	25.0	2.02	mg/L	1.0000	139	NR	75-125			QM-02
Chromium	0.103	0.0100	0.0005	mg/L	0.10000	0.0012	102	75-125			
Cobalt	0.109	0.0100	0.0003	mg/L	0.10000	0.0121	97	75-125			
Copper	0.0951	0.0250	0.0003	mg/L	0.10000	0.0030	92	75-125			
Lead	0.0904	0.0050	0.00007	mg/L	0.10000	0.0018	89	75-125			
Molybdenum	0.107	0.0100	0.0010	mg/L	0.10000	ND	107	75-125			
Nickel	0.127	0.0100	0.0005	mg/L	0.10000	0.0325	95	75-125			
Selenium	0.118	0.0100	0.0018	mg/L	0.10000	0.0106	107	75-125			
Silver	0.0966	0.0100	0.0002	mg/L	0.10000	ND	97	75-125			



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July 20, 2017

Report No.: AAG0275

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070326 - EPA 3005A											
Matrix Spike (7070326-MS1)			Source: AAG0261-01			Prepared & Analyzed: 07/14/17					
Thallium	0.0910	0.0010	0.00005	mg/L	0.10000	0.0002	91	75-125			
Vanadium	0.103	0.0100	0.0012	mg/L	0.10000	ND	103	75-125			
Zinc	0.230	0.0100	0.0012	mg/L	0.10000	0.136	94	75-125			
Lithium	0.0995	0.0500	0.0015	mg/L	0.10000	0.0214	78	75-125			
Matrix Spike Dup (7070326-MSD1)			Source: AAG0261-01			Prepared & Analyzed: 07/14/17					
Antimony	0.103	0.0030	0.0006	mg/L	0.10000	ND	103	75-125	5	20	
Arsenic	0.105	0.0050	0.0005	mg/L	0.10000	0.0044	100	75-125	3	20	
Barium	0.108	0.0100	0.0004	mg/L	0.10000	0.0137	94	75-125	4	20	
Beryllium	0.0913	0.0030	0.00009	mg/L	0.10000	0.0143	77	75-125	2	20	
Boron	15.2	2.00	0.298	mg/L	1.0000	15.2	NR	75-125	4	20	QM-02
Cadmium	0.104	0.0010	0.0001	mg/L	0.10000	0.0029	101	75-125	2	20	
Calcium	133	25.0	2.02	mg/L	1.0000	139	NR	75-125	0.1	20	QM-02
Chromium	0.0982	0.0100	0.0005	mg/L	0.10000	0.0012	97	75-125	5	20	
Cobalt	0.105	0.0100	0.0003	mg/L	0.10000	0.0121	93	75-125	4	20	
Copper	0.0916	0.0250	0.0003	mg/L	0.10000	0.0030	89	75-125	4	20	
Lead	0.0864	0.0050	0.00007	mg/L	0.10000	0.0018	85	75-125	5	20	
Molybdenum	0.101	0.0100	0.0010	mg/L	0.10000	ND	101	75-125	5	20	
Nickel	0.122	0.0100	0.0005	mg/L	0.10000	0.0325	90	75-125	4	20	
Selenium	0.114	0.0100	0.0018	mg/L	0.10000	0.0106	103	75-125	4	20	
Silver	0.0928	0.0100	0.0002	mg/L	0.10000	ND	93	75-125	4	20	
Thallium	0.0875	0.0010	0.00005	mg/L	0.10000	0.0002	87	75-125	4	20	
Vanadium	0.0983	0.0100	0.0012	mg/L	0.10000	ND	98	75-125	5	20	
Zinc	0.225	0.0100	0.0012	mg/L	0.10000	0.136	89	75-125	2	20	
Lithium	0.0994	0.0500	0.0015	mg/L	0.10000	0.0214	78	75-125	0.06	20	
Post Spike (7070326-PS1)			Source: AAG0261-01			Prepared & Analyzed: 07/14/17					
Antimony	102			ug/L	100.00	0.559	101	80-120			
Arsenic	105			ug/L	100.00	4.41	101	80-120			
Barium	111			ug/L	100.00	13.7	97	80-120			
Beryllium	93.7			ug/L	100.00	14.3	79	80-120			QM-05
Boron	15700			ug/L	1000.0	15200	46	80-120			QM-02
Cadmium	105			ug/L	100.00	2.92	102	80-120			
Calcium	132000			ug/L	1000.0	139000	NR	80-120			QM-02
Chromium	99.8			ug/L	100.00	1.18	99	80-120			
Cobalt	106			ug/L	100.00	12.1	94	80-120			
Copper	91.4			ug/L	100.00	3.03	88	80-120			
Lead	87.7			ug/L	100.00	1.80	86	80-120			
Molybdenum	101			ug/L	100.00	0.0857	101	80-120			
Nickel	122			ug/L	100.00	32.5	90	80-120			



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070326 - EPA 3005A											
Post Spike (7070326-PS1)			Source: AAG0261-01			Prepared & Analyzed: 07/14/17					
Selenium	116			ug/L	100.00	10.6	106	80-120			
Silver	94.6			ug/L	100.00	0.0049	95	80-120			
Thallium	89.4			ug/L	100.00	0.238	89	80-120			
Vanadium	100			ug/L	100.00	-0.224	100	80-120			
Zinc	226			ug/L	100.00	136	90	80-120			
Lithium	104			ug/L	100.00	21.4	82	80-120			
Batch 7070369 - EPA 7470A											
Blank (7070369-BLK1)						Prepared & Analyzed: 07/19/17					
Mercury	ND	0.00050	0.000041	mg/L							
LCS (7070369-BS1)						Prepared & Analyzed: 07/19/17					
Mercury	0.00214	0.00050	0.000041	mg/L	2.5000E-3		86	80-120			
Matrix Spike (7070369-MS1)			Source: AAG0275-01			Prepared & Analyzed: 07/19/17					
Mercury	0.00208	0.00050	0.000041	mg/L	2.5000E-3	ND	83	75-125			
Matrix Spike Dup (7070369-MSD1)			Source: AAG0275-01			Prepared & Analyzed: 07/19/17					
Mercury	0.00213	0.00050	0.000041	mg/L	2.5000E-3	ND	85	75-125	2	20	
Post Spike (7070369-PS1)			Source: AAG0275-01			Prepared & Analyzed: 07/19/17					
Mercury	1.61			ug/L	1.6667	0.00618	96	80-120			



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July 20, 2017

Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

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

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



Pace Analytical Services, Inc.
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PAGE: 1 OF 2

CHAIN OF CUSTODY RECORD

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 PO #: laburch@southernmco.com	
PROJECT NAME/STATE: Plant Kraft Grumman Road Phase 2 CCR & State D&O / Background #5		PROJECT #:	
Collection DATE 7/10/17 7/11/17 7/11/17 7/11/17 7/11/17 7/11/17	Collection TIME 1650 1035 1300 1555 1426 --	MATRIX CODE* GW GW GW GW GW GW	SAMPLE IDENTIFICATION GW C-12 GWA-8 GWC-11 GWC-14 GWC-15 Dup-2-7-11-17
CONTAINER TYPE: P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		ANALYSIS REQUESTED Metals App. III & IV (EPA 6020/7470) ✓ Metals (See attached) EPA 6020 ✓ Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) ✓ Radum 226 & 228 (SV-846 9315/9320) ✓	
CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		PRESERVATION 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen	
LAB ID NUMBER 1 2 3 4 5 6		REMARKS/ADDITIONAL INFORMATION 2 nd Rad Here	
DATE/TIME: 7-11-17 1420 RECEIVED BY: <i>ASCB</i>		DATE/TIME: 7-12-17 0800 RELINQUISHED BY: <i>J-J</i>	
RECEIVED BY: <i>Grumman</i>		RECEIVED BY: <i>Grumman</i>	
TEMPERATURE: 22.3		CLIENT: OTHER FS	

FOR LAB USE ONLY
 LAB #: AA60275
 Entered into LIMS:
 Tracking #:

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR & State

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CHAIN OF CUSTODY RECORD



Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
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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
Heath McCorkle
laburch@southernmco.com

PROJECT NAME/STATE:
Plant Kraft Grumman Road
Phase 2 CCR & State D&O / Background #5

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

PRESERVATION:
1 - HCl, $\leq 6^{\circ}\text{C}$
2 - H_2SO_4 , $\leq 6^{\circ}\text{C}</math>
3 - $\text{HNO}_3</math>
4 - NaOH , $\leq 6^{\circ}\text{C}</math>
5 - NaOH/ZnAc , $\leq 6^{\circ}\text{C}</math>
6 - $\text{Na}_2\text{S}_2\text{O}_3$, $\leq 6^{\circ}\text{C}</math>
7 - $\leq 6^{\circ}\text{C}$ not frozen$$$$$

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

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, $\leq 6^{\circ}\text{C}$
A - AMBER GLASS	2 - H_2SO_4 , $\leq 6^{\circ}\text{C}$
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH , $\leq 6^{\circ}\text{C}$
S - STERILE	5 - NaOH/ZnAc , $\leq 6^{\circ}\text{C}$
O - OTHER	6 - $\text{Na}_2\text{S}_2\text{O}_3$, $\leq 6^{\circ}\text{C}$
	7 - $\leq 6^{\circ}\text{C}$ not frozen

Collection DATE	Collection TIME	MATRIX CODE	SAMPLE IDENTIFICATION			
			C	O	R	A
7-10-17	1730	W	X			FB-1-7-10-17
7-11-17	1250	W	X			EB-1-7-11-17
7-11-17	1720	GW	X			GWC-20
7-11-17	0755	GW	X			GWC-22

ANALYSIS REQUESTED	P	P	P	P	P	ANALYSIS REQUESTED	P	P	P	P	P
Metals App. III & IV (EPA 6020/7470)	3										
Metals (See attached) EPA 6020		3									
Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C)			3								
Radium 226 & 228 (SM 846 9315/9320)				3							

RECEIVED BY AND TITLE:
D. FLORES

DATE/TIME: 7-11-17 1720

RECEIVED BY: Lauren Petty

DATE/TIME: 7-17-17 0800

RECEIVED BY: Lauren Petty

DATE/TIME: 07/17/17 12:50

RECEIVED BY: Lauren Petty

DATE/TIME: 07/17/17 12:50

RELINQUISHED BY: Lauren Petty

DATE/TIME: 7-17-17 0800

RELINQUISHED BY: Lauren Petty

DATE/TIME: 7-17-17 0800

LAB #	FOR LAB USE ONLY
7	
8	
9	
10	

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

PRESERVATION:
1 - HCl, $\leq 6^{\circ}\text{C}</math>
2 - H_2SO_4 , $\leq 6^{\circ}\text{C}</math>
3 - $\text{HNO}_3</math>
4 - NaOH , $\leq 6^{\circ}\text{C}</math>
5 - NaOH/ZnAc , $\leq 6^{\circ}\text{C}</math>
6 - $\text{Na}_2\text{S}_2\text{O}_3$, $\leq 6^{\circ}\text{C}</math>
7 - $\leq 6^{\circ}\text{C}$ not frozen$$$$$$

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

LAB #	FOR LAB USE ONLY
7	
8	
9	
10	

RECEIVED BY AND TITLE:
D. FLORES

DATE/TIME: 7-11-17 1720

RECEIVED BY: Lauren Petty

DATE/TIME: 7-17-17 0800

RECEIVED BY: Lauren Petty

DATE/TIME: 07/17/17 12:50

RECEIVED BY: Lauren Petty

DATE/TIME: 07/17/17 12:50

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
Plant Kraft - Grumman Rd COC Phase 2 CCR & State



PACE ANALYTICAL SERVICES, LLC.

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

LOG-IN CHECKLIST

Printed: 7/13/2017 8:36:46AM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 07/12/17 12:50

Work Order: AAG0275

Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 10

#Containers: 42

Minimum Temp(C): 2.3

Maximum Temp(C): 2.3

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:

August 04, 2017

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: AAG0275 Plant Kraft
Pace Project No.: 30223998

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on July 13, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AAG0275 Plant Kraft
Pace Project No.: 30223998

Pennsylvania Certification IDs

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: AAG0275 Plant Kraft
Pace Project No.: 30223998

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30223998001	GWC-12	Water	07/10/17 16:50	07/13/17 10:15
30223998002	GWA-8	Water	07/11/17 10:35	07/13/17 10:15
30223998003	GWC-11	Water	07/11/17 13:00	07/13/17 10:15
30223998004	GWC-14	Water	07/11/17 15:55	07/13/17 10:15
30223998005	GWC-15	Water	07/11/17 14:20	07/13/17 10:15
30223998006	Dup-2-7-11-17	Water	07/11/17 00:00	07/13/17 10:15
30223998007	FB-1-7-10-17	Water	07/10/17 17:30	07/13/17 10:15
30223998008	EB-1-7-11-17	Water	07/11/17 12:50	07/13/17 10:15
30223998009	GWC-20	Water	07/11/17 17:20	07/13/17 10:15
30223998010	GWC-22	Water	07/11/17 07:55	07/13/17 10:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AAG0275 Plant Kraft
Pace Project No.: 30223998

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30223998001	GWC-12	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30223998002	GWA-8	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30223998003	GWC-11	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30223998004	GWC-14	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30223998005	GWC-15	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30223998006	Dup-2-7-11-17	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30223998007	FB-1-7-10-17	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30223998008	EB-1-7-11-17	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30223998009	GWC-20	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1
30223998010	GWC-22	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	RMK	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0275 Plant Kraft

Pace Project No.: 30223998

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	0.630 ± 0.223 (0.231) C:85% T:NA	pCi/L	07/25/17 10:10	13982-63-3	
Radium-228		EPA 9320	0.919 ± 0.461 (0.817) C:77% T:82%	pCi/L	07/28/17 11:27	15262-20-1	
Total Radium		Total Radium Calculation	1.55 ± 0.684 (1.05)	pCi/L	08/02/17 11:13	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	0.964 ± 0.275 (0.173) C:89% T:NA	pCi/L	07/25/17 10:20	13982-63-3	
Radium-228		EPA 9320	0.881 ± 0.440 (0.761) C:78% T:84%	pCi/L	07/28/17 11:27	15262-20-1	
Total Radium		Total Radium Calculation	1.85 ± 0.715 (0.934)	pCi/L	08/02/17 11:13	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	0.587 ± 0.211 (0.178) C:81% T:NA	pCi/L	07/25/17 10:20	13982-63-3	
Radium-228		EPA 9320	1.30 ± 0.547 (0.883) C:76% T:70%	pCi/L	07/28/17 11:27	15262-20-1	
Total Radium		Total Radium Calculation	1.89 ± 0.758 (1.06)	pCi/L	08/02/17 11:13	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	0.244 ± 0.141 (0.201) C:86% T:NA	pCi/L	07/25/17 10:20	13982-63-3	
Radium-228		EPA 9320	0.879 ± 0.482 (0.901) C:81% T:86%	pCi/L	07/28/17 11:27	15262-20-1	
Total Radium		Total Radium Calculation	1.12 ± 0.623 (1.10)	pCi/L	08/02/17 11:13	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	0.386 ± 0.168 (0.189) C:89% T:NA	pCi/L	07/25/17 10:20	13982-63-3	
Radium-228		EPA 9320	0.368 ± 0.358 (0.735) C:77% T:90%	pCi/L	07/28/17 11:27	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0275 Plant Kraft
Pace Project No.: 30223998

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-15 Lab ID: 30223998005 Collected: 07/11/17 14:20 Received: 07/13/17 10:15 Matrix: Water						
PWS: Site ID: Sample Type:						
Total Radium	Total Radium Calculation	0.754 ± 0.526 (0.924)	pCi/L	08/02/17 11:13	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: Dup-2-7-11-17 Lab ID: 30223998006 Collected: 07/11/17 00:00 Received: 07/13/17 10:15 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.189 ± 0.117 (0.169) C:93% T:NA	pCi/L	07/25/17 10:20	13982-63-3	
Radium-228	EPA 9320	0.485 ± 0.377 (0.742) C:78% T:79%	pCi/L	07/28/17 11:27	15262-20-1	
Total Radium	Total Radium Calculation	0.674 ± 0.494 (0.911)	pCi/L	08/02/17 11:13	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FB-1-7-10-17 Lab ID: 30223998007 Collected: 07/10/17 17:30 Received: 07/13/17 10:15 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	-0.0230 ± 0.0832 (0.241) C:93% T:NA	pCi/L	07/25/17 10:20	13982-63-3	
Radium-228	EPA 9320	0.0870 ± 0.369 (0.838) C:76% T:78%	pCi/L	07/28/17 11:27	15262-20-1	
Total Radium	Total Radium Calculation	0.0870 ± 0.452 (1.08)	pCi/L	08/02/17 11:13	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EB-1-7-11-17 Lab ID: 30223998008 Collected: 07/11/17 12:50 Received: 07/13/17 10:15 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.00356 ± 0.0763 (0.209) C:89% T:NA	pCi/L	07/25/17 10:20	13982-63-3	
Radium-228	EPA 9320	0.496 ± 0.357 (0.690) C:73% T:85%	pCi/L	07/28/17 11:28	15262-20-1	
Total Radium	Total Radium Calculation	0.500 ± 0.433 (0.899)	pCi/L	08/02/17 11:13	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-20 Lab ID: 30223998009 Collected: 07/11/17 17:20 Received: 07/13/17 10:15 Matrix: Water						
PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	1.13 ± 0.299 (0.186) C:96% T:NA	pCi/L	07/25/17 10:20	13982-63-3	
Radium-228	EPA 9320	1.63 ± 0.540 (0.720) C:79% T:78%	pCi/L	07/28/17 11:27	15262-20-1	
Total Radium	Total Radium Calculation	2.76 ± 0.839 (0.906)	pCi/L	08/02/17 11:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAG0275 Plant Kraft

Pace Project No.: 30223998

Sample: GWC-22 **Lab ID: 30223998010** Collected: 07/11/17 07:55 Received: 07/13/17 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.75 ± 0.407 (0.194) C:86% T:NA	pCi/L	07/25/17 10:20	13982-63-3	
Radium-228	EPA 9320	2.45 ± 0.721 (0.920) C:74% T:83%	pCi/L	07/28/17 11:27	15262-20-1	
Total Radium	Total Radium Calculation	4.20 ± 1.13 (1.11)	pCi/L	08/02/17 11:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0275 Plant Kraft

Pace Project No.: 30223998

QC Batch: 265165

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30223998001, 30223998002, 30223998003, 30223998004, 30223998005, 30223998006, 30223998007, 30223998008, 30223998009, 30223998010

METHOD BLANK: 1306528

Matrix: Water

Associated Lab Samples: 30223998001, 30223998002, 30223998003, 30223998004, 30223998005, 30223998006, 30223998007, 30223998008, 30223998009, 30223998010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0806 ± 0.263 (0.593) C:80% T:100%	pCi/L	07/28/17 11:27	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAG0275 Plant Kraft

Pace Project No.: 30223998

QC Batch:	265160	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	30223998001, 30223998002, 30223998003, 30223998004, 30223998005, 30223998006, 30223998007, 30223998008, 30223998009, 30223998010		

METHOD BLANK:	1306523	Matrix:	Water
Associated Lab Samples:	30223998001, 30223998002, 30223998003, 30223998004, 30223998005, 30223998006, 30223998007, 30223998008, 30223998009, 30223998010		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0171 ± 0.0541 (0.175) C:91% T:NA	pCi/L	07/25/17 10:10	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: AAG0275 Plant Kraft
Pace Project No.: 30223998

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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Chain of Custody



Workorder: AAG0275

Workorder Name: Plant Kraft

Owner Received Date:

Results Requested By: 8/4/2017

Report To:	Subcontract To:	Requested Analysis						
Betsy McDaniel Pace Analytical Atlanta 110 Technology Parkway Peachtree Corners, GA 30092 Phone (770)-734-4200	Pace - Pittsburgh 1638 Roseytown Road Stes. 2,3,4 Greensburg, PA 15601 Phone (724) 850-5600	<p>WO#: 30223998</p> <p>30223998</p>						
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	Radium 226, 228, Total	LAB USE ONLY
1	GWC-12	G	7/10/2017 16:50	AAG0275-01	GW	4	X	001
2	GWA-8	G	7/11/2017 10:35	AAG0275-02	GW	2	X	002
3	GWC-11	G	7/11/2017 13:00	AAG0275-03	GW	2	X	003
4	GWC-14	G	7/11/2017 15:55	AAG0275-04	GW	2	X	004
5	GWC-15	G	7/11/2017 14:20	AAG0275-05	GW	2	X	005
6	Dup-2-7-11-17	G	7/11/2017 0:00	AAG0275-06	GW	2	X	006
7	FB-1-7-10-17	G	7/10/2017 17:30	AAG0275-07	W	2	X	007
8	EB-1-7-11-17	G	7/11/2017 12:50	AAG0275-08	W	2	X	008
9	GWC-20	G	7/11/2017 17:20	AAG0275-09	GW	2	X	009
10	GWC-22	G	7/11/2017 7:55	AAG0275-10	GW	2	X	010
Transfers	Released By	Date/Time	Received By	Date/Time	Comments			
1	M. RAHMAN	7/12/17	[Signature]	7/13/17				
2								
3								

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

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC

This chain of custody is considered complete as is since this information is available in the owner laboratory.



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

CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 REPORT TO: Lauren Petty REQUESTED COMPLETION DATE: Heath McCorkle laburch@southernco.com PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase 2 CCR & State D&O / Background #5		CONTAINER TYPE: P 3 PRESERVATION: 3 # of CONTAINERS: 6		ANALYSIS REQUESTED: Metals App, III & IV (EPA 6020/7470) ✓ Metals (See attached) (EPA 6020) ✓ Cl, SO ₄ & TDS (EPA 300.D & SM 2640C) ✓ Rad (um 226 & 228 (SM 846 9315/9320)) ✓		CONTAINER TYPE: P-PLASTIC A-AMBER GLASS G-CLEAR GLASS V-VOA VIAL S-STERILE O-OTHER		PRESERVATION: 1- HCl, 56°C 2- H ₂ SO ₄ , 56°C 3- HNO ₃ 4- NaOH, 56°C 5- NaOH/ZnAc, 56°C 6- Na ₂ S ₂ O ₃ , 56°C 7- 56°C not frozen	
CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 REPORT TO: Lauren Petty REQUESTED COMPLETION DATE: Heath McCorkle PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase 2 CCR & State D&O / Background #5		CONTAINER TYPE: P 3 PRESERVATION: 3 # of CONTAINERS: 6		ANALYSIS REQUESTED: Metals App, III & IV (EPA 6020/7470) ✓ Metals (See attached) (EPA 6020) ✓ Cl, SO ₄ & TDS (EPA 300.D & SM 2640C) ✓ Rad (um 226 & 228 (SM 846 9315/9320)) ✓		CONTAINER TYPE: P-PLASTIC A-AMBER GLASS G-CLEAR GLASS V-VOA VIAL S-STERILE O-OTHER		PRESERVATION: 1- HCl, 56°C 2- H ₂ SO ₄ , 56°C 3- HNO ₃ 4- NaOH, 56°C 5- NaOH/ZnAc, 56°C 6- Na ₂ S ₂ O ₃ , 56°C 7- 56°C not frozen	
Collection DATE 7/10/17 Collection TIME 1650 MATRIX CODE* GW CGOR O-X R- M- A- P-B	SAMPLE IDENTIFICATION GW C-12 GW A-8 GW C-11 GW C-14 GW C-15 Dup-2-7-11-17	RELINQUISHED BY: [Signature] DATE/TIME: 7-11-17 1420	RELINQUISHED BY: [Signature] DATE/TIME: 7-17-17 0800	LAB #: AA60275 Entered into LIS: Tracking #:	REMARKS/ADDITIONAL INFORMATION 2nd Rad Hex 30223098	FOR LAB USE ONLY			

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sp, Se, V, Zn
Plant Kraft - Grumman Rd COC Phase 2 CCR & State

Sample Condition Upon Receipt Pittsburgh

30223998

Pace Analytical

Client Name: PACE-GA Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Label	<u>ZH</u>
LIMS Login	<u>AMC</u>

Tracking #: 741366571247

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

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

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

Temp should be above freezing to 6°C

Date and initials of person examining contents: ZH 7/13/17

Comments:	Yes	No	N/A	
Chain of Custody Present:	/			1.
Chain of Custody Filled Out:	/			2.
Chain of Custody Relinquished:	/			3.
Sampler Name & Signature on COC:	/			4. <u>pace 7/12/17</u>
Sample Labels match COC: -Includes date/time/ID Matrix: <u>WT</u>	/			5. <u>pace 7/13/17</u>
Samples Arrived within Hold Time:	/			6.
Short Hold Time Analysis (<72hr remaining):		/		7.
Rush Turn Around Time Requested:		/		8.
Sufficient Volume:	/			9.
Correct Containers Used: -Pace Containers Used:	/			10.
Containers Intact:	/			11.
Orthophosphate field filtered			/	12.
Organic Samples checked for dechlorination:			/	13.
Filtered volume received for Dissolved tests			/	14.
All containers have been checked for preservation.	/			15.
All containers needing preservation are found to be in compliance with EPA recommendation.	/			<u>PH 12</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>ZH</u> Date/time of preservation: _____
				Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):			/	16.
Trip Blank Present:			/	17.
Trip Blank Custody Seals Present			/	
Rad Aqueous Samples Screened > 0.5 mrem/hr	/			Initial when completed: <u>ZH</u> Date: <u>7/13/17</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JC2
Date: 7/20/2017
Worklist: 36691
Matrix: DW

Method Blank Assessment	
MB Sample ID	1306523
MB Concentration:	-0.017
M/B Counting Uncertainty:	0.054
MB MDC:	0.175
MB Numerical Performance Indicator:	-0.62
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	7/25/2017
Spike I.D.:	17-030
Spike Concentration (pCi/L):	80.197
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.503
Target Conc. (pCi/L, g, F):	15.937
Uncertainty (Calculated):	1.488
Result (pCi/L, g, F):	13.249
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.807
Numerical Performance Indicator:	-3.14
Percent Recovery:	83.13%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30223998001
Duplicate Sample I.D.:	30223998001DUP
Sample Result (pCi/L, g, F):	0.630
Sample Result Counting Uncertainty (pCi/L, g, F):	0.204
Sample Duplicate Result (pCi/L, g, F):	0.359
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.155
Are sample and/or duplicate results below MDC?	See-Below ##
Duplicate Numerical Performance Indicator:	2.076
Duplicate RPD:	54-88%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail

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

Comments:

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

Sample results = 5c mdc, use numerical indicator < 2 acceptable for DW < 3 acceptable for all other matrices

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 7/24/2017
Worklist: 36694
Matrix: DW

Method Blank Assessment	
MB Sample ID	1306528
MB Concentration:	0.081
MB Counting Uncertainty:	0.263
MB MDC:	0.593
MB Numerical Performance Indicator:	0.60
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		N
LCS(Y or N)?		LCS036694
Count Date:	7/28/2017	
Spike I.D.:	17-005	
Spike Concentration (pCi/mL):	23,943	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.800	
Target Conc. (pCi/L, g, F):	5.986	
Uncertainty (Calculated):	0.431	
Result (pCi/L, g, F):	4.848	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.599	
Numerical Performance Indicator:	-3.02	
Percent Recovery:	81.00%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Duplicate Sample Assessment		N
LCS(Y or N)?		LCS036694
Sample I.D.:	30223998001	
Duplicate Sample I.D.:	30223998001DUP	
Sample Result (pCi/L, g, F):	0.919	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.431	
Sample Duplicate Result (pCi/L, g, F):	1.199	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.426	
Are sample and/or duplicate results below MDC?	See Below #	
Duplicate Numerical Performance Indicator:	-0.906	
Duplicate RPD:	26.46%	
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.
30223998001
30223998001DUP

Comments:

Qua 13/17

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

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



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: AAG0384

July 26, 2017

Project: CCR Event

Project #:Plant Kraft

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

Approved:

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

Project Manager

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All test results relate only to the samples analyzed.



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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-4	AAG0384-01	Ground Water	07/12/17 17:00	07/14/17 08:00
GWA-7	AAG0384-02	Ground Water	07/13/17 10:40	07/14/17 08:00



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 2017

Report No.: AAG0384

Project: CCR Event

Client ID: GWC-4

Lab Number ID: AAG0384-01

Date/Time Sampled: 7/12/2017 5:00:00PM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Metals, Dissolved											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	07/19/17 07:40	07/21/17 00:59	7070437	CSW
Arsenic	0.0010	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/19/17 07:40	07/21/17 00:59	7070437	CSW
Barium	0.0696	0.0100	0.0004	mg/L	EPA 6020B		1	07/19/17 07:40	07/21/17 00:59	7070437	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	07/19/17 07:40	07/21/17 00:59	7070437	CSW
Boron	8.30	2.00	0.298	mg/L	EPA 6020B		50	07/19/17 07:40	07/25/17 13:10	7070437	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/19/17 07:40	07/21/17 00:59	7070437	CSW
Calcium	9.48	5.00	2.02	mg/L	EPA 6020B		50	07/19/17 07:40	07/21/17 01:05	7070437	CSW
Chromium	0.0064	0.0100	0.0005	mg/L	EPA 6020B	J	1	07/19/17 07:40	07/21/17 00:59	7070437	CSW
Cobalt	0.0005	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/19/17 07:40	07/21/17 00:59	7070437	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	07/19/17 07:40	07/21/17 00:59	7070437	CSW
Molybdenum	0.0074	0.0100	0.0010	mg/L	EPA 6020B	J	1	07/19/17 07:40	07/21/17 00:59	7070437	CSW
Selenium	0.0021	0.0100	0.0018	mg/L	EPA 6020B	J	1	07/19/17 07:40	07/21/17 00:59	7070437	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/19/17 07:40	07/21/17 00:59	7070437	CSW
Vanadium	0.0347	0.0100	0.0012	mg/L	EPA 6020B		1	07/19/17 07:40	07/21/17 00:59	7070437	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	07/19/17 07:40	07/21/17 00:59	7070437	CSW
Lithium	0.0020	0.0500	0.0015	mg/L	EPA 6020B	J	1	07/19/17 07:40	07/21/17 00:59	7070437	CSW
Mercury	ND	0.0005	0.00004	mg/L	EPA 7470A		1	07/18/17 12:40	07/18/17 19:14	7070383	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 2017

Report No.: AAG0384

Project: CCR Event

Client ID: GWA-7

Lab Number ID: AAG0384-02

Date/Time Sampled: 7/13/2017 10:40:00AM

Date/Time Received: 7/14/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Metals, Dissolved											
Antimony	0.0008	0.0030	0.0006	mg/L	EPA 6020B	J	1	07/19/17 07:40	07/21/17 01:10	7070437	CSW
Arsenic	0.0037	0.0050	0.0005	mg/L	EPA 6020B	J	1	07/19/17 07:40	07/21/17 01:10	7070437	CSW
Barium	0.0717	0.0100	0.0004	mg/L	EPA 6020B		1	07/19/17 07:40	07/21/17 01:10	7070437	CSW
Beryllium	ND	0.0150	0.0005	mg/L	EPA 6020B	R-01	5	07/19/17 07:40	07/24/17 17:34	7070437	CSW
Boron	15.1	2.00	0.298	mg/L	EPA 6020B		50	07/19/17 07:40	07/24/17 16:59	7070437	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	07/19/17 07:40	07/21/17 01:10	7070437	CSW
Calcium	4.48	2.50	0.202	mg/L	EPA 6020B		5	07/19/17 07:40	07/21/17 01:22	7070437	CSW
Chromium	0.0233	0.0100	0.0005	mg/L	EPA 6020B		1	07/19/17 07:40	07/21/17 01:10	7070437	CSW
Cobalt	0.0035	0.0100	0.0003	mg/L	EPA 6020B	J	1	07/19/17 07:40	07/21/17 01:10	7070437	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	07/19/17 07:40	07/21/17 01:10	7070437	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	07/19/17 07:40	07/21/17 01:10	7070437	CSW
Selenium	0.0121	0.0100	0.0018	mg/L	EPA 6020B		1	07/19/17 07:40	07/21/17 01:10	7070437	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	07/19/17 07:40	07/21/17 01:10	7070437	CSW
Vanadium	0.203	0.0100	0.0012	mg/L	EPA 6020B		1	07/19/17 07:40	07/21/17 01:10	7070437	CSW
Zinc	0.0028	0.0100	0.0012	mg/L	EPA 6020B	J	1	07/19/17 07:40	07/21/17 01:10	7070437	CSW
Lithium	ND	0.250	0.0075	mg/L	EPA 6020B	R-01	5	07/19/17 07:40	07/24/17 17:34	7070437	CSW
Mercury	ND	0.0005	0.00004	mg/L	EPA 7470A		1	07/18/17 12:40	07/18/17 19:16	7070383	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 2017

Report No.: AAG0384

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070383 - EPA 7470A											
Blank (7070383-BLK1)						Prepared & Analyzed: 07/18/17					
Mercury	ND	0.0005	0.00004	mg/L							
LCS (7070383-BS1)						Prepared & Analyzed: 07/18/17					
Mercury	0.0023	0.0005	0.00004	mg/L	2.5000E-3		94	80-120			
Matrix Spike (7070383-MS1)						Source: AAG0384-01 Prepared & Analyzed: 07/18/17					
Mercury	0.0021	0.0005	0.00004	mg/L	2.5000E-3	ND	82	75-125			
Matrix Spike Dup (7070383-MSD1)						Source: AAG0384-01 Prepared & Analyzed: 07/18/17					
Mercury	0.0015	0.0005	0.00004	mg/L	2.5000E-3	ND	61	75-125	29	20	QM-05, QR-03
Post Spike (7070383-PS1)						Source: AAG0384-01 Prepared & Analyzed: 07/18/17					
Mercury	1.61			ug/L	1.6667	0.0046	96	80-120			
Batch 7070437 - EPA 3005A											
Blank (7070437-BLK1)						Prepared: 07/19/17 Analyzed: 07/20/17					
Antimony	ND	0.0030	0.0006	mg/L							
Arsenic	ND	0.0050	0.0005	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	ND	0.500	0.0404	mg/L							
Chromium	ND	0.0100	0.0005	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	0.0006	0.0250	0.0003	mg/L							J
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0012	mg/L							
Zinc	ND	0.0100	0.0012	mg/L							
Lithium	ND	0.0500	0.0015	mg/L							



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 2017

Report No.: AAG0384

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070437 - EPA 3005A											
LCS (7070437-BS1)						Prepared: 07/19/17 Analyzed: 07/20/17					
Antimony	0.104	0.0030	0.0006	mg/L	0.10000		104	80-120			
Arsenic	0.0997	0.0050	0.0005	mg/L	0.10000		100	80-120			
Barium	0.0999	0.0100	0.0004	mg/L	0.10000		100	80-120			
Beryllium	0.101	0.0030	0.00009	mg/L	0.10000		101	80-120			
Boron	1.04	0.0400	0.0060	mg/L	1.0000		104	80-120			
Cadmium	0.103	0.0010	0.0001	mg/L	0.10000		103	80-120			
Calcium	1.04	0.500	0.0404	mg/L	1.0000		104	80-120			
Chromium	0.107	0.0100	0.0005	mg/L	0.10000		107	80-120			
Cobalt	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Copper	0.0989	0.0250	0.0003	mg/L	0.10000		99	80-120			
Lead	0.102	0.0050	0.00007	mg/L	0.10000		102	80-120			
Molybdenum	0.106	0.0100	0.0010	mg/L	0.10000		106	80-120			
Nickel	0.104	0.0100	0.0005	mg/L	0.10000		104	80-120			
Selenium	0.102	0.0100	0.0018	mg/L	0.10000		102	80-120			
Silver	0.102	0.0100	0.0002	mg/L	0.10000		102	80-120			
Thallium	0.100	0.0010	0.00005	mg/L	0.10000		100	80-120			
Vanadium	0.106	0.0100	0.0012	mg/L	0.10000		106	80-120			
Zinc	0.103	0.0100	0.0012	mg/L	0.10000		103	80-120			
Lithium	0.106	0.0500	0.0015	mg/L	0.10000		106	80-120			

Matrix Spike (7070437-MS1)				Source: AAG0384-02			Prepared: 07/19/17 Analyzed: 07/21/17				
Antimony	0.101	0.0030	0.0006	mg/L	0.10000	0.0008	100	75-125			
Arsenic	0.106	0.0050	0.0005	mg/L	0.10000	0.0037	102	75-125			
Barium	0.155	0.0100	0.0004	mg/L	0.10000	0.0717	83	75-125			
Beryllium	0.0973	0.0150	0.0005	mg/L	0.10000	ND	97	75-125			
Boron	16.5	2.00	0.298	mg/L	1.0000	15.1	136	75-125			QM-02
Cadmium	0.0944	0.0010	0.0001	mg/L	0.10000	ND	94	75-125			
Calcium	6.07	25.0	2.02	mg/L	1.0000	4.48	159	75-125			QM-02, J
Chromium	0.126	0.0100	0.0005	mg/L	0.10000	0.0233	102	75-125			
Cobalt	0.101	0.0100	0.0003	mg/L	0.10000	0.0035	98	75-125			
Copper	0.0867	0.0250	0.0003	mg/L	0.10000	0.0007	86	75-125			
Lead	0.0898	0.0050	0.00007	mg/L	0.10000	0.0002	90	75-125			
Molybdenum	0.111	0.0100	0.0010	mg/L	0.10000	ND	111	75-125			
Nickel	0.103	0.0100	0.0005	mg/L	0.10000	0.0104	93	75-125			
Selenium	0.114	0.0100	0.0018	mg/L	0.10000	0.0121	102	75-125			
Silver	0.0875	0.0100	0.0002	mg/L	0.10000	ND	88	75-125			
Thallium	0.0899	0.0010	0.00005	mg/L	0.10000	ND	90	75-125			
Vanadium	0.317	0.0100	0.0012	mg/L	0.10000	0.203	114	75-125			
Zinc	0.0976	0.0100	0.0012	mg/L	0.10000	0.0028	95	75-125			
Lithium	0.0992	0.250	0.0075	mg/L	0.10000	ND	99	75-125			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

July 26, 2017

Report No.: AAG0384

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7070437 - EPA 3005A											
Matrix Spike Dup (7070437-MSD1)			Source: AAG0384-02			Prepared: 07/19/17 Analyzed: 07/21/17					
Antimony	0.105	0.0030	0.0006	mg/L	0.10000	0.0008	104	75-125	4	20	
Arsenic	0.107	0.0050	0.0005	mg/L	0.10000	0.0037	103	75-125	1	20	
Barium	0.160	0.0100	0.0004	mg/L	0.10000	0.0717	88	75-125	3	20	
Beryllium	0.0963	0.0150	0.0005	mg/L	0.10000	ND	96	75-125	1	20	
Boron	17.2	2.00	0.298	mg/L	1.0000	15.1	208	75-125	4	20	QM-02
Cadmium	0.0944	0.0010	0.0001	mg/L	0.10000	ND	94	75-125	0.06	20	
Calcium	6.44	25.0	2.02	mg/L	1.0000	4.48	196	75-125	6	20	QM-02, J
Chromium	0.126	0.0100	0.0005	mg/L	0.10000	0.0233	103	75-125	0.6	20	
Cobalt	0.0997	0.0100	0.0003	mg/L	0.10000	0.0035	96	75-125	2	20	
Copper	0.0869	0.0250	0.0003	mg/L	0.10000	0.0007	86	75-125	0.2	20	
Lead	0.0876	0.0050	0.00007	mg/L	0.10000	0.0002	87	75-125	2	20	
Molybdenum	0.111	0.0100	0.0010	mg/L	0.10000	ND	111	75-125	0.4	20	
Nickel	0.103	0.0100	0.0005	mg/L	0.10000	0.0104	92	75-125	0.1	20	
Selenium	0.120	0.0100	0.0018	mg/L	0.10000	0.0121	108	75-125	6	20	
Silver	0.0894	0.0100	0.0002	mg/L	0.10000	ND	89	75-125	2	20	
Thallium	0.0901	0.0010	0.00005	mg/L	0.10000	ND	90	75-125	0.3	20	
Vanadium	0.318	0.0100	0.0012	mg/L	0.10000	0.203	115	75-125	0.2	20	
Zinc	0.0984	0.0100	0.0012	mg/L	0.10000	0.0028	96	75-125	0.9	20	
Lithium	0.0974	0.250	0.0075	mg/L	0.10000	ND	97	75-125	2	20	J

Post Spike (7070437-PS1)			Source: AAG0384-02			Prepared: 07/19/17 Analyzed: 07/21/17					
Antimony	105			ug/L	100.00	0.821	104	80-120			
Arsenic	106			ug/L	100.00	3.72	102	80-120			
Barium	157			ug/L	100.00	71.7	85	80-120			
Beryllium	98.4			ug/L	100.00	0.150	98	80-120			
Boron	16500			ug/L	1000.0	15100	142	80-120			QM-02
Cadmium	93.6			ug/L	100.00	0.0003	94	80-120			
Calcium	6080			ug/L	1000.0	4480	160	80-120			QM-02
Chromium	125			ug/L	100.00	23.3	102	80-120			
Cobalt	102			ug/L	100.00	3.54	99	80-120			
Copper	86.6			ug/L	100.00	0.671	86	80-120			
Lead	88.6			ug/L	100.00	0.222	88	80-120			
Molybdenum	110			ug/L	100.00	0.449	110	80-120			
Nickel	104			ug/L	100.00	10.4	93	80-120			
Selenium	119			ug/L	100.00	12.1	107	80-120			
Silver	90.2			ug/L	100.00	0.0287	90	80-120			
Thallium	90.9			ug/L	100.00	0.0056	91	80-120			
Vanadium	320			ug/L	100.00	203	116	80-120			
Zinc	96.5			ug/L	100.00	2.81	94	80-120			
Lithium	102			ug/L	100.00	-1.15	102	80-120			



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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 26, 2017

Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

- R-01** Elevated reporting limit due to matrix interference.
- QR-03** The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to suspected matrix interference and/or non-homogeneous sample matrix.
- QM-05** The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.
- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

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

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



CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239 REPORT TO: Lauren Petty CC: Maria Padilla Heath McCorkle PO #: laburch@southernco.com PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase 2 CCR & State D&O / Background #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 ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen	
CONTAINER TYPE: 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		*MATRIX CODES: REMARKS/ADDITIONAL INFORMATION	
ANALYSIS REQUESTED P 3 (EPA 6020/7470) (FIELD FILTERED) P 3 (EPA 6020) (FIELD FILTERED) P 7 (Cl, F, SO ₄ & TDS) P 3 (EPA 300.0 & SM 2540C) P 3 (Radium 226 & 228 (SW-846 9315/9320))		LABORATORY USE ONLY LAB #: AA 60384 Entered into LIMS: [Signature] Tracking #: [Signature]	
CONTAINERS # of CONTAINERS 1 1		RELINQUISHED BY: DATE/TIME: 7-13-17 1040 DATE/TIME: 7-14-17 0800	
RECEIVED BY: DATE/TIME: 7/14/17 0800 Temperature: Min: 19.5C Max:		SAMPLE SHIPPED VIA: UPS Intact FED-EX Broken USPS Not Present COURIER # of Coolers: 1 CLIENT Other FS:	

Sample Condition Upon Receipt



Client Name: GA Power Project # AAG-0384

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used IR-2 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 0.5 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Optional
Proj. Due Date:
Proj. Name:

Date and Initials of person examining contents: <u>2H 7/14/17</u>

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

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



PACE ANALYTICAL SERVICES, LLC.

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

LOG-IN CHECKLIST

Printed: 7/17/2017 11:10:39AM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 07/14/17 08:00

Work Order: AAG0384

Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 2

#Containers: 2

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 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:

Product Name: Low-Flow System

Date: 2017-10-04 14:40:55

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 18.6 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 21.1 ft
Screen Length 5 ft
Depth to Water 5.74 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 10
Last 5	14:20:05	1200.00	25.83	6.16	4026.61	286.00	5.90	-0.01	11.42
Last 5	14:25:05	1500.00	25.88	6.16	4041.46	304.00	5.90	-0.01	7.82
Last 5	14:30:05	1799.99	25.74	6.16	4032.75	312.00	5.90	-0.01	4.61
Last 5	14:35:05	2099.98	25.83	6.16	4028.96	300.00	5.90	-0.01	1.68
Last 5	14:40:05	2400.00	25.96	6.16	4011.58	309.00	5.90	-0.01	-1.36
Variance 0			-0.14	0.00	-8.71			-0.00	-3.21
Variance 1			0.09	-0.01	-3.79			0.00	-2.93
Variance 2			0.14	0.00	-17.38			-0.00	-3.04

Notes

81F Sunny. Sampled at 1440.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-02 14:17:07

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft GrummanRoad
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369557
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 17 ft

Well Information:

Well ID GWA-8
Well diameter 2 in
Well Total Depth 20.9 ft
Screen Length 5 ft
Depth to Water 7.41 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.5015855 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 16.68 in
Total Volume Pumped 4.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	13:54:00	1200.02	25.73	4.44	295.27	3.01	8.60	0.27	119.25
Last 5	13:59:01	1500.56	25.76	4.37	317.93	2.74	8.70	0.24	111.31
Last 5	14:04:01	1800.56	25.59	4.32	333.36	2.44	8.70	0.20	106.03
Last 5	14:09:01	2100.55	25.64	4.31	339.13	2.12	8.70	0.17	101.75
Last 5	14:14:01	2400.55	25.41	4.31	342.85	2.05	8.80	0.16	97.32
Variance 0			-0.18	-0.05	15.43			-0.04	-5.28
Variance 1			0.05	-0.01	5.78			-0.02	-4.28
Variance 2			-0.23	0.00	3.72			-0.02	-4.42

Notes

Sampled at 14:15. Mostly cloudy 60's.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-02 14:53:36

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft GrummanRoad
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369557
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 17 ft

Well Information:

Well ID GWA-8
Well diameter 2 in
Well Total Depth 20.9 ft
Screen Length 5 ft
Depth to Water 7.41 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.5015855 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 16 in
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	14:32:19	300.14	25.45	4.31	344.25	1.95	8.80	0.13	92.23
Last 5	14:37:19	600.02	25.34	4.31	344.25	1.61	8.80	0.12	90.46
Last 5	14:42:19	900.03	25.28	4.32	342.19	1.34	8.80	0.11	88.69
Last 5	14:47:19	1200.02	25.54	4.30	343.12	1.12	8.80	0.10	88.63
Last 5	14:52:19	1500.02	25.47	4.32	343.20	1.50	8.80	0.10	86.90
Variance 0			-0.06	0.01	-2.06			-0.01	-1.77
Variance 1			0.26	-0.02	0.93			-0.01	-0.05
Variance 2			-0.08	0.01	0.08			-0.01	-1.74

Notes

Sampled at 14:55. Mostly cloudy 60's.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-03 09:21:57

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 20.79"
Longitude -81° -11' -1.96"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 34 ft

Pump placement from TOC 28.2 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 31.4 ft
Screen Length 5 ft
Depth to Water 14.54 ft

Pumping Information:

Final Pumping Rate 0 mL/min
Total System Volume 0.2417564 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 100
Last 5	09:15:00	300.08	22.14	4.52	72.15	12.10	--	0.17	105.48
Last 5									
Last 5									
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.00	0.00	0.00			0.00	0.00
Variance 2			0.00	0.00	0.00			0.00	0.00

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-03 11:03:12

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft GrummanRoad
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369557
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 33 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.1 ft
Screen Length 5 ft
Depth to Water 17.98 ft

Pumping Information:

Final Pumping Rate 300 mL/min
Total System Volume 0.237293 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.44 in
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	10:41:16	600.02	23.47	5.67	258.72	3.25	18.10	0.15	85.64
Last 5	10:46:16	900.02	23.47	5.68	260.65	2.59	18.10	0.12	83.56
Last 5	10:51:16	1200.02	23.53	5.61	261.26	2.27	18.10	0.10	86.78
Last 5	10:56:16	1500.32	23.65	5.64	261.22	1.60	18.10	0.10	87.88
Last 5	11:01:16	1800.32	23.93	5.65	260.89	1.32	18.20	0.09	90.74
Variance 0			0.06	-0.07	0.61			-0.01	3.21
Variance 1			0.12	0.02	-0.04			-0.01	1.10
Variance 2			0.28	0.02	-0.33			-0.01	2.86

Notes

Sampled at 11:01. Sunny 70's.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-03 09:51:23

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft GrummanRoad
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369557
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 22.8 ft
Screen Length 5 ft
Depth to Water 19.59 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.52 in
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	09:29:48	2400.90	22.99	6.29	503.06	0.35	19.80	0.12	-31.54
Last 5	09:34:48	2700.90	23.02	6.33	512.54	0.44	19.80	0.12	-35.15
Last 5	09:39:48	3000.90	23.03	6.37	520.68	0.31	19.80	0.11	-38.31
Last 5	09:44:48	3300.90	23.06	6.39	528.47	0.28	19.80	0.11	-41.02
Last 5	09:49:48	3600.90	23.08	6.42	531.96	--	--	0.11	-42.93
Variance 0			0.01	0.03	8.14			-0.00	-3.15
Variance 1			0.03	0.03	7.80			-0.00	-2.71
Variance 2			0.02	0.03	3.49			-0.00	-1.92

Notes

Sampled at 09:50. Sunny 60's.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-04 13:11:32

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 23.9 ft

Well Information:

Well ID GWC-4
Well diameter 2 in
Well Total Depth 26.4 ft
Screen Length 5 ft
Depth to Water 15.35 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 5.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 10
Last 5	12:50:09	900.01	23.43	5.84	1579.95	212.00	15.40	0.11	79.39
Last 5	12:55:09	1200.00	23.45	5.78	1601.93	227.00	15.50	0.09	74.78
Last 5	13:00:09	1499.99	23.43	5.78	1616.07	236.00	15.40	0.08	70.56
Last 5	13:05:09	1799.99	23.43	5.78	1628.23	230.00	15.40	0.08	65.89
Last 5	13:10:09	2099.98	23.65	5.77	1641.25	233.00	15.40	0.07	61.52
Variance 0			-0.02	-0.01	14.14			-0.01	-4.22
Variance 1			0.00	0.01	12.16			-0.00	-4.66
Variance 2			0.22	-0.01	13.02			-0.01	-4.38

Notes

Sampled at 1310. 81F Sunny

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-03 15:08:46

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft GrummanRoad
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369557
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 22.8 ft
Screen Length 5 ft
Depth to Water 7.37 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.96 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	14:45:40	1800.93	24.77	5.34	633.21	8.01	7.70	0.07	42.97
Last 5	14:50:40	2100.93	24.72	5.34	636.50	7.14	7.70	0.07	41.31
Last 5	14:55:40	2400.93	24.69	5.34	631.33	6.39	7.70	0.06	33.62
Last 5	15:00:40	2700.93	24.71	5.35	633.68	5.76	7.70	0.06	29.28
Last 5	15:05:40	3000.93	24.53	5.36	631.88	4.80	7.70	0.06	28.14
Variance 0			-0.03	0.00	-5.17			-0.00	-7.69
Variance 1			0.02	0.01	2.35			-0.00	-4.34
Variance 2			-0.18	0.00	-1.80			0.00	-1.14

Notes

Sunny 80's. Sampled at 15:05.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-03 15:16:04

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 24.2 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 5 ft
Depth to Water 10.52 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 10
Last 5	14:55:10	1499.99	24.15	5.10	458.57	104.00	10.50	0.10	67.84
Last 5	15:00:10	1799.99	24.33	5.10	461.15	66.80	10.50	0.09	64.69
Last 5	15:05:10	2099.98	24.15	5.09	457.63	58.90	10.50	0.08	61.90
Last 5	15:10:10	2399.97	24.33	5.10	458.92	51.80	10.50	0.08	59.45
Last 5	15:15:10	2699.98	24.17	5.08	448.35	0.00	10.50	0.12	56.00
Variance 0			-0.18	-0.01	-3.52			-0.01	-2.79
Variance 1			0.18	0.01	1.29			-0.01	-2.46
Variance 2			-0.16	-0.02	-10.57			0.04	-3.45

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-04 08:50:37

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft GrummanRoad
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369557
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 25.7 ft
Screen Length 5 ft
Depth to Water 8.03 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 54.84 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	08:32:09	300.14	22.72	4.96	213.79	8.29	9.90	0.19	80.28
Last 5	08:37:09	600.03	22.78	4.82	213.81	6.19	10.80	0.18	73.85
Last 5	08:42:09	900.02	22.93	4.78	213.16	4.95	11.70	0.15	68.05
Last 5	08:47:09	1200.02	23.11	4.72	212.00	3.75	12.60	0.13	66.64
Last 5									
Variance 0			0.06	-0.14	0.03			-0.01	-6.43
Variance 1			0.15	-0.04	-0.66			-0.03	-5.80
Variance 2			0.17	-0.06	-1.15			-0.02	-1.41

Notes

Well purged dry on 10-3-17. Sampled at 08:50. Sunny 60's.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-03 13:14:26

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft GrummanRoad
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369557
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 22.5 ft
Screen Length 5 ft
Depth to Water 10.12 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 32.16 in
Total Volume Pumped 11.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	12:51:17	3601.34	26.74	5.05	368.98	6.74	12.80	0.14	166.85
Last 5	12:56:17	3901.34	26.09	5.06	372.49	12.40	12.80	0.14	171.86
Last 5	13:01:17	4201.34	25.98	5.04	386.30	7.05	12.80	0.13	177.26
Last 5	13:06:17	4501.34	25.45	5.07	395.62	5.16	12.80	0.13	165.64
Last 5	13:11:17	4801.34	25.84	5.07	402.42	4.95	12.80	0.12	152.70
Variance 0			-0.11	-0.01	13.81			-0.01	5.40
Variance 1			-0.54	0.02	9.32			-0.00	-11.63
Variance 2			0.39	0.00	6.80			-0.01	-12.94

Notes

Sunny 70's. Sampled at 13:11.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-04 11:56:51

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 24.2 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 5 ft
Depth to Water 10.41 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 9.625 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 10
Last 5	11:35:03	1799.98	25.03	4.06	1532.54	6.85	10.60	0.12	143.14
Last 5	11:40:03	2099.97	25.18	4.06	1559.88	5.93	10.60	0.12	143.35
Last 5	11:45:03	2399.97	25.69	4.05	1557.19	6.32	10.60	0.12	143.70
Last 5	11:50:03	2699.96	25.36	4.06	1530.39	5.07	10.60	0.08	143.73
Last 5	11:55:03	2999.95	25.06	4.06	1545.59	4.93	10.60	0.08	143.24
Variance 0			0.51	-0.00	-2.69			-0.00	0.35
Variance 1			-0.34	0.01	-26.80			-0.04	0.03
Variance 2			-0.30	-0.00	15.20			-0.01	-0.49

Notes

Sampled at 1155. 81F Sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-04 10:21:13

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 24.2 ft

Well Information:

Well ID GWC-13
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 5 ft
Depth to Water 11.99 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6 in
Total Volume Pumped 27 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 10
Last 5	10:00:18	2999.97	24.70	4.74	68.22	10.40	12.50	0.13	99.08
Last 5	10:05:18	3299.96	24.87	4.74	84.84	3.58	12.50	0.13	104.84
Last 5	10:10:18	3599.96	24.96	4.74	79.15	2.46	12.50	0.12	101.45
Last 5	10:15:18	3899.95	23.66	4.70	78.86	2.10	12.40	0.12	103.32
Last 5	10:20:18	4199.94	23.34	4.71	78.83	2.00	12.50	0.13	101.39
Variance 0			0.09	0.00	-5.69			-0.02	-3.39
Variance 1			-1.31	-0.04	-0.29			0.00	1.88
Variance 2			-0.32	0.02	-0.04			0.01	-1.93

Notes

68F cloudy. Sampled at 1025.

Grab Samples



Groundwater Sampling Log

Well ID: GWC-14

Job Name: Plant Kraft - Grumman Rd.

Sheet No. 1/1

Sampled By: O. FUQUEN

Sampling Date 10-2-17

Water Level (Ft BTOC) 17.67

Well Depth (Ft BTOC): 27.00

Standing Water Column (H) 9.33

Well Dia. (in) 2" 4"

Standing Well Volume (gal) 1.5

Casing Type: PVC Steel

Purge Volume Removed: 46 7.0L

Flush Mount: YES NO

Begin Purging: 1448

Purging Device: Peristaltic Pump

Completed Purging: 1513, 20 min.
1526 38

Tubing Type: Poly

Time	Water Level (BTOC)	Purge Rate (mL/Min.)	Field Parameters						Remarks
			pH (S.U.)	Spec. Cond. (µS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	
Stability Range			± 0.1	± 5%	No Criteria	< 5	± 10%	No Criteria	
1453	175	17.8	5.17	1024.7	23.2	10.1	0.2	17.8	
1458	200	17.8	5.13	1038.7	22.9	7.82	0.16	142.2	
1503	200	17.8	5.13	1050	22.83	5.17 2.7	0.14	142.7	
1508	200	17.8	5.14	1045.9	22.88	4.99	0.13	143.4	Smartwell failed in final comment
1513	200								
1516	200	17.8	5.13	1049.6	22.81	3.63	0.12	145.8	
1521	17.8	200	5.14	1050.3	22.85	3.02	0.12	146.9	
1526	17.8	200	5.13	1045.8	22.75	2.84	0.11	148.1	

Final Sample Parameters								
TIME	DATE	pH (S.U.)	Spec. Cond. (µS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Remarks
1513	10-2-17	5.13	1045.8	22.75	2.84	0.11	148.1	

1526

Comments Smartwell failed after 20 min stabl. 76°F, Cloudy
Stabl. well again, ended low flow, app crashed again.

Notes:

H = well depth (BTOC) - W.L.(BTOC)

Well volume standing in pipe: 2" diameter well: 0.16 x H = vol. (gal)

4" diameter well: 0.66 x H = vol. (gal)

Product Name: Low-Flow System

Date: 2017-10-02 17:49:12

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 16.23"
Longitude -81° -10' -58.73"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type .17
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 24.3 ft

Well Information:

Well ID GWC-15
Well diameter 2 in
Well Total Depth 26.8 ft
Screen Length 5 ft
Depth to Water 18.24 ft

Pumping Information:

Final Pumping Rate 225 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 0
Last 5	17:22:30	4499.93	24.15	6.83	955.04	11.00	18.40	0.08	158.10
Last 5	17:27:30	4799.92	24.15	6.83	955.68	9.85	18.40	0.08	160.11
Last 5	17:32:30	5099.92	24.15	6.83	952.61	8.73	18.40	0.08	163.75
Last 5	17:37:30	5399.92	24.06	6.83	951.99	6.91	18.40	0.08	166.94
Last 5	17:42:30	5699.91	24.02	6.83	953.22	6.00	18.40	0.08	166.91
Variance 0			0.00	-0.00	-3.07			-0.00	3.64
Variance 1			-0.09	0.00	-0.61			0.00	3.19
Variance 2			-0.04	0.00	1.23			0.00	-0.03

Notes

Sampled at 1747. Final NTU: 4.67 74F cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-03 12:46:48

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 17.01"
Longitude -81° -10' -55.11"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 32 ft

Pump placement from TOC 26 ft

Well Information:

Well ID GWC-16
Well diameter 2 in
Well Total Depth 28.2 ft
Screen Length 5 ft
Depth to Water 19.9 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 37 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 10
Last 5	12:25:02	6299.96	24.65	5.61	1576.41	6.46	20.00	0.42	104.64
Last 5	12:30:02	6599.97	24.47	5.58	1587.86	6.34	20.00	0.42	104.26
Last 5	12:35:02	6899.97	24.62	5.56	1585.35	6.03	20.00	0.42	103.51
Last 5	12:40:02	7199.98	24.56	5.56	1577.76	5.75	20.00	0.43	102.96
Last 5	12:45:02	7499.97	24.56	5.55	1594.14	4.78	20.00	0.42	102.32
Variance 0			0.15	-0.01	-2.51			0.00	-0.75
Variance 1			-0.07	-0.00	-7.58			0.00	-0.56
Variance 2			-0.00	-0.01	16.37			-0.01	-0.63

Notes

Sampled at 1245 77F SUNNY.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-04 15:22:56

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft GrummanRoad
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369557
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 23 ft
Screen Length 5 ft
Depth to Water 6.06 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12.48 in
Total Volume Pumped 18.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	15:00:08	6300.84	27.51	4.33	3516.18	5.20	7.10	0.06	162.94
Last 5	15:05:08	6600.84	29.85	4.18	3698.37	4.29	7.10	0.05	167.06
Last 5	15:10:08	6900.84	30.18	4.12	3809.78	4.03	7.10	0.04	169.15
Last 5	15:15:08	7200.84	29.78	4.11	3844.81	4.38	7.10	0.04	169.78
Last 5	15:20:08	7500.84	29.90	4.09	3863.05	3.99	7.10	0.05	171.56
Variance 0			0.33	-0.06	111.41			-0.00	2.09
Variance 1			-0.40	-0.01	35.03			0.00	0.64
Variance 2			0.12	-0.01	18.24			0.00	1.78

Notes

Sunny 80's. Sampled at 15:20. EB-2 here.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-02 16:12:57

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft GrummanRoad
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369557
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 22 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 24.9 ft
Screen Length 5 ft
Depth to Water 20.06 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.5239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5.28 in
Total Volume Pumped 3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	15:50:46	600.02	24.46	5.83	999.60	0.63	20.40	0.15	9.89
Last 5	15:55:46	900.02	24.33	5.85	989.22	0.61	20.40	0.14	9.01
Last 5	16:00:46	1200.02	24.16	5.87	988.03	0.55	20.40	0.13	7.03
Last 5	16:05:46	1500.13	23.98	5.87	995.47	0.50	20.50	0.11	6.43
Last 5	16:10:46	1800.13	23.90	5.88	997.48	0.45	20.50	0.11	5.91
Variance 0			-0.17	0.02	-1.19			-0.01	-1.98
Variance 1			-0.17	0.01	7.44			-0.02	-0.60
Variance 2			-0.08	0.01	2.02			-0.00	-0.52

Notes

Sampled at 16:15. Mostly cloudy 60's.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-03 13:48:13

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 26 ft

Pump placement from TOC 21.3 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 23.8 ft
Screen Length 5 ft
Depth to Water 19.69 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.206049 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 10
Last 5	13:25:00	600.02	25.44	5.19	102.03	8.77	19.70	6.65	60.65
Last 5	13:30:00	900.01	25.24	5.18	102.10	7.69	19.70	6.78	63.69
Last 5	13:35:00	1200.01	25.32	5.13	102.23	7.10	19.70	6.80	65.64
Last 5	13:40:00	1500.00	25.69	5.15	103.45	5.23	19.70	6.73	67.35
Last 5	13:45:00	1800.00	25.78	5.18	106.16	4.41	19.70	6.57	68.52
Variance 0			0.08	-0.05	0.13			0.02	1.96
Variance 1			0.38	0.02	1.22			-0.07	1.71
Variance 2			0.09	0.03	2.71			-0.16	1.17

Notes

Sampled at 1345. 77F Sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-04 12:23:07

Project Information:

Operator Name Ryan Walker
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Plant Kraft GrummanRoad
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369557
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peristaltic
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 23 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-22
Well diameter 2 in
Well Total Depth 18.6 ft
Screen Length 5 ft
Depth to Water 3.25 ft

Pumping Information:

Final Pumping Rate 180 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.8 in
Total Volume Pumped 32.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	11:58:52	8400.59	25.48	4.74	1920.37	5.42	3.40	0.07	181.09
Last 5	12:03:52	8700.59	25.25	4.74	1973.87	5.02	3.40	0.07	179.33
Last 5	12:08:52	9000.59	25.19	4.74	2013.67	5.80	3.40	0.07	177.32
Last 5	12:13:52	9300.59	25.11	4.73	2053.20	4.78	3.40	0.07	166.71
Last 5	12:18:52	9600.59	25.09	4.74	2067.33	3.95	3.40	0.07	153.92
Variance 0			-0.06	0.00	39.80			0.00	-2.01
Variance 1			-0.08	-0.00	39.53			-0.00	-10.61
Variance 2			-0.02	0.01	14.13			0.00	-12.79

Notes

Sampled at 12:18. Sunny 70's. FB-2 here.

Grab Samples



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: AAJ0109

November 03, 2017

Project: CCR Event

Project #: Plant Kraft - Grumman Road

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

Approved:

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

Project Manager

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



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Field Blank-1-10-2-17	AAJ0109-01	Water	10/02/17 16:15	10/04/17 12:20
GWC-15	AAJ0109-02	Ground Water	10/02/17 17:47	10/04/17 12:20
GWC-21	AAJ0109-03	Ground Water	10/03/17 13:45	10/04/17 12:20
GWC-5	AAJ0109-04	Ground Water	10/03/17 17:30	10/04/17 12:20
Dup-1-10-3-17	AAJ0109-05	Ground Water	10/03/17 00:00	10/04/17 12:20
GWC-1	AAJ0109-06	Ground Water	10/03/17 11:01	10/04/17 12:20
GWC-6	AAJ0109-07	Ground Water	10/03/17 15:05	10/04/17 12:20
GWC-11	AAJ0109-08	Ground Water	10/03/17 13:11	10/04/17 12:20
GWC-20	AAJ0109-09	Ground Water	10/02/17 16:15	10/04/17 12:20
Dup-2-3-17	AAJ0109-10	Ground Water	10/03/17 00:00	10/04/17 12:20
GWC-2	AAJ0109-11	Ground Water	10/03/17 09:50	10/04/17 12:20
GWA-8	AAJ0109-12	Ground Water	10/02/17 14:55	10/04/17 12:20
GWC-16	AAJ0109-13	Ground Water	10/03/17 12:45	10/04/17 12:20
GWC-3	AAJ0109-14	Ground Water	10/03/17 09:50	10/04/17 12:20
GWC-14	AAJ0109-15	Ground Water	10/02/17 15:26	10/04/17 12:20



PACE ANALYTICAL SERVICES, LLC.

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November 03, 2017

Case Narrative

The Radium analysis by methods EPA 9315/9320 was performed by Pace-Pittsburgh, 1638 Roseytown Road - Suites 2, 3, 4, Greensburg PA 15601. The Pace-Pittsburgh lab contact is Jacquelyn Collins at 724-850-5612.

Plant Kraft - Grumman Road report AAJ0109 11/3/2017

This revised report replaces the original report submitted on 10/16/2017.

The consultant requested that vanadium and zinc be added to a couple of samples. The following changes were made: samples AAJ0109-02 (GWC-15) and AAJ0109-09 (GWC-20) now have vanadium and zinc data reported. No other changes were made to this report.



PACE ANALYTICAL SERVICES, LLC.

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

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0109

Project: CCR Event

Client ID: Field Blank-1-10-2-17

Lab Number ID: AAJ0109-01

Date/Time Sampled: 10/2/2017 4:15:00PM

Date/Time Received: 10/4/2017 12:20:00PM

Matrix: Water

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	10/05/17 18:25	10/05/17 18:25	7100141	JPT
Inorganic Anions											
Chloride	0.06	0.25	0.02	mg/L	EPA 300.0	J	1	10/06/17 09:52	10/07/17 16:23	7100176	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 16:23	7100176	RLC
Sulfate	0.03	1.0	0.02	mg/L	EPA 300.0	J	1	10/06/17 09:52	10/07/17 16:23	7100176	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:01	7100238	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:01	7100238	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:01	7100238	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:01	7100238	CSW
Boron	0.0069	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 20:01	7100238	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:01	7100238	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:01	7100238	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:01	7100238	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:01	7100238	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:01	7100238	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:01	7100238	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:01	7100238	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:01	7100238	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:01	7100238	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/11/17 11:55	10/11/17 15:54	7100247	MTC



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Georgia Power
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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0109

Project: CCR Event

Client ID: GWC-15

Lab Number ID: AAJ0109-02

Date/Time Sampled: 10/2/2017 5:47:00PM

Date/Time Received: 10/4/2017 12:20:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	559	25	10	mg/L	SM 2540 C		1	10/05/17 18:25	10/05/17 18:25	7100141	JPT
Inorganic Anions											
Chloride	4.4	0.25	0.02	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 16:44	7100176	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 16:44	7100176	RLC
Sulfate	56	5.0	0.08	mg/L	EPA 300.0		5	10/06/17 09:52	10/10/17 08:38	7100176	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:19	7100238	CSW
Arsenic	0.0723	0.0050	0.0005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:19	7100238	CSW
Barium	0.0470	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:19	7100238	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:19	7100238	CSW
Boron	1.59	0.0400	0.0060	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:19	7100238	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:19	7100238	CSW
Calcium	137	25.0	2.02	mg/L	EPA 6020B		50	10/10/17 09:45	10/10/17 20:24	7100238	CSW
Chromium	0.0013	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 20:19	7100238	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:19	7100238	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 20:19	7100238	CSW
Molybdenum	0.103	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:19	7100238	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:19	7100238	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:19	7100238	CSW
Vanadium	0.0022	0.0100	0.0012	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 20:19	7100238	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:19	7100238	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:19	7100238	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/11/17 11:55	10/11/17 15:57	7100247	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0109

Project: CCR Event

Client ID: GWC-21

Lab Number ID: AAJ0109-03

Date/Time Sampled: 10/3/2017 1:45:00PM

Date/Time Received: 10/4/2017 12:20:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	66	25	10	mg/L	SM 2540 C		1	10/05/17 18:25	10/05/17 18:25	7100141	JPT
Inorganic Anions											
Chloride	4.4	0.25	0.02	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 17:04	7100176	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 17:04	7100176	RLC
Sulfate	34	1.0	0.02	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 17:04	7100176	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:30	7100238	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:30	7100238	CSW
Barium	0.0376	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:30	7100238	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:30	7100238	CSW
Boron	0.100	0.0400	0.0060	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:30	7100238	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:30	7100238	CSW
Calcium	7.88	0.500	0.0404	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:30	7100238	CSW
Chromium	0.0005	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 20:30	7100238	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:30	7100238	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 20:30	7100238	CSW
Molybdenum	0.0031	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 20:30	7100238	CSW
Selenium	0.0100	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 20:30	7100238	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:30	7100238	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:30	7100238	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/11/17 11:55	10/11/17 15:59	7100247	MTC



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0109

Project: CCR Event

Client ID: GWC-5

Lab Number ID: AAJ0109-04

Date/Time Sampled: 10/3/2017 5:30:00PM

Date/Time Received: 10/4/2017 12:20:00PM

Matrix: Ground Water

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	10/05/17 18:25	10/05/17 18:25	7100141	JPT
Inorganic Anions											
Chloride	27	0.25	0.02	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 18:06	7100176	RLC
Fluoride	0.11	0.30	0.03	mg/L	EPA 300.0	J	1	10/06/17 09:52	10/07/17 18:06	7100176	RLC
Sulfate	130	10	0.17	mg/L	EPA 300.0		10	10/06/17 09:52	10/10/17 08:59	7100176	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:41	7100238	CSW
Arsenic	0.0010	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 20:41	7100238	CSW
Barium	0.127	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:41	7100238	CSW
Beryllium	0.0002	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 20:41	7100238	CSW
Boron	2.72	0.0400	0.0060	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:41	7100238	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:41	7100238	CSW
Calcium	15.2	5.00	2.02	mg/L	EPA 6020B		50	10/10/17 09:45	10/10/17 20:47	7100238	CSW
Chromium	0.0012	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 20:41	7100238	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:41	7100238	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 20:41	7100238	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:41	7100238	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:41	7100238	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:41	7100238	CSW
Lithium	0.0027	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 20:41	7100238	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/11/17 11:55	10/11/17 16:01	7100247	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

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0109

Project: CCR Event

Client ID: Dup-1-10-3-17

Lab Number ID: AAJ0109-05

Date/Time Sampled: 10/3/2017 12:00:00AM

Date/Time Received: 10/4/2017 12:20:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	23	25	10	mg/L	SM 2540 C	J	1	10/05/17 18:25	10/05/17 18:25	7100141	JPT
Inorganic Anions											
Chloride	8.7	0.25	0.02	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 18:27	7100176	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 18:27	7100176	RLC
Sulfate	20	1.0	0.02	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 18:27	7100176	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:53	7100238	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:53	7100238	CSW
Barium	0.0556	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:53	7100238	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:53	7100238	CSW
Boron	0.0228	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 20:53	7100238	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:53	7100238	CSW
Calcium	0.267	0.500	0.0404	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 20:53	7100238	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:53	7100238	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:53	7100238	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:53	7100238	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:53	7100238	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:53	7100238	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:53	7100238	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 20:53	7100238	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/11/17 11:55	10/11/17 16:04	7100247	MTC



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Environmental Monitoring & Laboratory Analysis
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Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0109

Project: CCR Event

Client ID: GWC-1

Lab Number ID: AAJ0109-06

Date/Time Sampled: 10/3/2017 11:01:00AM

Date/Time Received: 10/4/2017 12:20:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	192	25	10	mg/L	SM 2540 C		1	10/05/17 18:25	10/05/17 18:25	7100141	JPT
Inorganic Anions											
Chloride	4.5	0.25	0.02	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 18:48	7100176	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 18:48	7100176	RLC
Sulfate	63	10	0.17	mg/L	EPA 300.0		10	10/06/17 09:52	10/10/17 09:20	7100176	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:04	7100238	CSW
Arsenic	0.0013	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 21:04	7100238	CSW
Barium	0.0436	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:04	7100238	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:04	7100238	CSW
Boron	0.765	0.0400	0.0060	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:04	7100238	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:04	7100238	CSW
Calcium	25.5	25.0	2.02	mg/L	EPA 6020B		50	10/10/17 09:45	10/10/17 21:10	7100238	CSW
Chromium	0.0014	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 21:04	7100238	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:04	7100238	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:04	7100238	CSW
Molybdenum	0.162	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:04	7100238	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:04	7100238	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:04	7100238	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:04	7100238	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/11/17 11:55	10/11/17 16:11	7100247	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0109

Project: CCR Event

Client ID: GWC-6

Lab Number ID: AAJ0109-07

Date/Time Sampled: 10/3/2017 3:05:00PM

Date/Time Received: 10/4/2017 12:20:00PM

Matrix: Ground Water

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	10/05/17 18:25	10/05/17 18:25	7100141	JPT
Inorganic Anions											
Chloride	73	1.2	0.12	mg/L	EPA 300.0		5	10/06/17 09:52	10/10/17 09:41	7100176	RLC
Fluoride	0.11	0.30	0.03	mg/L	EPA 300.0	J	1	10/06/17 09:52	10/07/17 19:08	7100176	RLC
Sulfate	140	5.0	0.08	mg/L	EPA 300.0		5	10/06/17 09:52	10/10/17 09:41	7100176	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:27	7100238	CSW
Arsenic	0.0014	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 21:27	7100238	CSW
Barium	0.105	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:27	7100238	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:27	7100238	CSW
Boron	2.69	0.0400	0.0060	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:27	7100238	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:27	7100238	CSW
Calcium	5.17	0.500	0.0404	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:27	7100238	CSW
Chromium	0.0022	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 21:27	7100238	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:27	7100238	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 21:27	7100238	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:27	7100238	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:27	7100238	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:27	7100238	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:27	7100238	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/11/17 11:55	10/11/17 16:13	7100247	MTC



PACE ANALYTICAL SERVICES, LLC.

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 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0109

Project: CCR Event

Client ID: GWC-11

Lab Number ID: AAJ0109-08

Date/Time Sampled: 10/3/2017 1:11:00PM

Date/Time Received: 10/4/2017 12:20:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	248	25	10	mg/L	SM 2540 C		1	10/05/17 18:25	10/05/17 18:25	7100141	JPT
Inorganic Anions											
Chloride	46	0.25	0.02	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 19:29	7100176	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 19:29	7100176	RLC
Sulfate	140	5.0	0.08	mg/L	EPA 300.0		5	10/06/17 09:52	10/10/17 10:02	7100176	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:39	7100238	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:39	7100238	CSW
Barium	0.103	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:39	7100238	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:39	7100238	CSW
Boron	0.0838	0.0400	0.0060	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:39	7100238	CSW
Cadmium	0.0003	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 21:39	7100238	CSW
Calcium	39.8	25.0	2.02	mg/L	EPA 6020B		50	10/10/17 09:45	10/10/17 21:44	7100238	CSW
Chromium	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 21:39	7100238	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:39	7100238	CSW
Lead	0.0003	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 21:39	7100238	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:39	7100238	CSW
Selenium	0.0079	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 21:39	7100238	CSW
Thallium	0.00007	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 21:39	7100238	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:39	7100238	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/11/17 11:55	10/11/17 16:16	7100247	MTC



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0109

Project: CCR Event

Client ID: GWC-20

Lab Number ID: AAJ0109-09

Date/Time Sampled: 10/2/2017 4:15:00PM

Date/Time Received: 10/4/2017 12:20:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	698	25	10	mg/L	SM 2540 C		1	10/05/17 18:25	10/05/17 18:25	7100141	JPT
Inorganic Anions											
Chloride	30	0.25	0.02	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 21:12	7100176	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 21:12	7100176	RLC
Sulfate	390	10	0.17	mg/L	EPA 300.0		10	10/06/17 09:52	10/10/17 10:24	7100176	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:50	7100238	CSW
Arsenic	0.216	0.0050	0.0005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:50	7100238	CSW
Barium	0.148	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:50	7100238	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:50	7100238	CSW
Boron	4.65	0.0400	0.0060	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:50	7100238	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:50	7100238	CSW
Calcium	105	25.0	2.02	mg/L	EPA 6020B		50	10/10/17 09:45	10/10/17 21:56	7100238	CSW
Chromium	0.0009	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 21:50	7100238	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:50	7100238	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:50	7100238	CSW
Molybdenum	0.130	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:50	7100238	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:50	7100238	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:50	7100238	CSW
Vanadium	0.0028	0.0100	0.0012	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 21:50	7100238	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:50	7100238	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 21:50	7100238	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/11/17 11:55	10/11/17 16:18	7100247	MTC



PACE ANALYTICAL SERVICES, LLC.

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November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0109

Project: CCR Event

Client ID: Dup-2-3-17

Lab Number ID: AAJ0109-10

Date/Time Sampled: 10/3/2017 12:00:00AM

Date/Time Received: 10/4/2017 12:20:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	420	25	10	mg/L	SM 2540 C		1	10/05/17 18:25	10/05/17 18:25	7100141	JPT
Inorganic Anions											
Chloride	67	2.5	0.24	mg/L	EPA 300.0		10	10/06/17 09:52	10/10/17 10:45	7100176	RLC
Fluoride	0.11	0.30	0.03	mg/L	EPA 300.0	J	1	10/06/17 09:52	10/07/17 21:33	7100176	RLC
Sulfate	140	10	0.17	mg/L	EPA 300.0		10	10/06/17 09:52	10/10/17 10:45	7100176	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:01	7100238	CSW
Arsenic	0.0015	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:01	7100238	CSW
Barium	0.104	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:01	7100238	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:01	7100238	CSW
Boron	2.78	0.0400	0.0060	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:01	7100238	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:01	7100238	CSW
Calcium	5.28	0.500	0.0404	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:01	7100238	CSW
Chromium	0.0023	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:01	7100238	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:01	7100238	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:01	7100238	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:01	7100238	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:01	7100238	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:01	7100238	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:01	7100238	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/11/17 11:55	10/11/17 16:20	7100247	MTC



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0109

Project: CCR Event

Client ID: GWC-2

Lab Number ID: AAJ0109-11

Date/Time Sampled: 10/3/2017 9:50:00AM

Date/Time Received: 10/4/2017 12:20:00PM

Matrix: Ground Water

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	10/05/17 18:25	10/05/17 18:25	7100141	JPT
Inorganic Anions											
Chloride	9.0	0.25	0.02	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 21:54	7100176	RLC
Fluoride	0.06	0.30	0.03	mg/L	EPA 300.0	J	1	10/06/17 09:52	10/07/17 21:54	7100176	RLC
Sulfate	20	1.0	0.02	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 21:54	7100176	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:13	7100238	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:13	7100238	CSW
Barium	0.0570	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:13	7100238	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:13	7100238	CSW
Boron	0.0266	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:13	7100238	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:13	7100238	CSW
Calcium	0.251	0.500	0.0404	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:13	7100238	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:13	7100238	CSW
Cobalt	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:13	7100238	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:13	7100238	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:13	7100238	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:13	7100238	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:13	7100238	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:13	7100238	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/11/17 11:55	10/11/17 16:23	7100247	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

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0109

Project: CCR Event

Client ID: GWA-8

Lab Number ID: AAJ0109-12

Date/Time Sampled: 10/2/2017 2:55:00PM

Date/Time Received: 10/4/2017 12:20:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	210	25	10	mg/L	SM 2540 C		1	10/05/17 18:25	10/05/17 18:25	7100141	JPT
Inorganic Anions											
Chloride	15	0.25	0.02	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 22:35	7100176	RLC
Fluoride	0.12	0.30	0.03	mg/L	EPA 300.0	J	1	10/06/17 09:52	10/07/17 22:35	7100176	RLC
Sulfate	150	10	0.17	mg/L	EPA 300.0		10	10/06/17 09:52	10/11/17 12:16	7100176	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:36	7100238	CSW
Arsenic	0.0006	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:36	7100238	CSW
Barium	0.0618	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:36	7100238	CSW
Beryllium	0.0002	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:36	7100238	CSW
Boron	0.107	0.0400	0.0060	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:36	7100238	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:36	7100238	CSW
Calcium	22.7	5.00	2.02	mg/L	EPA 6020B		50	10/10/17 09:45	10/10/17 22:41	7100238	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:36	7100238	CSW
Cobalt	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:36	7100238	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:36	7100238	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:36	7100238	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:36	7100238	CSW
Thallium	0.00006	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:36	7100238	CSW
Vanadium	ND	0.0100	0.0012	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:36	7100238	CSW
Zinc	0.0026	0.0100	0.0012	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/14/17 18:28	7100238	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:36	7100238	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/11/17 11:55	10/11/17 16:25	7100247	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0109

Project: CCR Event

Client ID: GWC-16

Lab Number ID: AAJ0109-13

Date/Time Sampled: 10/3/2017 12:45:00PM

Date/Time Received: 10/4/2017 12:20:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1240	25	10	mg/L	SM 2540 C		1	10/06/17 15:30	10/06/17 15:30	7100182	JPT
Inorganic Anions											
Chloride	58	2.5	0.24	mg/L	EPA 300.0		10	10/06/17 09:52	10/11/17 12:37	7100176	RLC
Fluoride	0.86	0.30	0.03	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 22:55	7100176	RLC
Sulfate	780	25	0.42	mg/L	EPA 300.0		25	10/06/17 09:52	10/12/17 06:36	7100176	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:47	7100238	CSW
Arsenic	0.0813	0.0050	0.0005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:47	7100238	CSW
Barium	0.135	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:47	7100238	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:47	7100238	CSW
Boron	4.15	0.0400	0.0060	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:47	7100238	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:47	7100238	CSW
Calcium	217	25.0	2.02	mg/L	EPA 6020B		50	10/10/17 09:45	10/10/17 22:53	7100238	CSW
Chromium	0.0009	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:47	7100238	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:47	7100238	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:47	7100238	CSW
Molybdenum	0.201	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:47	7100238	CSW
Selenium	0.0051	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:47	7100238	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:47	7100238	CSW
Vanadium	0.0036	0.0100	0.0012	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:47	7100238	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	10/10/17 09:45	10/14/17 18:34	7100238	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:47	7100238	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/11/17 11:55	10/11/17 16:28	7100247	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0109

Project: CCR Event

Client ID: GWC-3

Lab Number ID: AAJ0109-14

Date/Time Sampled: 10/3/2017 9:50:00AM

Date/Time Received: 10/4/2017 12:20:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	349	25	10	mg/L	SM 2540 C		1	10/06/17 15:30	10/06/17 15:30	7100182	JPT
Inorganic Anions											
Chloride	2.3	0.25	0.02	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 23:16	7100176	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 23:16	7100176	RLC
Sulfate	20	1.0	0.02	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 23:16	7100176	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:59	7100238	CSW
Arsenic	0.349	0.0050	0.0005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:59	7100238	CSW
Barium	0.0563	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:59	7100238	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:59	7100238	CSW
Boron	0.784	0.0400	0.0060	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:59	7100238	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:59	7100238	CSW
Calcium	69.6	25.0	2.02	mg/L	EPA 6020B		50	10/10/17 09:45	10/10/17 23:04	7100238	CSW
Chromium	0.0014	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:59	7100238	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:59	7100238	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:59	7100238	CSW
Molybdenum	0.0794	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:59	7100238	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:59	7100238	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:59	7100238	CSW
Vanadium	0.0031	0.0100	0.0012	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 22:59	7100238	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	10/10/17 09:45	10/14/17 18:40	7100238	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 22:59	7100238	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/11/17 11:55	10/11/17 16:30	7100247	MTC



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0109

Project: CCR Event

Client ID: GWC-14

Lab Number ID: AAJ0109-15

Date/Time Sampled: 10/2/2017 3:26:00PM

Date/Time Received: 10/4/2017 12:20:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	689	25	10	mg/L	SM 2540 C		1	10/06/17 15:30	10/06/17 15:30	7100182	JPT
Inorganic Anions											
Chloride	34	0.25	0.02	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 23:37	7100176	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/06/17 09:52	10/07/17 23:37	7100176	RLC
Sulfate	470	10	0.17	mg/L	EPA 300.0		10	10/06/17 09:52	10/11/17 12:58	7100176	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 23:10	7100238	CSW
Arsenic	0.0026	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 23:10	7100238	CSW
Barium	0.0274	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 23:10	7100238	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 23:10	7100238	CSW
Boron	0.0748	0.0400	0.0060	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 23:10	7100238	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 23:10	7100238	CSW
Calcium	126	25.0	2.02	mg/L	EPA 6020B		50	10/10/17 09:45	10/10/17 23:16	7100238	CSW
Chromium	0.0009	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 23:10	7100238	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 23:10	7100238	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 23:10	7100238	CSW
Molybdenum	0.0025	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 23:10	7100238	CSW
Selenium	0.0040	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/10/17 23:10	7100238	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 23:10	7100238	CSW
Vanadium	0.0175	0.0100	0.0012	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 23:10	7100238	CSW
Zinc	0.0026	0.0100	0.0012	mg/L	EPA 6020B	J	1	10/10/17 09:45	10/14/17 18:45	7100238	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 09:45	10/10/17 23:10	7100238	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/11/17 11:55	10/11/17 16:32	7100247	MTC



PACE ANALYTICAL SERVICES, LLC.

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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0109

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100141 - SM 2540 C											
Blank (7100141-BLK1)						Prepared & Analyzed: 10/05/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7100141-BS1)						Prepared & Analyzed: 10/05/17					
Total Dissolved Solids	389	25	10	mg/L	400.00		97	84-108			
Duplicate (7100141-DUP1)						Source: AAJ0109-01 Prepared & Analyzed: 10/05/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (7100141-DUP2)						Source: AAJ0109-10 Prepared & Analyzed: 10/05/17					
Total Dissolved Solids	414	25	10	mg/L		420			1	10	
Batch 7100182 - SM 2540 C											
Blank (7100182-BLK1)						Prepared & Analyzed: 10/06/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7100182-BS1)						Prepared & Analyzed: 10/06/17					
Total Dissolved Solids	379	25	10	mg/L	400.00		95	84-108			
Duplicate (7100182-DUP1)						Source: AAJ0126-04 Prepared & Analyzed: 10/06/17					
Total Dissolved Solids	3330	25	10	mg/L		3350			0.7	10	
Duplicate (7100182-DUP2)						Source: AAJ0126-05 Prepared & Analyzed: 10/06/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	



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Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0109

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100176 - EPA 300.0											
Blank (7100176-BLK1)						Prepared: 10/06/17 Analyzed: 10/07/17					
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 (7100176-BS1)						Prepared: 10/06/17 Analyzed: 10/07/17					
Chloride	10.2	0.25	0.02	mg/L	10.020		102	90-110			
Fluoride	9.50	0.30	0.03	mg/L	10.020		95	90-110			
Sulfate	10.7	1.0	0.02	mg/L	10.050		106	90-110			
Matrix Spike (7100176-MS1)						Source: AAJ0109-03 Prepared: 10/06/17 Analyzed: 10/07/17					
Chloride	14.7	0.25	0.02	mg/L	10.020	4.36	103	90-110			
Fluoride	9.75	0.30	0.03	mg/L	10.020	ND	97	90-110			
Sulfate	41.0	1.0	0.02	mg/L	10.050	33.7	73	90-110			QM-02
Matrix Spike (7100176-MS2)						Source: AAJ0109-11 Prepared: 10/06/17 Analyzed: 10/07/17					
Chloride	18.7	0.25	0.02	mg/L	10.020	9.04	96	90-110			
Fluoride	11.8	0.30	0.03	mg/L	10.020	0.06	118	90-110			QM-05
Sulfate	26.9	1.0	0.02	mg/L	10.050	20.1	68	90-110			QM-02
Matrix Spike Dup (7100176-MSD1)						Source: AAJ0109-03 Prepared: 10/06/17 Analyzed: 10/07/17					
Chloride	14.7	0.25	0.02	mg/L	10.020	4.36	103	90-110	0.1	15	
Fluoride	9.89	0.30	0.03	mg/L	10.020	ND	99	90-110	1	15	
Sulfate	41.3	1.0	0.02	mg/L	10.050	33.7	76	90-110	0.8	15	QM-02



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Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0109

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	----	-----	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 7100238 - EPA 3005A

Blank (7100238-BLK1)

Prepared & Analyzed: 10/10/17

Antimony	ND	0.0030	0.0006	mg/L							
Arsenic	ND	0.0050	0.0005	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	ND	0.500	0.0404	mg/L							
Chromium	ND	0.0100	0.0005	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	ND	0.0250	0.0003	mg/L							
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0012	mg/L							
Zinc	ND	0.0100	0.0012	mg/L							
Lithium	ND	0.0500	0.0015	mg/L							

LCS (7100238-BS1)

Prepared & Analyzed: 10/10/17

Antimony	0.108	0.0030	0.0006	mg/L	0.10000		108	80-120			
Arsenic	0.0993	0.0050	0.0005	mg/L	0.10000		99	80-120			
Barium	0.101	0.0100	0.0004	mg/L	0.10000		101	80-120			
Beryllium	0.106	0.0030	0.00009	mg/L	0.10000		106	80-120			
Cadmium	0.102	0.0010	0.0001	mg/L	0.10000		102	80-120			
Chromium	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			
Cobalt	0.0999	0.0100	0.0003	mg/L	0.10000		100	80-120			
Copper	0.101	0.0250	0.0003	mg/L	0.10000		101	80-120			
Lead	0.103	0.0050	0.00007	mg/L	0.10000		103	80-120			
Nickel	0.102	0.0100	0.0005	mg/L	0.10000		102	80-120			
Selenium	0.0987	0.0100	0.0018	mg/L	0.10000		99	80-120			
Silver	0.101	0.0100	0.0002	mg/L	0.10000		101	80-120			
Thallium	0.105	0.0010	0.00005	mg/L	0.10000		105	80-120			
Vanadium	0.103	0.0100	0.0012	mg/L	0.10000		103	80-120			
Zinc	0.101	0.0100	0.0012	mg/L	0.10000		101	80-120			
Lithium	0.103	0.0500	0.0015	mg/L	0.10000		103	80-120			



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0109

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100238 - EPA 3005A											
Matrix Spike (7100238-MS1)			Source: AAJ0109-06				Prepared & Analyzed: 10/10/17				
Antimony	0.107	0.0030	0.0006	mg/L	0.10000	ND	107	75-125			
Arsenic	0.104	0.0050	0.0005	mg/L	0.10000	0.0013	102	75-125			
Barium	0.142	0.0100	0.0004	mg/L	0.10000	0.0436	98	75-125			
Beryllium	0.104	0.0030	0.00009	mg/L	0.10000	ND	104	75-125			
Cadmium	0.104	0.0010	0.0001	mg/L	0.10000	ND	104	75-125			
Chromium	0.106	0.0100	0.0005	mg/L	0.10000	0.0014	104	75-125			
Cobalt	0.103	0.0100	0.0003	mg/L	0.10000	ND	103	75-125			
Copper	0.0984	0.0250	0.0003	mg/L	0.10000	ND	98	75-125			
Lead	0.0996	0.0050	0.00007	mg/L	0.10000	ND	100	75-125			
Nickel	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125			
Selenium	0.106	0.0100	0.0018	mg/L	0.10000	ND	106	75-125			
Silver	0.104	0.0100	0.0002	mg/L	0.10000	ND	104	75-125			
Thallium	0.103	0.0010	0.00005	mg/L	0.10000	ND	103	75-125			
Vanadium	0.110	0.0100	0.0012	mg/L	0.10000	0.0042	106	75-125			
Zinc	0.0983	0.0100	0.0012	mg/L	0.10000	ND	98	75-125			
Lithium	0.104	0.0500	0.0015	mg/L	0.10000	ND	104	75-125			
Matrix Spike Dup (7100238-MSD1)			Source: AAJ0109-06				Prepared & Analyzed: 10/10/17				
Antimony	0.111	0.0030	0.0006	mg/L	0.10000	ND	111	75-125	4	20	
Arsenic	0.104	0.0050	0.0005	mg/L	0.10000	0.0013	103	75-125	0.2	20	
Barium	0.146	0.0100	0.0004	mg/L	0.10000	0.0436	102	75-125	3	20	
Beryllium	0.105	0.0030	0.00009	mg/L	0.10000	ND	105	75-125	0.2	20	
Cadmium	0.107	0.0010	0.0001	mg/L	0.10000	ND	107	75-125	2	20	
Chromium	0.110	0.0100	0.0005	mg/L	0.10000	0.0014	108	75-125	4	20	
Cobalt	0.106	0.0100	0.0003	mg/L	0.10000	ND	106	75-125	2	20	
Copper	0.102	0.0250	0.0003	mg/L	0.10000	ND	102	75-125	4	20	
Lead	0.101	0.0050	0.00007	mg/L	0.10000	ND	101	75-125	1	20	
Nickel	0.104	0.0100	0.0005	mg/L	0.10000	ND	104	75-125	3	20	
Selenium	0.105	0.0100	0.0018	mg/L	0.10000	ND	105	75-125	0.5	20	
Silver	0.103	0.0100	0.0002	mg/L	0.10000	ND	103	75-125	0.7	20	
Thallium	0.104	0.0010	0.00005	mg/L	0.10000	ND	104	75-125	0.7	20	
Vanadium	0.114	0.0100	0.0012	mg/L	0.10000	0.0042	110	75-125	3	20	
Zinc	0.102	0.0100	0.0012	mg/L	0.10000	ND	102	75-125	4	20	
Lithium	0.102	0.0500	0.0015	mg/L	0.10000	ND	102	75-125	2	20	



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0109

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100238 - EPA 3005A											
Post Spike (7100238-PS1)		Source: AAJ0109-06				Prepared & Analyzed: 10/10/17					
Antimony	105			ug/L	100.00	0.119	105	80-120			
Arsenic	103			ug/L	100.00	1.31	101	80-120			
Barium	145			ug/L	100.00	43.6	102	80-120			
Beryllium	102			ug/L	100.00	0.0053	102	80-120			
Cadmium	105			ug/L	100.00	0.0480	105	80-120			
Chromium	108			ug/L	100.00	1.39	106	80-120			
Cobalt	103			ug/L	100.00	0.0587	103	80-120			
Copper	100			ug/L	100.00	0.0758	100	80-120			
Lead	99.7			ug/L	100.00	0.0216	100	80-120			
Nickel	103			ug/L	100.00	0.184	103	80-120			
Selenium	103			ug/L	100.00	1.09	102	80-120			
Silver	104			ug/L	100.00	0.0011	104	80-120			
Thallium	104			ug/L	100.00	0.0462	104	80-120			
Vanadium	114			ug/L	100.00	4.20	110	80-120			
Zinc	99.6			ug/L	100.00	-1.23	100	80-120			
Lithium	100			ug/L	100.00	0.401	100	80-120			

Batch 7100247 - EPA 7470A

Blank (7100247-BLK1)						Prepared & Analyzed: 10/11/17					
Mercury	ND	0.00050	0.000036	mg/L							
LCS (7100247-BS1)						Prepared & Analyzed: 10/11/17					
Mercury	0.00253	0.00050	0.000036	mg/L	2.5000E-3		101	80-120			
Matrix Spike (7100247-MS1)		Source: AAJ0109-04				Prepared & Analyzed: 10/11/17					
Mercury	0.00242	0.00050	0.000036	mg/L	2.5000E-3	ND	97	75-125			



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2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0109

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100247 - EPA 7470A											
Matrix Spike Dup (7100247-MSD1)			Source: AAJ0109-04			Prepared & Analyzed: 10/11/17					
Mercury	0.00246	0.00050	0.000036	mg/L	2.5000E-3	ND	99	75-125	2	20	
Post Spike (7100247-PS1)			Source: AAJ0109-04			Prepared & Analyzed: 10/11/17					
Mercury	1.67			ug/L	1.6667	-0.0160	100	80-120			



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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

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

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



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

CHAIN OF CUSTODY RECORD

PAGE: OF

CLIENT NAME:			ANALYSIS REQUESTED			CONTAINER TYPE			PRESERVATION		
Georgia Power			P			P - PLASTIC			1 - HCl, ≤6°C		
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:			P			A - AMBER GLASS			2 - H ₂ SO ₄ , ≤6°C		
241 Ralph McGill Blvd SE B10185			3			G - CLEAR GLASS			3 - HNO ₃		
Atlanta, GA 30308			# of			V - VOA VIAL			4 - NaOH, ≤6°C		
404-508-7239			CONTAINERS			S - STERILE			5 - NaOH/ZnAc, ≤6°C		
REPORT TO:			C O N T A I N E R S			O - OTHER			6 - Na ₂ S ₂ O ₃ , ≤6°C		
Lauren Petty			↓						7 - ≤6°C not frozen		
HEALTH McCorkle									MATRIX CODES:		
PO #:									DW - DRINKING WATER S - SOIL		
laburch@southernco.com									WW - WASTEWATER SL - SLUDGE		
PROJECT NAME/STATE:									GW - GROUNDWATER SD - SOLID		
Plant Kraft Grumman Road									SW - SURFACE WATER A - AIR		
Phase 2 CCR & State D&O									ST - STORM WATER L - LIQUID		
PROJECT #:									W - WATER P - PRODUCT		
Collection DATE	Collection TIME	MATRIX CODE*	C O M P	G R A B	SAMPLE IDENTIFICATION	RELINQUISHED BY:	DATE/TIME:	RELINQUISHED BY:	DATE/TIME:	LAB #:	REMARKS/ADDITIONAL INFORMATION
10-2-17	1455	GW	X	X	GWA-8	gfy	0815 10-4-17	gfy	0815 10-4-17	AAJ0109	
10-2-17	1526	GW	X	X	GWG-16						
10-3-17	0950	GW	X	X	GWG-3						
10-2-17	1526	GW	X	X	GWG-14						
SAMPLED BY AND TITLE: <i>Ryga Walker</i> RECEIVED BY: <i>Sho-O'Kelly</i> RECEIVED BY LAB: <i>Adelman</i> Temperature: <i>11.2</i> Min. <i>1.2</i> Max.											

Plant Kraft - Grumman Rd CCR Phase 2 CCR & State



Sample Condition Upon Receipt

Client Name: GLA Power Project # AA70109

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: _____

Optional:
Reg. Note 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-4 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 1.2 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 10/04/17 MR

Temp should be above freezing to 6°C Comments: _____

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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



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: 10/5/2017 1:30:44PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 10/04/17 12:20

Work Order: AAJ0109

Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 15

#Containers: 60

Minimum Temp(C): 1.2

Maximum Temp(C): 1.2

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 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:

October 27, 2017

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: AAJ0109 Plant Kraft
Pace Project No.: 30232038

Dear Mr. Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 05, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Revision 1: This report replaces the October 18, 2017 report. Report reissued October 27, 2017 to reflect the correction of collection date for Sample 30232038009.

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

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AAJ0109 Plant Kraft
Pace Project No.: 30232038

Pennsylvania Certification IDs

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: AAJ0109 Plant Kraft

Pace Project No.: 30232038

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30232038001	Field Blank-1-10-2-17	Water	10/02/17 16:15	10/05/17 10:05
30232038002	GWC-15	Water	10/02/17 17:47	10/05/17 10:05
30232038003	GWC-21	Water	10/03/17 13:45	10/05/17 10:05
30232038004	GWC-5	Water	10/03/17 17:30	10/05/17 10:05
30232038005	DUP-1-10-3-17	Water	10/03/17 00:00	10/05/17 10:05
30232038006	GWC-1	Water	10/03/17 11:01	10/05/17 10:05
30232038007	GWC-6	Water	10/03/17 15:05	10/05/17 10:05
30232038008	GWC-11	Water	10/03/17 13:11	10/05/17 10:05
30232038009	GWC-20	Water	10/02/17 16:15	10/05/17 10:05
30232038010	DUP-2-3-17	Water	10/03/17 00:00	10/05/17 10:05
30232038011	GWC-2	Water	10/03/17 09:50	10/05/17 10:05
30232038012	GWA-8	Water	10/02/17 14:55	10/05/17 10:05
30232038013	GWC-16	Water	10/03/17 12:45	10/05/17 10:05
30232038014	GWC-3	Water	10/03/17 09:50	10/05/17 10:05
30232038015	GWC-14	Water	10/02/17 15:26	10/05/17 10:05

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AAJ0109 Plant Kraft
Pace Project No.: 30232038

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30232038001	Field Blank-1-10-2-17	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232038002	GWC-15	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232038003	GWC-21	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232038004	GWC-5	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232038005	DUP-1-10-3-17	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232038006	GWC-1	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232038007	GWC-6	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232038008	GWC-11	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232038009	GWC-20	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232038010	DUP-2-3-17	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232038011	GWC-2	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232038012	GWA-8	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232038013	GWC-16	EPA 9315	JC2	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AAJ0109 Plant Kraft
Pace Project No.: 30232038

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30232038014	GWC-3	EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
		EPA 9315	JC2	1
		EPA 9320	VAL	1
30232038015	GWC-14	Total Radium Calculation	JAL	1
		EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0109 Plant Kraft
Pace Project No.: 30232038

Sample: Field Blank-1-10-2-17		Lab ID: 30232038001	Collected: 10/02/17 16:15	Received: 10/05/17 10:05	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Radium-226	EPA 9315	0.262 ± 0.214 (0.391) C:82% T:NA	pCi/L	10/11/17 08:25	13982-63-3		
Radium-228	EPA 9320	-0.428 ± 0.270 (0.710) C:73% T:82%	pCi/L	10/13/17 13:52	15262-20-1		
Total Radium	Total Radium Calculation	0.262 ± 0.484 (1.10)	pCi/L	10/17/17 10:02	7440-14-4		

Sample: GWC-15		Lab ID: 30232038002	Collected: 10/02/17 17:47	Received: 10/05/17 10:05	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Radium-226	EPA 9315	0.831 ± 0.319 (0.341) C:85% T:NA	pCi/L	10/11/17 08:25	13982-63-3		
Radium-228	EPA 9320	0.692 ± 0.353 (0.626) C:77% T:90%	pCi/L	10/13/17 13:53	15262-20-1		
Total Radium	Total Radium Calculation	1.52 ± 0.672 (0.967)	pCi/L	10/17/17 10:02	7440-14-4		

Sample: GWC-21		Lab ID: 30232038003	Collected: 10/03/17 13:45	Received: 10/05/17 10:05	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Radium-226	EPA 9315	0.609 ± 0.284 (0.399) C:85% T:NA	pCi/L	10/11/17 08:25	13982-63-3		
Radium-228	EPA 9320	0.251 ± 0.302 (0.637) C:75% T:82%	pCi/L	10/13/17 13:54	15262-20-1		
Total Radium	Total Radium Calculation	0.860 ± 0.586 (1.04)	pCi/L	10/17/17 10:02	7440-14-4		

Sample: GWC-5		Lab ID: 30232038004	Collected: 10/03/17 17:30	Received: 10/05/17 10:05	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Radium-226	EPA 9315	1.58 ± 0.454 (0.405) C:89% T:NA	pCi/L	10/11/17 08:25	13982-63-3		
Radium-228	EPA 9320	0.421 ± 0.304 (0.577) C:76% T:75%	pCi/L	10/13/17 13:54	15262-20-1		
Total Radium	Total Radium Calculation	2.00 ± 0.758 (0.982)	pCi/L	10/17/17 10:02	7440-14-4		

Sample: DUP-1-10-3-17		Lab ID: 30232038005	Collected: 10/03/17 00:00	Received: 10/05/17 10:05	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Radium-226	EPA 9315	0.403 ± 0.250 (0.412) C:85% T:NA	pCi/L	10/11/17 08:25	13982-63-3		
Radium-228	EPA 9320	-0.122 ± 0.240 (0.596) C:77% T:80%	pCi/L	10/13/17 13:54	15262-20-1		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0109 Plant Kraft
Pace Project No.: 30232038

Sample: DUP-1-10-3-17		Lab ID: 30232038005	Collected: 10/03/17 00:00	Received: 10/05/17 10:05	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	0.403 ± 0.490 (1.01)	pCi/L	10/17/17 10:02	7440-14-4	

Sample: GWC-1		Lab ID: 30232038006	Collected: 10/03/17 11:01	Received: 10/05/17 10:05	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.08 ± 0.380 (0.398) C:80% T:NA	pCi/L	10/11/17 08:25	13982-63-3	
Radium-228	EPA 9320	0.758 ± 0.340 (0.558) C:77% T:89%	pCi/L	10/13/17 13:54	15262-20-1	
Total Radium	Total Radium Calculation	1.84 ± 0.720 (0.956)	pCi/L	10/17/17 10:02	7440-14-4	

Sample: GWC-6		Lab ID: 30232038007	Collected: 10/03/17 15:05	Received: 10/05/17 10:05	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	2.65 ± 0.626 (0.361) C:87% T:NA	pCi/L	10/11/17 08:25	13982-63-3	
Radium-228	EPA 9320	0.979 ± 0.507 (0.915) C:79% T:79%	pCi/L	10/13/17 12:04	15262-20-1	
Total Radium	Total Radium Calculation	3.63 ± 1.13 (1.28)	pCi/L	10/17/17 10:02	7440-14-4	

Sample: GWC-11		Lab ID: 30232038008	Collected: 10/03/17 13:11	Received: 10/05/17 10:05	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	3.03 ± 0.693 (0.375) C:81% T:NA	pCi/L	10/11/17 08:24	13982-63-3	
Radium-228	EPA 9320	1.70 ± 0.580 (0.831) C:77% T:82%	pCi/L	10/13/17 12:04	15262-20-1	
Total Radium	Total Radium Calculation	4.73 ± 1.27 (1.21)	pCi/L	10/17/17 10:02	7440-14-4	

Sample: GWC-20		Lab ID: 30232038009	Collected: 10/02/17 16:15	Received: 10/05/17 10:05	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	2.41 ± 0.585 (0.429) C:90% T:NA	pCi/L	10/11/17 08:25	13982-63-3	
Radium-228	EPA 9320	1.74 ± 0.565 (0.776) C:80% T:86%	pCi/L	10/13/17 12:04	15262-20-1	
Total Radium	Total Radium Calculation	4.15 ± 1.15 (1.21)	pCi/L	10/17/17 10:02	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0109 Plant Kraft

Pace Project No.: 30232038

Sample: DUP-2-3-17		Lab ID: 30232038010	Collected: 10/03/17 00:00	Received: 10/05/17 10:05	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	2.57 ± 0.618 (0.444) C:85% T:NA	pCi/L	10/11/17 08:40	13982-63-3	
Radium-228	EPA 9320	0.801 ± 0.481 (0.908) C:75% T:82%	pCi/L	10/13/17 12:04	15262-20-1	
Total Radium	Total Radium Calculation	3.37 ± 1.10 (1.35)	pCi/L	10/17/17 10:02	7440-14-4	

Sample: GWC-2		Lab ID: 30232038011	Collected: 10/03/17 09:50	Received: 10/05/17 10:05	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.477 ± 0.250 (0.367) C:86% T:NA	pCi/L	10/11/17 08:20	13982-63-3	
Radium-228	EPA 9320	0.518 ± 0.363 (0.712) C:79% T:99%	pCi/L	10/13/17 15:08	15262-20-1	
Total Radium	Total Radium Calculation	0.995 ± 0.613 (1.08)	pCi/L	10/17/17 10:02	7440-14-4	

Sample: GWA-8		Lab ID: 30232038012	Collected: 10/02/17 14:55	Received: 10/05/17 10:05	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.44 ± 0.434 (0.435) C:91% T:NA	pCi/L	10/11/17 08:21	13982-63-3	
Radium-228	EPA 9320	0.463 ± 0.369 (0.737) C:83% T:85%	pCi/L	10/13/17 15:08	15262-20-1	
Total Radium	Total Radium Calculation	1.90 ± 0.803 (1.17)	pCi/L	10/17/17 10:02	7440-14-4	

Sample: GWC-16		Lab ID: 30232038013	Collected: 10/03/17 12:45	Received: 10/05/17 10:05	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.69 ± 0.461 (0.337) C:89% T:NA	pCi/L	10/11/17 08:21	13982-63-3	
Radium-228	EPA 9320	0.435 ± 0.365 (0.737) C:82% T:86%	pCi/L	10/13/17 15:09	15262-20-1	
Total Radium	Total Radium Calculation	2.13 ± 0.826 (1.07)	pCi/L	10/17/17 10:02	7440-14-4	

Sample: GWC-3		Lab ID: 30232038014	Collected: 10/03/17 09:50	Received: 10/05/17 10:05	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.12 ± 0.379 (0.416) C:86% T:NA	pCi/L	10/11/17 08:21	13982-63-3	
Radium-228	EPA 9320	0.820 ± 0.446 (0.816) C:78% T:86%	pCi/L	10/13/17 15:09	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0109 Plant Kraft

Pace Project No.: 30232038

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	1.94 ± 0.825 (1.23)	pCi/L	10/17/17 10:02	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.469 ± 0.244 (0.371) C:95% T:NA	pCi/L	10/11/17 08:21	13982-63-3	
Radium-228	EPA 9320	0.386 ± 0.383 (0.793) C:82% T:86%	pCi/L	10/13/17 15:09	15262-20-1	
Total Radium	Total Radium Calculation	0.855 ± 0.627 (1.16)	pCi/L	10/17/17 10:02	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAJ0109 Plant Kraft

Pace Project No.: 30232038

QC Batch:	274636	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	30232038001, 30232038002, 30232038003, 30232038004, 30232038005, 30232038006, 30232038007, 30232038008, 30232038009, 30232038010, 30232038011, 30232038012, 30232038013, 30232038014, 30232038015		

METHOD BLANK:	1350987	Matrix:	Water
Associated Lab Samples:	30232038001, 30232038002, 30232038003, 30232038004, 30232038005, 30232038006, 30232038007, 30232038008, 30232038009, 30232038010, 30232038011, 30232038012, 30232038013, 30232038014, 30232038015		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.185 ± 0.314 (0.686) C:77% T:78%	pCi/L	10/13/17 10:45	

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.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAJ0109 Plant Kraft

Pace Project No.: 30232038

QC Batch: 274635

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30232038001, 30232038002, 30232038003, 30232038004, 30232038005, 30232038006, 30232038007, 30232038008, 30232038009, 30232038010, 30232038011, 30232038012, 30232038013, 30232038014, 30232038015

METHOD BLANK: 1350986

Matrix: Water

Associated Lab Samples: 30232038001, 30232038002, 30232038003, 30232038004, 30232038005, 30232038006, 30232038007, 30232038008, 30232038009, 30232038010, 30232038011, 30232038012, 30232038013, 30232038014, 30232038015

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.348 ± 0.222 (0.333) C:76% T:NA	pCi/L	10/11/17 08:25	

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

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QUALIFIERS

Project: AAJ0109 Plant Kraft

Pace Project No.: 30232038

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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Chain of Custody



Workorder: AAJ0109

Workorder Name: Plant Kraft

Owner Received Date: 10/3/2017

Results Requested By: 11/1/2017

Report To:

Subcontract To:

Requested Analysis

Betsy McDaniel

Pace - Pittsburgh

Pace Analytical Atlanta

1638 Roseytown Road

110 Technology Parkway

Stes. 2,3,4

Peachtree Corners, GA 30092

Greensburg, PA 15601

Phone (770)-734-4200

Phone (724) 850-5600

WO#: 30232038



30232038

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		Date/Time	Comments
						CON	H		
1	Field Blank-1-10-2-17	G	10/2/2017 16:15	AAJ0109-01	W	2			
2	GWC-15	G	10/2/2017 17:47	AAJ0109-02	GW	2			
3	GWC-21	G	10/3/2017 13:45	AAJ0109-03	GW	2			
4	GWC-5	G	10/3/2017 17:30	AAJ0109-04	GW	2			
5	DUP-1-10-3-17	G	10/3/2017 0:00	AAJ0109-05	GW	2			
6	GWC-1	G	10/3/2017 11:01	AAJ0109-06	GW	2			
7	GWC-6	G	10/3/2017 15:05	AAJ0109-07	GW	2			
8	GWC-11	G	10/3/2017 13:11	AAJ0109-08	GW	2			
9	GWC-20	G	10/3/2017 16:15	AAJ0109-09	GW	2			
10	DUP-2-3-17	G	10/3/2017 0:00	AAJ0109-10	GW	2			
Transfers Released By		Date/Time		Received By		Date/Time		Comments	
1	Chandler Park		10/17/1650		C. Chandler		10/17/17		1005
2									
3									

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

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

Friday, June 17, 2016 11:01:34 AM

FMT-ALL-C-002rev.00 24March2009

Page 1 of 2

Chain of Custody



Workorder: AAJ0109

Workorder Name: Plant Kraft

Owner Received Date: 10/3/2017

Results Requested By: 11/1/2017

Report To:		Subcontract To:		Requested Analysis			
Betsy McDaniel Pace Analytical Atlanta 110 Technology Parkway Peachtree Corners, GA 30092 Phone (770)-734-4200		Pace - Pittsburgh 1638 Roseytown Road Stes. 2,3,4 Greensburg, PA 15601 Phone (724) 850-5600		30232038			
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	LAB USE ONLY
11	GWC-2	G	10/3/2017 9:50	AAJ0109-11	GW	2	211
12	GWA-8	G	10/2/2017 14:55	AAJ0109-12	GW	2	012
13	GWC-16	G	10/3/2017 12:45	AAJ0109-13	GW	2	013
14	GWC-3	G	10/3/2017 9:50	AAJ0109-14	GW	2	014
15	GWC-14	G	10/2/2017 15:26	AAJ0109-15	GW	2	015
16							
17							
18							
19							
20							
Transfers Released By						Radium 226, 228, Total	
1	Chandler		10/4/17 16:50	L. Conway			
2							
3							
Transfers Released By		Date/Time	Received By	Date/Time	Comments		

Cooler Temperature on Receipt 41 °C

Custody Seal Y or N

Received on Ice Y or N

Sample Intact Y or N

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

Sample Condition Upon Receipt

30232038



Client Name: GIA Power

Project # AAJ0109

Courier: Fed-Ex UPS USPS Client Commercial Pace Other _____

Tracking #: _____



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

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used IR-4 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 1.2 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 8°C

Comments:

Date and Initials of person examining contents: 10/04/17 MR

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

Client Notification/ Resolution: _____

Person Contacted: _____ Date/Time: _____

Field Data Required? Y / N

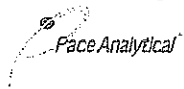
Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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

F-ALLC003rev.3 11September2008

Pittsburgh Lab Sample Condition Upon Receipt



Client Name: PACE GA

Project # 30232038

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 741366590334

Label <u>CA</u>
LIMS Login

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: 10/5/17 CA

Comments:	Yes	No	N/A	
Chain of Custody Present:	/			1.
Chain of Custody Filled Out:	/			2.
Chain of Custody Relinquished:	/			3.
Sampler Name & Signature on COC:	/			4.
Sample Labels match COC:	/			5.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	/			6.
Short Hold Time Analysis (<72hr remaining):	/			7.
Rush Turn Around Time Requested:	/			8.
Sufficient Volume:	/			9.
Correct Containers Used:	/			10.
-Pace Containers Used:	/			
Containers Intact:	/			11.
Orthophosphate field filtered			/	12.
Hex Cr Aqueous Compliance/NPDES sample field filtered			/	13.
Organic Samples checked for dechlorination:			/	14.
Filtered volume received for Dissolved tests			/	15.
All containers have been checked for preservation.	/			16.
All containers needing preservation are found to be in compliance with EPA recommendation.	/			
exceptions: VOA, coliform, TOC, O&G, Phenolics				
				Initial when completed <u>CA</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			/	17.
Trip Blank Present:			/	18.
Trip Blank Custody Seals Present			/	
Rad Aqueous Samples Screened > 0.5 mrem/hr		/		Initial when completed: <u>CA</u> Date: <u>10/5/17</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

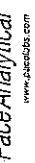
Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 10/11/2017
Worklist: 38137
Matrix: DW

Method Blank Assessment	
MB Sample ID	1350987
MB concentration:	0.185
M/B Counting Uncertainty:	0.313
MB MDC:	0.686
MB Numerical Performance Indicator:	1.16
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment		Y
LCS38137		LCS38137
Count Date:	10/13/2017	10/13/2017
Spike I.D.:	17-033	17-033
Spike Concentration (pCi/mL):	23.282	23.282
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.805	0.805
Target Conc. (pCi/L, g, F):	5.774	5.786
Uncertainty (Calculated):	0.416	0.417
Result (pCi/L, g, F):	6.195	5.113
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.744	0.681
Numerical Performance Indicator:	0.97	-1.65
Percent Recovery:	107.29%	88.37%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS38137
Duplicate Sample I.D.:	LCS38137
Sample Result (pCi/L, g, F):	6.195
Duplicate Result (pCi/L, g, F):	0.744
Sample Result Counting Uncertainty (pCi/L, g, F):	5.113
Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.681
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	2.104
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	19.35%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

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

Comments:

Amal

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

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JC2
Date: 10/10/2017
Worklist: 38136
Matrix: DW

Method Blank Assessment	
MB Sample ID	1350986
MB concentration:	0.348
M/B Counting Uncertainty:	0.216
MB MDC:	0.333
MB Numerical Performance Indicator:	3.16
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	
Count Date:	10/11/2017
Spike I.D.:	17-030
Spike Concentration (pCi/mL):	80.190
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.506
Target Conc. (pCi/L, g, F):	15.856
Uncertainty (Calculated):	1.461
Result (pCi/L, g, F):	13.314
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.040
Numerical Performance Indicator:	-2.78
Percent Recovery:	83.97%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30231663007
Duplicate Sample I.D.:	30231663007DUP
Sample Result (pCi/L, g, F):	0.376
Sample Result Counting Uncertainty (pCi/L, g, F):	0.209
Sample Duplicate Result (pCi/L, g, F):	0.094
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.177
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	2.018
Duplicate RPD:	120.18%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**

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

30231663007

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

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

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

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



PACE ANALYTICAL SERVICES, LLC.

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

Laboratory Report

Prepared For:

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

Attention: Mr. Joju Abraham

Report Number: AAJ0126

November 03, 2017

Project: CCR Event

Project #: Plant Kraft-Grumman Road

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

Approved:

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

Project Manager

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



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-13	AAJ0126-01	Ground Water	10/04/17 10:25	10/05/17 08:00
GWC-4	AAJ0126-02	Ground Water	10/04/17 13:10	10/05/17 08:00
GWC-12	AAJ0126-03	Ground Water	10/04/17 11:55	10/05/17 08:00
GWA-7	AAJ0126-04	Ground Water	10/04/17 14:40	10/05/17 08:00
EB-1-10-4-17	AAJ0126-05	Water	10/04/17 15:10	10/05/17 08:00
GWC-9	AAJ0126-06	Ground Water	10/04/17 08:50	10/05/17 08:00
GWC-17	AAJ0126-07	Ground Water	10/04/17 15:20	10/05/17 08:00
GWC-22	AAJ0126-08	Ground Water	10/04/17 12:18	10/05/17 08:00
EB-2-10-4-17	AAJ0126-09	Water	10/04/17 15:50	10/05/17 08:00
FB-2-10-4-17	AAJ0126-10	Water	10/04/17 11:50	10/05/17 08:00



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Attention: Mr. Joju Abraham

November 03, 2017

Case Narrative

The Radium analysis by methods EPA 9315/9320 was performed by Pace-Pittsburgh, 1638 Roseytown Road - Suites 2, 3, 4, Greensburg PA 15601. The Pace-Pittsburgh lab contact is Jacquelyn Collins at 724-850-5612.

Plant Kraft - Grumman Road report AAJ0126 11/3/2017

This revised report replaces the original report submitted on 10/16/2017.

The consultant requested that vanadium and zinc be added to a sample. The following changes were made: sample AAJ0126-04 (GWA-7) now has vanadium and zinc data reported. No other changes were made to this report.



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0126

Project: CCR Event

Client ID: GWC-13

Lab Number ID: AAJ0126-01

Date/Time Sampled: 10/4/2017 10:25:00AM

Date/Time Received: 10/5/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	38	25	10	mg/L	SM 2540 C		1	10/06/17 15:30	10/06/17 15:30	7100182	JPT
Inorganic Anions											
Chloride	3.0	0.25	0.02	mg/L	EPA 300.0		1	10/09/17 09:32	10/09/17 12:31	7100217	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/09/17 09:32	10/09/17 12:31	7100217	RLC
Sulfate	33	1.0	0.02	mg/L	EPA 300.0		1	10/09/17 09:32	10/09/17 12:31	7100217	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:06	7100245	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:06	7100245	CSW
Barium	0.0185	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:06	7100245	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:06	7100245	CSW
Boron	0.116	0.0400	0.0060	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:06	7100245	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:06	7100245	CSW
Calcium	2.19	0.500	0.0404	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:06	7100245	CSW
Chromium	0.0008	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 19:06	7100245	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:06	7100245	CSW
Lead	0.0007	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 19:06	7100245	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:06	7100245	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:06	7100245	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:06	7100245	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:06	7100245	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/13/17 09:20	10/13/17 14:02	7100286	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0126

Project: CCR Event

Client ID: GWC-4

Lab Number ID: AAJ0126-02

Date/Time Sampled: 10/4/2017 1:10:00PM

Date/Time Received: 10/5/2017 8:00:00AM

Matrix: Ground Water

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	10/06/17 15:30	10/06/17 15:30	7100182	JPT
Inorganic Anions											
Chloride	130	2.5	0.24	mg/L	EPA 300.0		10	10/09/17 09:32	10/09/17 19:45	7100217	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/09/17 09:32	10/09/17 12:52	7100217	RLC
Sulfate	290	10	0.17	mg/L	EPA 300.0		10	10/09/17 09:32	10/09/17 19:45	7100217	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 23:12	7100245	CSW
Arsenic	0.0018	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 23:12	7100245	CSW
Barium	0.0994	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 23:12	7100245	CSW
Beryllium	0.0001	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 23:12	7100245	CSW
Boron	8.88	2.00	0.298	mg/L	EPA 6020B		50	10/10/17 14:25	10/12/17 15:33	7100245	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 23:12	7100245	CSW
Calcium	12.5	5.00	2.02	mg/L	EPA 6020B		50	10/10/17 14:25	10/11/17 23:17	7100245	CSW
Chromium	0.0097	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 23:12	7100245	CSW
Cobalt	0.0010	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 23:12	7100245	CSW
Lead	0.0057	0.0050	0.00007	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 23:12	7100245	CSW
Molybdenum	0.0181	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 23:12	7100245	CSW
Selenium	0.0038	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 23:12	7100245	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 23:12	7100245	CSW
Lithium	0.0041	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 23:12	7100245	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/13/17 09:20	10/13/17 14:04	7100286	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0126

Project: CCR Event

Client ID: GWC-12

Lab Number ID: AAJ0126-03

Date/Time Sampled: 10/4/2017 11:55:00AM

Date/Time Received: 10/5/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	986	25	10	mg/L	SM 2540 C		1	10/06/17 15:30	10/06/17 15:30	7100182	JPT
Inorganic Anions											
Chloride	100	2.5	0.24	mg/L	EPA 300.0		10	10/09/17 09:32	10/09/17 20:06	7100217	RLC
Fluoride	0.37	0.30	0.03	mg/L	EPA 300.0		1	10/09/17 09:32	10/09/17 13:13	7100217	RLC
Sulfate	760	20	0.34	mg/L	EPA 300.0		20	10/09/17 09:32	10/12/17 12:16	7100217	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:29	7100245	CSW
Arsenic	0.0009	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 19:29	7100245	CSW
Barium	0.0162	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:29	7100245	CSW
Beryllium	0.0006	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 19:29	7100245	CSW
Boron	5.18	0.0400	0.0060	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:29	7100245	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:29	7100245	CSW
Calcium	74.6	25.0	2.02	mg/L	EPA 6020B		50	10/10/17 14:25	10/11/17 19:34	7100245	CSW
Chromium	0.0011	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 19:29	7100245	CSW
Cobalt	0.0011	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 19:29	7100245	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 19:29	7100245	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:29	7100245	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:29	7100245	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 19:29	7100245	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:29	7100245	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/13/17 09:20	10/13/17 14:07	7100286	MTC



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

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0126

Project: CCR Event

Client ID: GWA-7

Lab Number ID: AAJ0126-04

Date/Time Sampled: 10/4/2017 2:40:00PM

Date/Time Received: 10/5/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	3350	25	10	mg/L	SM 2540 C		1	10/06/17 15:30	10/06/17 15:30	7100182	JPT
Inorganic Anions											
Chloride	260	2.5	0.24	mg/L	EPA 300.0		10	10/09/17 09:32	10/09/17 21:49	7100217	RLC
Fluoride	0.04	0.30	0.03	mg/L	EPA 300.0	J	1	10/09/17 09:32	10/09/17 13:33	7100217	RLC
Sulfate	13	1.0	0.02	mg/L	EPA 300.0		1	10/09/17 09:32	10/09/17 13:33	7100217	RLC
Metals, Total											
Antimony	0.0008	0.0030	0.0006	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 23:23	7100245	CSW
Arsenic	0.0078	0.0050	0.0005	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 23:23	7100245	CSW
Barium	0.113	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 23:23	7100245	CSW
Beryllium	0.0002	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 23:23	7100245	CSW
Boron	21.5	2.00	0.298	mg/L	EPA 6020B		50	10/10/17 14:25	10/12/17 15:39	7100245	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 23:23	7100245	CSW
Calcium	6.41	0.500	0.0404	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 23:23	7100245	CSW
Chromium	0.0378	0.0100	0.0005	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 23:23	7100245	CSW
Cobalt	0.0058	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 23:23	7100245	CSW
Lead	0.0042	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 23:23	7100245	CSW
Molybdenum	0.0013	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 23:23	7100245	CSW
Selenium	0.0195	0.0100	0.0018	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 23:23	7100245	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 23:23	7100245	CSW
Vanadium	0.316	0.0100	0.0012	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 23:23	7100245	CSW
Zinc	0.0263	0.0100	0.0012	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 23:23	7100245	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 23:23	7100245	CSW
Mercury	0.00010	0.00050	0.000036	mg/L	EPA 7470A	J	1	10/13/17 09:20	10/13/17 14:09	7100286	MTC



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

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0126

Project: CCR Event

Client ID: EB-1-10-4-17

Lab Number ID: AAJ0126-05

Date/Time Sampled: 10/4/2017 3:10:00PM

Date/Time Received: 10/5/2017 8:00:00AM

Matrix: Water

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	10/06/17 15:30	10/06/17 15:30	7100182	JPT
Inorganic Anions											
Chloride	0.08	0.25	0.02	mg/L	EPA 300.0	J	1	10/09/17 09:32	10/09/17 13:54	7100217	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/09/17 09:32	10/09/17 13:54	7100217	RLC
Sulfate	0.11	1.0	0.02	mg/L	EPA 300.0	J	1	10/09/17 09:32	10/09/17 13:54	7100217	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:40	7100245	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:40	7100245	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:40	7100245	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:40	7100245	CSW
Boron	0.0123	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 19:40	7100245	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:40	7100245	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:40	7100245	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:40	7100245	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:40	7100245	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:40	7100245	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:40	7100245	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:40	7100245	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:40	7100245	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:40	7100245	CSW
Mercury	0.000045	0.00050	0.000036	mg/L	EPA 7470A	J	1	10/13/17 09:20	10/13/17 14:12	7100286	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0126

Project: CCR Event

Client ID: GWC-9

Lab Number ID: AAJ0126-06

Date/Time Sampled: 10/4/2017 8:50:00AM

Date/Time Received: 10/5/2017 8:00:00AM

Matrix: Ground Water

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	10/06/17 15:30	10/06/17 15:30	7100182	JPT
Inorganic Anions											
Chloride	18	0.25	0.02	mg/L	EPA 300.0		1	10/09/17 09:32	10/09/17 14:56	7100217	RLC
Fluoride	0.22	0.30	0.03	mg/L	EPA 300.0	J	1	10/09/17 09:32	10/09/17 14:56	7100217	RLC
Sulfate	78	5.0	0.08	mg/L	EPA 300.0		5	10/09/17 09:32	10/12/17 12:37	7100217	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:46	7100245	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:46	7100245	CSW
Barium	0.356	0.0100	0.0004	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:46	7100245	CSW
Beryllium	0.0002	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 19:46	7100245	CSW
Boron	0.0254	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 19:46	7100245	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:46	7100245	CSW
Calcium	8.57	0.500	0.0404	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:46	7100245	CSW
Chromium	0.0011	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 19:46	7100245	CSW
Cobalt	0.0015	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 19:46	7100245	CSW
Lead	0.00009	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 19:46	7100245	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:46	7100245	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:46	7100245	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/10/17 14:25	10/11/17 19:46	7100245	CSW
Lithium	0.0021	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/10/17 14:25	10/11/17 19:46	7100245	CSW
Mercury	0.00005	0.00050	0.000036	mg/L	EPA 7470A	J	1	10/13/17 09:20	10/13/17 14:19	7100286	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0126

Project: CCR Event

Client ID: GWC-17

Lab Number ID: AAJ0126-07

Date/Time Sampled: 10/4/2017 3:20:00PM

Date/Time Received: 10/5/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	2370	25	10	mg/L	SM 2540 C		1	10/06/17 15:30	10/06/17 15:30	7100182	JPT
Inorganic Anions											
Chloride	1000	6.2	0.60	mg/L	EPA 300.0		25	10/09/17 09:32	10/12/17 14:02	7100217	RLC
Fluoride	1.8	0.30	0.03	mg/L	EPA 300.0		1	10/09/17 09:32	10/09/17 15:17	7100217	RLC
Sulfate	1100	25	0.42	mg/L	EPA 300.0		25	10/09/17 09:32	10/12/17 14:02	7100217	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:04	7100283	CSW
Arsenic	0.0019	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/12/17 18:04	7100283	CSW
Barium	0.0589	0.0100	0.0004	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:04	7100283	CSW
Beryllium	0.0037	0.0030	0.00009	mg/L	EPA 6020B		1	10/11/17 09:45	10/14/17 20:11	7100283	CSW
Boron	1.02	0.0400	0.0060	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:04	7100283	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:04	7100283	CSW
Calcium	136	25.0	2.02	mg/L	EPA 6020B		50	10/11/17 09:45	10/12/17 18:09	7100283	CSW
Chromium	0.0055	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/12/17 18:04	7100283	CSW
Cobalt	0.0073	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/12/17 18:04	7100283	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	B-01, J	1	10/11/17 09:45	10/12/17 18:04	7100283	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:04	7100283	CSW
Selenium	0.0042	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/12/17 18:04	7100283	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/12/17 18:04	7100283	CSW
Lithium	0.0082	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/14/17 20:11	7100283	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/13/17 09:20	10/13/17 14:21	7100286	MTC



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 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0126

Project: CCR Event

Client ID: GWC-22

Lab Number ID: AAJ0126-08

Date/Time Sampled: 10/4/2017 12:18:00PM

Date/Time Received: 10/5/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	1500	25	10	mg/L	SM 2540 C		1	10/06/17 15:30	10/06/17 15:30	7100182	JPT
Inorganic Anions											
Chloride	360	2.5	0.24	mg/L	EPA 300.0		10	10/09/17 09:32	10/09/17 22:51	7100217	RLC
Fluoride	0.12	0.30	0.03	mg/L	EPA 300.0	J	1	10/09/17 09:32	10/09/17 15:37	7100217	RLC
Sulfate	730	20	0.34	mg/L	EPA 300.0		20	10/09/17 09:32	10/12/17 13:20	7100217	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:39	7100283	CSW
Arsenic	0.0025	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/12/17 18:39	7100283	CSW
Barium	0.156	0.0100	0.0004	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:39	7100283	CSW
Beryllium	0.0001	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/14/17 20:17	7100283	CSW
Boron	6.05	0.0400	0.0060	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:39	7100283	CSW
Cadmium	0.0002	0.0010	0.0001	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/12/17 18:39	7100283	CSW
Calcium	115	25.0	2.02	mg/L	EPA 6020B		50	10/11/17 09:45	10/12/17 18:45	7100283	CSW
Chromium	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/12/17 18:39	7100283	CSW
Cobalt	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/12/17 18:39	7100283	CSW
Lead	0.0008	0.0050	0.00007	mg/L	EPA 6020B	B-01, J	1	10/11/17 09:45	10/12/17 18:39	7100283	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:39	7100283	CSW
Selenium	0.0023	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/12/17 18:39	7100283	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/12/17 18:39	7100283	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/11/17 09:45	10/14/17 20:17	7100283	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/13/17 09:20	10/13/17 14:23	7100286	MTC



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November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0126

Project: CCR Event

Client ID: EB-2-10-4-17

Lab Number ID: AAJ0126-09

Date/Time Sampled: 10/4/2017 3:50:00PM

Date/Time Received: 10/5/2017 8:00:00AM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	11	25	10	mg/L	SM 2540 C	J	1	10/06/17 15:30	10/06/17 15:30	7100182	JPT
Inorganic Anions											
Chloride	0.06	0.25	0.02	mg/L	EPA 300.0	J	1	10/09/17 09:32	10/09/17 17:00	7100217	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/09/17 09:32	10/09/17 17:00	7100217	RLC
Sulfate	0.05	1.0	0.02	mg/L	EPA 300.0	J	1	10/09/17 09:32	10/09/17 17:00	7100217	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:51	7100283	CSW
Arsenic	0.0006	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/12/17 18:51	7100283	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:51	7100283	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/11/17 09:45	10/14/17 20:32	7100283	CSW
Boron	0.0198	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/12/17 18:51	7100283	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:51	7100283	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:51	7100283	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:51	7100283	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:51	7100283	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:51	7100283	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:51	7100283	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:51	7100283	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:51	7100283	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/11/17 09:45	10/14/17 20:32	7100283	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/13/17 09:20	10/13/17 14:26	7100286	MTC



PACE ANALYTICAL SERVICES, LLC.

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November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0126

Project: CCR Event

Client ID: FB-2-10-4-17

Lab Number ID: AAJ0126-10

Date/Time Sampled: 10/4/2017 11:50:00AM

Date/Time Received: 10/5/2017 8:00:00AM

Matrix: Water

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	0.06	0.25	0.02	mg/L	EPA 300.0	J	1	10/09/17 09:32	10/09/17 17:21	7100217	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	10/09/17 09:32	10/09/17 17:21	7100217	RLC
Sulfate	0.05	1.0	0.02	mg/L	EPA 300.0	J	1	10/09/17 09:32	10/09/17 17:21	7100217	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:56	7100283	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:56	7100283	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:56	7100283	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/11/17 09:45	10/14/17 20:28	7100283	CSW
Boron	0.0137	0.0400	0.0060	mg/L	EPA 6020B	J	1	10/11/17 09:45	10/12/17 18:56	7100283	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:56	7100283	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:56	7100283	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:56	7100283	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:56	7100283	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:56	7100283	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:56	7100283	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:56	7100283	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/11/17 09:45	10/12/17 18:56	7100283	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/11/17 09:45	10/14/17 20:28	7100283	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	10/13/17 09:20	10/13/17 14:28	7100286	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0126

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100182 - SM 2540 C											
Blank (7100182-BLK1)						Prepared & Analyzed: 10/06/17					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (7100182-BS1)						Prepared & Analyzed: 10/06/17					
Total Dissolved Solids	379	25	10	mg/L	400.00		95	84-108			
Duplicate (7100182-DUP1)						Source: AAJ0126-04 Prepared & Analyzed: 10/06/17					
Total Dissolved Solids	3330	25	10	mg/L		3350			0.7	10	
Duplicate (7100182-DUP2)						Source: AAJ0126-05 Prepared & Analyzed: 10/06/17					
Total Dissolved Solids	ND	25	10	mg/L		ND				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



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Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100217 - EPA 300.0											
Blank (7100217-BLK1)						Prepared & Analyzed: 10/09/17					
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 (7100217-BS1)						Prepared & Analyzed: 10/09/17					
Chloride	10.8	0.25	0.02	mg/L	10.020		107	90-110			
Fluoride	9.91	0.30	0.03	mg/L	10.020		99	90-110			
Sulfate	11.0	1.0	0.02	mg/L	10.050		110	90-110			
Matrix Spike (7100217-MS1)						Source: AAJ0126-05 Prepared & Analyzed: 10/09/17					
Chloride	10.1	0.25	0.02	mg/L	10.020	0.08	100	90-110			
Fluoride	9.50	0.30	0.03	mg/L	10.020	ND	95	90-110			
Sulfate	10.5	1.0	0.02	mg/L	10.050	0.11	104	90-110			
Matrix Spike (7100217-MS2)						Source: AAJ0237-01 Prepared & Analyzed: 10/09/17					
Chloride	15.8	0.25	0.02	mg/L	10.020	5.48	103	90-110			
Fluoride	10.3	0.30	0.03	mg/L	10.020	ND	103	90-110			
Sulfate	129	1.0	0.02	mg/L	10.050	133	NR	90-110			QM-02
Matrix Spike Dup (7100217-MSD1)						Source: AAJ0126-05 Prepared & Analyzed: 10/09/17					
Chloride	10.1	0.25	0.02	mg/L	10.020	0.08	100	90-110	0.3	15	
Fluoride	9.55	0.30	0.03	mg/L	10.020	ND	95	90-110	0.5	15	
Sulfate	10.4	1.0	0.02	mg/L	10.050	0.11	102	90-110	2	15	



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7100245 - EPA 3005A

Blank (7100245-BLK1)

Prepared: 10/10/17 Analyzed: 10/11/17

Antimony	ND	0.0030	0.0006	mg/L							
Arsenic	ND	0.0050	0.0005	mg/L							
Barium	ND	0.0100	0.0004	mg/L							
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.0400	0.0060	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	ND	0.500	0.0404	mg/L							
Chromium	ND	0.0100	0.0005	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	ND	0.0250	0.0003	mg/L							
Lead	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0012	mg/L							
Zinc	ND	0.0100	0.0012	mg/L							
Lithium	ND	0.0500	0.0015	mg/L							

LCS (7100245-BS1)

Prepared: 10/10/17 Analyzed: 10/11/17

Antimony	0.110	0.0030	0.0006	mg/L	0.10000		110	80-120			
Arsenic	0.104	0.0050	0.0005	mg/L	0.10000		104	80-120			
Barium	0.106	0.0100	0.0004	mg/L	0.10000		106	80-120			
Beryllium	0.105	0.0030	0.00009	mg/L	0.10000		105	80-120			
Cadmium	0.104	0.0010	0.0001	mg/L	0.10000		104	80-120			
Chromium	0.106	0.0100	0.0005	mg/L	0.10000		106	80-120			
Cobalt	0.104	0.0100	0.0003	mg/L	0.10000		104	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			
Nickel	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Selenium	0.106	0.0100	0.0018	mg/L	0.10000		106	80-120			
Silver	0.106	0.0100	0.0002	mg/L	0.10000		106	80-120			
Thallium	0.106	0.0010	0.00005	mg/L	0.10000		106	80-120			
Vanadium	0.105	0.0100	0.0012	mg/L	0.10000		105	80-120			
Zinc	0.106	0.0100	0.0012	mg/L	0.10000		106	80-120			
Lithium	0.106	0.0500	0.0015	mg/L	0.10000		106	80-120			



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100245 - EPA 3005A											
Matrix Spike (7100245-MS1)			Source: AAJ0126-01				Prepared: 10/10/17 Analyzed: 10/11/17				
Antimony	0.107	0.0030	0.0006	mg/L	0.10000	ND	107	75-125			
Arsenic	0.102	0.0050	0.0005	mg/L	0.10000	ND	102	75-125			
Barium	0.124	0.0100	0.0004	mg/L	0.10000	0.0185	106	75-125			
Beryllium	0.101	0.0030	0.00009	mg/L	0.10000	ND	101	75-125			
Cadmium	0.0999	0.0010	0.0001	mg/L	0.10000	ND	100	75-125			
Chromium	0.108	0.0100	0.0005	mg/L	0.10000	0.0008	108	75-125			
Cobalt	0.103	0.0100	0.0003	mg/L	0.10000	ND	103	75-125			
Copper	0.102	0.0250	0.0003	mg/L	0.10000	0.0004	101	75-125			
Lead	0.104	0.0050	0.00007	mg/L	0.10000	0.0007	104	75-125			
Nickel	0.102	0.0100	0.0005	mg/L	0.10000	ND	102	75-125			
Selenium	0.104	0.0100	0.0018	mg/L	0.10000	ND	104	75-125			
Silver	0.103	0.0100	0.0002	mg/L	0.10000	ND	103	75-125			
Thallium	0.106	0.0010	0.00005	mg/L	0.10000	ND	106	75-125			
Vanadium	0.108	0.0100	0.0012	mg/L	0.10000	0.0015	106	75-125			
Zinc	0.103	0.0100	0.0012	mg/L	0.10000	0.0022	101	75-125			
Lithium	0.105	0.0500	0.0015	mg/L	0.10000	ND	105	75-125			
Matrix Spike Dup (7100245-MSD1)			Source: AAJ0126-01				Prepared: 10/10/17 Analyzed: 10/11/17				
Antimony	0.111	0.0030	0.0006	mg/L	0.10000	ND	111	75-125	4	20	
Arsenic	0.104	0.0050	0.0005	mg/L	0.10000	ND	104	75-125	2	20	
Barium	0.127	0.0100	0.0004	mg/L	0.10000	0.0185	108	75-125	2	20	
Beryllium	0.102	0.0030	0.00009	mg/L	0.10000	ND	102	75-125	0.3	20	
Cadmium	0.105	0.0010	0.0001	mg/L	0.10000	ND	105	75-125	5	20	
Chromium	0.111	0.0100	0.0005	mg/L	0.10000	0.0008	110	75-125	2	20	
Cobalt	0.103	0.0100	0.0003	mg/L	0.10000	ND	103	75-125	0.2	20	
Copper	0.104	0.0250	0.0003	mg/L	0.10000	0.0004	104	75-125	2	20	
Lead	0.102	0.0050	0.00007	mg/L	0.10000	0.0007	102	75-125	2	20	
Nickel	0.104	0.0100	0.0005	mg/L	0.10000	ND	104	75-125	2	20	
Selenium	0.105	0.0100	0.0018	mg/L	0.10000	ND	105	75-125	0.9	20	
Silver	0.104	0.0100	0.0002	mg/L	0.10000	ND	104	75-125	2	20	
Thallium	0.103	0.0010	0.00005	mg/L	0.10000	ND	103	75-125	2	20	
Vanadium	0.108	0.0100	0.0012	mg/L	0.10000	0.0015	106	75-125	0.01	20	
Zinc	0.106	0.0100	0.0012	mg/L	0.10000	0.0022	104	75-125	3	20	
Lithium	0.103	0.0500	0.0015	mg/L	0.10000	ND	103	75-125	2	20	



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November 03, 2017

Report No.: AAJ0126

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100245 - EPA 3005A											
Post Spike (7100245-PS1)			Source: AAJ0126-01			Prepared: 10/10/17 Analyzed: 10/11/17					
Antimony	102			ug/L	100.00	0.190	102	80-120			
Arsenic	101			ug/L	100.00	0.354	101	80-120			
Barium	122			ug/L	100.00	18.5	104	80-120			
Beryllium	97.9			ug/L	100.00	0.0268	98	80-120			
Cadmium	102			ug/L	100.00	0.0043	102	80-120			
Chromium	108			ug/L	100.00	0.770	108	80-120			
Cobalt	100			ug/L	100.00	0.150	100	80-120			
Copper	101			ug/L	100.00	0.385	100	80-120			
Lead	103			ug/L	100.00	0.683	102	80-120			
Nickel	101			ug/L	100.00	0.305	101	80-120			
Selenium	101			ug/L	100.00	0.564	100	80-120			
Silver	102			ug/L	100.00	0.0022	102	80-120			
Thallium	105			ug/L	100.00	0.0181	105	80-120			
Vanadium	109			ug/L	100.00	1.53	107	80-120			
Zinc	104			ug/L	100.00	2.24	101	80-120			
Lithium	99.3			ug/L	100.00	0.424	99	80-120			

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							



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100283 - EPA 3005A											
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			
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



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100283 - EPA 3005A											
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
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			



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0126

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100286 - EPA 7470A											
Blank (7100286-BLK1)											
						Prepared & Analyzed: 10/13/17					
Mercury	ND	0.00050	0.000036	mg/L							
LCS (7100286-BS1)											
						Prepared & Analyzed: 10/13/17					
Mercury	0.00250	0.00050	0.000036	mg/L	2.5000E-3		100	80-120			
Matrix Spike (7100286-MS1)											
						Source: AAJ0126-03			Prepared & Analyzed: 10/13/17		
Mercury	0.00244	0.00050	0.000036	mg/L	2.5000E-3	ND	97	75-125			
Matrix Spike Dup (7100286-MSD1)											
						Source: AAJ0126-03			Prepared & Analyzed: 10/13/17		
Mercury	0.00241	0.00050	0.000036	mg/L	2.5000E-3	ND	97	75-125	1	20	
Post Spike (7100286-PS1)											
						Source: AAJ0126-03			Prepared & Analyzed: 10/13/17		
Mercury	1.68			ug/L	1.6667	0.0195	100	80-120			



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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

- 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

PAGE: _____ OF _____

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239		REPORT TO: Lauren Petty CC: Maria Pacilla Heath McCorkle PO #: laburch@southerncco.com		PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase 2 CCR & State D&O	
CONTAINER TYPE: P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		ANALYSIS REQUESTED: P 3 P 3 P 7 P 3 Metals (See attached) (EPA 6020/7470) Metals App. III & IV (EPA 6020/7470) C, T, SO ₄ & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SW-846 9315/9320)		CONTAINER TYPE: P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	
PRESEVATION: 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O 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	
Collection DATE	Collection TIME	MATRIX CODE	C O R M A B	SAMPLE IDENTIFICATION	L A B I D N U M B E R
10-4-17	1025	GW	X	GWC-13	1
10-4-17	1310	GW	X	GWC-4	2
10-4-17	1155	GW	X	GWC-12	3
10-4-17	1440	GW	X	GWA-7	4
10-4-17	1510	GW	X	EB-1-10-4-17	5
10-4-17	0850	GW	X	GWC-9	6
10-4-17	1520	GW	X	GWC-17	7
10-4-17	1218	GW	X	GWC-22	8
10-4-17	1550	W	X	EB-2-10-4-17	9
10-4-17	1150	W	X	FB-2-10-4-17	10

SAMPLED BY AND TITLE: PAC/EA DATE/TIME: 10-4-17 1550	RELINQUISHED BY: DATE/TIME: 10-5-17 0800	FOR LAB USE ONLY LAB #: AAJ0126 Entered into LIMS: Tracking #:
RECEIVED BY: DATE/TIME: 10/05/17 0800	RELINQUISHED BY: DATE/TIME:	RECEIVED BY: DATE/TIME:
RECEIVED BY: DATE/TIME: 10/05/17 0800	SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER ES Custody Seal: () Broken Not Present # of Coolers:	RECEIVED BY: DATE/TIME:



Sample Condition Upon Receipt

Client Name: GIA Power Project # AAJ0126

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____
Tracking #: _____

Optional:
Provide Date
Print Name

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

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used IR-4 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 0.1 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 10/5/17 MK

Temp should be above freezing to 6°C

Comments:

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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



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: 10/6/2017 9:39:47AM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 10/05/17 08:00

Work Order: AAJ0126

Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 10

#Containers: 44

Minimum Temp(C): 0.1

Maximum Temp(C): 0.1

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:

October 26, 2017

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: AAJ0126 Plant Kraft
Pace Project No.: 30232157

Dear Mr. Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 06, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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

Project: AAJ0126 Plant Kraft
Pace Project No.: 30232157

Pennsylvania Certification IDs

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: AAJ0126 Plant Kraft

Pace Project No.: 30232157

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30232157001	GWC-13	Water	10/04/17 10:25	10/06/17 10:10
30232157002	GWC-4	Water	10/04/17 13:10	10/06/17 10:10
30232157003	GWC-12	Water	10/04/17 11:55	10/06/17 10:10
30232157004	GWA-7	Water	10/04/17 14:40	10/06/17 10:10
30232157005	EB-1-10-4-17	Water	10/04/17 15:10	10/06/17 10:10
30232157006	GWC-9	Water	10/04/17 08:50	10/06/17 10:10
30232157007	GWC-17	Water	10/04/17 15:20	10/06/17 10:10
30232157008	GWC-22	Water	10/04/17 12:18	10/06/17 10:10
30232157009	EB-2-10-4-17	Water	10/04/17 15:50	10/06/17 10:10
30232157010	FB-2-10-4-17	Water	10/04/17 11:50	10/06/17 10:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AAJ0126 Plant Kraft
Pace Project No.: 30232157

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30232157001	GWC-13	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232157002	GWC-4	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232157003	GWC-12	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232157004	GWA-7	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232157005	EB-1-10-4-17	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232157006	GWC-9	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232157007	GWC-17	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232157008	GWC-22	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232157009	EB-2-10-4-17	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1
30232157010	FB-2-10-4-17	EPA 9315	JC2	1
		EPA 9320	VAL	1
		Total Radium Calculation	JAL	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0126 Plant Kraft
Pace Project No.: 30232157

Sample: GWC-13		Lab ID: 30232157001	Collected: 10/04/17 10:25	Received: 10/06/17 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	0.368 ± 0.189 (0.231)		pCi/L	10/16/17 08:22	13982-63-3	
Radium-228	EPA 9320	0.962 ± 0.517 (0.959)		pCi/L	10/17/17 14:44	15262-20-1	
Total Radium	Total Radium Calculation	1.33 ± 0.706 (1.19)		pCi/L	10/24/17 11:20	7440-14-4	

Sample: GWC-4		Lab ID: 30232157002	Collected: 10/04/17 13:10	Received: 10/06/17 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	3.16 ± 0.686 (0.290)		pCi/L	10/16/17 08:23	13982-63-3	
Radium-228	EPA 9320	1.66 ± 0.652 (1.04)		pCi/L	10/17/17 14:45	15262-20-1	
Total Radium	Total Radium Calculation	4.82 ± 1.34 (1.33)		pCi/L	10/24/17 11:20	7440-14-4	

Sample: GWC-12		Lab ID: 30232157003	Collected: 10/04/17 11:55	Received: 10/06/17 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	0.621 ± 0.252 (0.270)		pCi/L	10/16/17 08:23	13982-63-3	
Radium-228	EPA 9320	1.06 ± 0.407 (0.612)		pCi/L	10/17/17 14:46	15262-20-1	
Total Radium	Total Radium Calculation	1.68 ± 0.659 (0.882)		pCi/L	10/24/17 11:20	7440-14-4	

Sample: GWA-7		Lab ID: 30232157004	Collected: 10/04/17 14:40	Received: 10/06/17 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	3.07 ± 0.477 (0.0584)		pCi/L	10/23/17 18:25	13982-63-3	
Radium-228	EPA 9320	0.781 ± 0.422 (0.746)		pCi/L	10/17/17 14:46	15262-20-1	
Total Radium	Total Radium Calculation	3.85 ± 0.899 (0.804)		pCi/L	10/24/17 11:20	7440-14-4	

Sample: EB-1-10-4-17		Lab ID: 30232157005	Collected: 10/04/17 15:10	Received: 10/06/17 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	0.197 ± 0.156 (0.266)		pCi/L	10/16/17 08:23	13982-63-3	
Radium-228	EPA 9320	0.193 ± 0.310 (0.674)		pCi/L	10/17/17 14:46	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0126 Plant Kraft
Pace Project No.: 30232157

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EB-1-10-4-17 Lab ID: 30232157005 Collected: 10/04/17 15:10 Received: 10/06/17 10:10 Matrix: Water PWS: Site ID: Sample Type:						
Total Radium	Total Radium Calculation	0.390 ± 0.466 (0.940)	pCi/L	10/24/17 11:20	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-9 Lab ID: 30232157006 Collected: 10/04/17 08:50 Received: 10/06/17 10:10 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	1.57 ± 0.469 (0.425) C:70% T:NA	pCi/L	10/16/17 08:23	13982-63-3	
Radium-228	EPA 9320	6.59 ± 1.40 (0.768) C:77% T:76%	pCi/L	10/17/17 14:48	15262-20-1	
Total Radium	Total Radium Calculation	8.16 ± 1.87 (1.19)	pCi/L	10/24/17 11:20	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-17 Lab ID: 30232157007 Collected: 10/04/17 15:20 Received: 10/06/17 10:10 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	3.16 ± 0.684 (0.306) C:84% T:NA	pCi/L	10/16/17 08:23	13982-63-3	
Radium-228	EPA 9320	1.79 ± 0.539 (0.640) C:75% T:87%	pCi/L	10/17/17 14:48	15262-20-1	
Total Radium	Total Radium Calculation	4.95 ± 1.22 (0.946)	pCi/L	10/24/17 11:20	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-22 Lab ID: 30232157008 Collected: 10/04/17 12:18 Received: 10/06/17 10:10 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	5.37 ± 1.01 (0.269) C:90% T:NA	pCi/L	10/16/17 08:23	13982-63-3	
Radium-228	EPA 9320	1.79 ± 0.572 (0.699) C:74% T:80%	pCi/L	10/17/17 15:38	15262-20-1	
Total Radium	Total Radium Calculation	7.16 ± 1.58 (0.968)	pCi/L	10/24/17 11:20	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EB-2-10-4-17 Lab ID: 30232157009 Collected: 10/04/17 15:50 Received: 10/06/17 10:10 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.111 ± 0.137 (0.284) C:90% T:NA	pCi/L	10/16/17 08:23	13982-63-3	
Radium-228	EPA 9320	0.178 ± 0.327 (0.717) C:78% T:77%	pCi/L	10/17/17 14:48	15262-20-1	
Total Radium	Total Radium Calculation	0.289 ± 0.464 (1.00)	pCi/L	10/24/17 11:20	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AAJ0126 Plant Kraft

Pace Project No.: 30232157

Sample: FB-2-10-4-17 **Lab ID: 30232157010** Collected: 10/04/17 11:50 Received: 10/06/17 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	0.110 ± 0.150 (0.322) C:79% T:NA	pCi/L	10/16/17 08:23	13982-63-3	
Radium-228	EPA 9320	-0.140 ± 0.288 (0.719) C:78% T:71%	pCi/L	10/17/17 14:48	15262-20-1	
Total Radium	Total Radium Calculation	0.110 ± 0.438 (1.04)	pCi/L	10/24/17 11:20	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAJ0126 Plant Kraft

Pace Project No.: 30232157

QC Batch: 275133 Analysis Method: EPA 9315
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
 Associated Lab Samples: 30232157001, 30232157002, 30232157003, 30232157004, 30232157005, 30232157006, 30232157007,
 30232157008, 30232157009, 30232157010

METHOD BLANK: 1352836 Matrix: Water
 Associated Lab Samples: 30232157001, 30232157002, 30232157003, 30232157004, 30232157005, 30232157006, 30232157007,
 30232157008, 30232157009, 30232157010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.254 ± 0.158 (0.215) C:88% T:NA	pCi/L	10/16/17 08:22	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AAJ0126 Plant Kraft

Pace Project No.: 30232157

QC Batch:	275134	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	30232157001, 30232157002, 30232157003, 30232157004, 30232157005, 30232157006, 30232157007, 30232157008, 30232157009, 30232157010		

METHOD BLANK:	1352837	Matrix:	Water
Associated Lab Samples:	30232157001, 30232157002, 30232157003, 30232157004, 30232157005, 30232157006, 30232157007, 30232157008, 30232157009, 30232157010		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.175 ± 0.298 (0.743) C:75% T:77%	pCi/L	10/17/17 14:48	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: AAJ0126 Plant Kraft

Pace Project No.: 30232157

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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

Chain of Custody



Workorder: AAJ0126 Workorder Name: Pace - Pittsburgh Owner Received Date: 10/5/2017 Results Requested By: 11/2/2017

Report To: Betsy McDaniel Subcontract To: Pace - Pittsburgh Requested Analysis

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

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

WO#: 30232157



Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		Date/Time	Comments
						HNO3			
1	GWC-13	G	10/4/2017 10:25	AAJ0126-01	GW	4			
2	GWC-4	G	10/4/2017 13:10	AAJ0126-02	GW	2			
3	GWC-12	G	10/4/2017 11:55	AAJ0126-03	GW	2			
4	GWC-7	G	10/4/2017 14:40	AAJ0126-04	GW	2			
5	EB-1-10-4-17	G	10/4/2017 15:10	AAJ0126-05	GW	2			
6	GWC-9	G	10/4/2017 8:50	AAJ0126-06	GW	2			
7	GWC-17	G	10/4/2017 15:20	AAJ0126-07	GW	4			
8	GWC-22	G	10/4/2017 12:18	AAJ0126-08	GW	2			
9	EB-2-10-4-17	G	10/4/2017 15:50	AAJ0126-09	W	2			
10	FB-2-10-4-17	G	10/4/2017 11:50	AAJ0126-10	W	2			

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	M. RAHMAN	10/5/17	L. Carney	10/17/17	
2					
3					

Cooler Temperature on Receipt 11 °C Custody Seal Y or N Received on Ice Y or N Sample Intact Y or N

***in order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC

This chain of custody is considered complete as is since this information is available in the owner laboratory.

Sample Condition Upon Receipt

30232157
Project # AAJ0126



Client Name: GIA Power

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used IR-4

Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 0.1
Temp should be above freezing to 8°C

Biological Tissue is Frozen: Yes No

Optional:
Print Date
Print Name

Date and initials of person examining contents: 10/5/17 MK

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

Client Notification/ Resolution: _____ Date/Time: _____ Field Data Required? Y / N

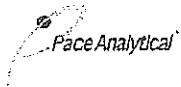
Person Contacted: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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

Pittsburgh Lab Sample Condition Upon Receipt



Client Name: Pace GA

Project # 30232157

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 7411

Label ZH
LIMS Login ANL

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

Thermometer Used NA Type of Ice: Wet Blue None

Cooler Temperature Observed Temp NA °C Correction Factor: _____ °C Final Temp: _____ °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/6/17 CR

Comments:	Yes	No	N/A	
Chain of Custody Present:	/			1.
Chain of Custody Filled Out:	/			2.
Chain of Custody Relinquished:	/			3.
Sampler Name & Signature on COC:		/		4.
Sample Labels match COC:	/			5.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	/			6.
Short Hold Time Analysis (<72hr remaining):	/			7.
Rush Turn Around Time Requested:	/			8.
Sufficient Volume:	/			9.
Correct Containers Used:	/			10.
-Pace Containers Used:	/			
Containers Intact:	/			11.
Orthophosphate field filtered			/	12.
Hex Cr Aqueous Compliance/NPDES sample field filtered			/	13.
Organic Samples checked for dechlorination:			/	14.
Filtered volume received for Dissolved tests			/	15.
All containers have been checked for preservation.	/			16.
All containers needing preservation are found to be in compliance with EPA recommendation.	/			<u>pH 2.2</u>
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed <u>CR</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			/	17.
Trip Blank Present:			/	18.
Trip Blank Custody Seals Present			/	
Rad Aqueous Samples Screened > 0.5 mrem/hr		/		Initial when completed: <u>CR</u> Date: <u>10/4/17</u>

Client Notification/ Resolution:
 Person Contacted: _____ Date/Time: _____ Contacted By: _____
 Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 10/13/2017
Worklist: 38208
Matrix: DW

Method Blank Assessment

MB Sample ID: 1352837
MB concentration: -0.175
M/B Counting Uncertainty: 0.297
MB MDC: 0.743
MB Numerical Performance Indicator: -1.16
MB Status vs Numerical Indicator: N/A
MB Status vs. MDC: Pass

Laboratory Control Sample Assessment

LCS (Y or N)?	N
LCS38208	LCS38208
Count Date: 10/17/2017	
Spike I.D.: 17-033	
Spike Concentration (pCi/mL): 23.251	
Volume Used (mL): 0.20	
Aliquot Volume (L, g, F): 0.818	
Target Conc. (pCi/L, g, F): 5.682	
Uncertainty (Calculated): 0.409	
Result (pCi/L, g, F): 5.065	
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.630	
Numerical Performance Indicator: -1.61	
Percent Recovery: 89.15%	
Status vs Numerical Indicator: N/A	
Status vs Recovery: Pass	

Duplicate Sample Assessment

Sample I.D.: 30232157001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.: 30232157001DUP	
Sample Result (pCi/L, g, F): 0.962	
Sample Result Counting Uncertainty (pCi/L, g, F): 0.487	
Sample Duplicate Result (pCi/L, g, F): 0.862	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.319	
Are sample and/or duplicate results below MDC? Duplicate Numerical Performance Indicator: 0.335	See Below ##
Duplicate RPD: 10.92%	
Duplicate Status vs Numerical Indicator: N/A	
Duplicate Status vs RPD: Pass	

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

Comments:

Handwritten signature/initials

Sample Matrix Spike Control Assessment

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

Quality Control Sample Performance Assessment



www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JC2
Date: 10/13/2017
Worklist: 38207
Matrix: DW

Method Blank Assessment	
MB Sample ID	1352836
MB concentration:	0.254
M/B Counting Uncertainty:	0.153
MB MDC:	0.215
MB Numerical Performance Indicator:	3.24
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	
Count Date:	10/16/2017
Spike I.D.:	17-030
Spike Concentration (pCi/mL):	80.190
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.517
Target Conc. (pCi/L, g, F):	15.507
Uncertainty (Calculated):	1.428
Result (pCi/L, g, F):	12.310
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.921
Numerical Performance Indicator:	-3.69
Percent Recovery:	79.38%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30232157001
Duplicate Sample I.D.:	30232157001DUP
Sample Result (pCi/L, g, F):	0.368
Sample Duplicate Result (pCi/L, g, F):	0.181
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.498
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.208
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-0.924
Duplicate RPD:	30.06%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***

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

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable.
***Batch must be re-prepped due to unacceptable precision.

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

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

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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: AAJ0129

November 03, 2017

Project: CCR Event

Project #:Plant Kraft-Grumman Road

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

Approved:

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

Project Manager

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All test results relate only to the samples analyzed.



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-4	AAJ0129-01	Ground Water	10/04/17 13:10	10/05/17 08:00
GWA-7	AAJ0129-02	Ground Water	10/04/17 14:40	10/05/17 08:00



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Case Narrative

Plant Kraft - Grumman Road report AAJ0129 11/3/2017

This revised report replaces the original report submitted on 10/16/2017.

The consultant requested that vanadium and zinc be added to a sample. The following changes were made: sample AAJ0129-02 (GWA-7) now has dissolved vanadium and zinc data reported. No other changes were made to this report.



PACE ANALYTICAL SERVICES, LLC.

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

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0129

Project: CCR Event

Client ID: GWC-4

Lab Number ID: AAJ0129-01

Date/Time Sampled: 10/4/2017 1:10:00PM

Date/Time Received: 10/5/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Metals, Dissolved											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	10/11/17 17:55	10/12/17 20:48	7100297	CSW
Arsenic	0.0009	0.0050	0.0005	mg/L	EPA 6020B	J	1	10/11/17 17:55	10/12/17 20:48	7100297	CSW
Barium	0.0748	0.0100	0.0004	mg/L	EPA 6020B		1	10/11/17 17:55	10/12/17 20:48	7100297	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	10/11/17 17:55	10/12/17 20:48	7100297	CSW
Boron	8.52	2.00	0.298	mg/L	EPA 6020B		50	10/11/17 17:55	10/12/17 20:37	7100297	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/11/17 17:55	10/12/17 20:48	7100297	CSW
Calcium	9.95	5.00	2.02	mg/L	EPA 6020B		50	10/11/17 17:55	10/12/17 20:37	7100297	CSW
Chromium	0.0056	0.0100	0.0005	mg/L	EPA 6020B	J	1	10/11/17 17:55	10/12/17 20:48	7100297	CSW
Cobalt	0.0007	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/11/17 17:55	10/12/17 20:48	7100297	CSW
Lead	0.00007	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/11/17 17:55	10/12/17 20:48	7100297	CSW
Molybdenum	0.0035	0.0100	0.0010	mg/L	EPA 6020B	J	1	10/11/17 17:55	10/12/17 20:48	7100297	CSW
Selenium	0.0025	0.0100	0.0018	mg/L	EPA 6020B	J	1	10/11/17 17:55	10/12/17 20:48	7100297	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/11/17 17:55	10/12/17 20:48	7100297	CSW
Lithium	0.0024	0.0500	0.0015	mg/L	EPA 6020B	J	1	10/11/17 17:55	10/12/17 20:48	7100297	CSW
Mercury	ND	0.0005	0.00004	mg/L	EPA 7470A		1	10/10/17 14:20	10/10/17 18:07	7100246	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

November 03, 2017

Attention: Mr. Joju Abraham

Report No.: AAJ0129

Project: CCR Event

Client ID: GWA-7

Lab Number ID: AAJ0129-02

Date/Time Sampled: 10/4/2017 2:40:00PM

Date/Time Received: 10/5/2017 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Metals, Dissolved											
Antimony	0.0008	0.0030	0.0006	mg/L	EPA 6020B	J	1	10/11/17 17:55	10/12/17 21:05	7100297	CSW
Arsenic	0.0058	0.0050	0.0005	mg/L	EPA 6020B		1	10/11/17 17:55	10/12/17 21:05	7100297	CSW
Barium	0.0960	0.0100	0.0004	mg/L	EPA 6020B		1	10/11/17 17:55	10/12/17 21:05	7100297	CSW
Beryllium	0.0002	0.0030	0.00009	mg/L	EPA 6020B	J	1	10/11/17 17:55	10/12/17 21:05	7100297	CSW
Boron	21.7	2.00	0.298	mg/L	EPA 6020B		50	10/11/17 17:55	10/12/17 20:43	7100297	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	10/11/17 17:55	10/12/17 21:05	7100297	CSW
Calcium	7.95	0.500	0.0404	mg/L	EPA 6020B		1	10/11/17 17:55	10/12/17 21:05	7100297	CSW
Chromium	0.0319	0.0100	0.0005	mg/L	EPA 6020B		1	10/11/17 17:55	10/12/17 21:05	7100297	CSW
Cobalt	0.0051	0.0100	0.0003	mg/L	EPA 6020B	J	1	10/11/17 17:55	10/12/17 21:05	7100297	CSW
Lead	0.0003	0.0050	0.00007	mg/L	EPA 6020B	J	1	10/11/17 17:55	10/12/17 21:05	7100297	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	10/11/17 17:55	10/12/17 21:05	7100297	CSW
Selenium	0.0230	0.0100	0.0018	mg/L	EPA 6020B		1	10/11/17 17:55	10/12/17 21:05	7100297	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	10/11/17 17:55	10/12/17 21:05	7100297	CSW
Vanadium	0.319	0.0100	0.0012	mg/L	EPA 6020B		1	10/11/17 17:55	10/12/17 21:05	7100297	CSW
Zinc	0.0062	0.0100	0.0012	mg/L	EPA 6020B	J	1	10/11/17 17:55	10/12/17 21:05	7100297	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	10/11/17 17:55	10/12/17 21:05	7100297	CSW
Mercury	ND	0.0005	0.00004	mg/L	EPA 7470A		1	10/10/17 14:20	10/10/17 18:10	7100246	MTC



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November 03, 2017

Report No.: AAJ0129

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100246 - EPA 7470A											
Blank (7100246-BLK1)						Prepared & Analyzed: 10/10/17					
Mercury	ND	0.0005	0.00004	mg/L							
LCS (7100246-BS1)						Prepared & Analyzed: 10/10/17					
Mercury	0.0024	0.0005	0.00004	mg/L	2.5000E-3		97	80-120			
Matrix Spike (7100246-MS1)						Source: AAJ0129-01 Prepared & Analyzed: 10/10/17					
Mercury	0.0021	0.0005	0.00004	mg/L	2.5000E-3	ND	83	75-125			
Matrix Spike Dup (7100246-MSD1)						Source: AAJ0129-01 Prepared & Analyzed: 10/10/17					
Mercury	0.0021	0.0005	0.00004	mg/L	2.5000E-3	ND	82	75-125	1	20	
Post Spike (7100246-PS1)						Source: AAJ0129-01 Prepared & Analyzed: 10/10/17					
Mercury	1.43			ug/L	1.6667	-0.0009	86	80-120			
Batch 7100297 - EPA 3005A											
Blank (7100297-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	ND	0.0050	0.00007	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0012	mg/L							
Zinc	ND	0.0100	0.0012	mg/L							
Lithium	ND	0.0500	0.0015	mg/L							



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Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0129

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7100297 - EPA 3005A

LCS (7100297-BS1)

Prepared: 10/11/17 Analyzed: 10/12/17

Antimony	0.101	0.0030	0.0006	mg/L	0.10000		101	80-120			
Arsenic	0.0963	0.0050	0.0005	mg/L	0.10000		96	80-120			
Barium	0.0910	0.0100	0.0004	mg/L	0.10000		91	80-120			
Beryllium	0.100	0.0030	0.00009	mg/L	0.10000		100	80-120			
Boron	1.00	0.0400	0.0060	mg/L	1.0000		100	80-120			
Cadmium	0.0972	0.0010	0.0001	mg/L	0.10000		97	80-120			
Calcium	0.969	0.500	0.0404	mg/L	1.0000		97	80-120			
Chromium	0.0998	0.0100	0.0005	mg/L	0.10000		100	80-120			
Cobalt	0.0970	0.0100	0.0003	mg/L	0.10000		97	80-120			
Copper	0.0978	0.0250	0.0003	mg/L	0.10000		98	80-120			
Lead	0.0935	0.0050	0.00007	mg/L	0.10000		94	80-120			
Molybdenum	0.0943	0.0100	0.0010	mg/L	0.10000		94	80-120			
Nickel	0.0948	0.0100	0.0005	mg/L	0.10000		95	80-120			
Selenium	0.0970	0.0100	0.0018	mg/L	0.10000		97	80-120			
Silver	0.0971	0.0100	0.0002	mg/L	0.10000		97	80-120			
Thallium	0.0960	0.0010	0.00005	mg/L	0.10000		96	80-120			
Vanadium	0.0980	0.0100	0.0012	mg/L	0.10000		98	80-120			
Zinc	0.104	0.0100	0.0012	mg/L	0.10000		104	80-120			
Lithium	0.0976	0.0500	0.0015	mg/L	0.10000		98	80-120			

Matrix Spike (7100297-MS1)

Source: AAJ0248-19

Prepared: 10/11/17 Analyzed: 10/12/17

Antimony	0.105	0.0030	0.0006	mg/L	0.10000	ND	105	75-125			
Arsenic	0.0961	0.0050	0.0005	mg/L	0.10000	ND	96	75-125			
Barium	0.180	0.0100	0.0004	mg/L	0.10000	ND	180	75-125			QM-02
Beryllium	0.0983	0.0030	0.00009	mg/L	0.10000	ND	98	75-125			
Boron	0.987	0.0400	0.0060	mg/L	1.0000	ND	99	75-125			
Cadmium	0.0961	0.0010	0.0001	mg/L	0.10000	ND	96	75-125			
Calcium	4.45	0.500	0.0404	mg/L	1.0000	ND	445	75-125			QM-02
Chromium	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125			
Cobalt	0.144	0.0100	0.0003	mg/L	0.10000	ND	144	75-125			QM-02
Copper	0.102	0.0250	0.0003	mg/L	0.10000	ND	102	75-125			
Lead	0.0949	0.0050	0.00007	mg/L	0.10000	ND	95	75-125			
Molybdenum	0.0985	0.0100	0.0010	mg/L	0.10000	ND	98	75-125			
Nickel	0.0967	0.0100	0.0005	mg/L	0.10000	ND	97	75-125			
Selenium	0.101	0.0100	0.0018	mg/L	0.10000	ND	101	75-125			
Silver	0.101	0.0100	0.0002	mg/L	0.10000	ND	101	75-125			
Thallium	0.0983	0.0010	0.00005	mg/L	0.10000	ND	98	75-125			
Vanadium	0.102	0.0100	0.0012	mg/L	0.10000	ND	102	75-125			
Zinc	0.104	0.0100	0.0012	mg/L	0.10000	ND	104	75-125			
Lithium	0.0972	0.0500	0.0015	mg/L	0.10000	ND	97	75-125			



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Georgia Power
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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Report No.: AAJ0129

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7100297 - EPA 3005A											
Matrix Spike Dup (7100297-MSD1)			Source: AAJ0248-19			Prepared: 10/11/17 Analyzed: 10/12/17					
Antimony	0.105	0.0030	0.0006	mg/L	0.10000	ND	105	75-125	0.2	20	
Arsenic	0.0979	0.0050	0.0005	mg/L	0.10000	ND	98	75-125	2	20	
Barium	0.186	0.0100	0.0004	mg/L	0.10000	ND	186	75-125	3	20	QM-02
Beryllium	0.0995	0.0030	0.00009	mg/L	0.10000	ND	99	75-125	1	20	
Boron	0.970	0.0400	0.0060	mg/L	1.0000	ND	97	75-125	2	20	
Cadmium	0.0980	0.0010	0.0001	mg/L	0.10000	ND	98	75-125	2	20	
Calcium	4.55	0.500	0.0404	mg/L	1.0000	ND	455	75-125	2	20	QM-02
Chromium	0.105	0.0100	0.0005	mg/L	0.10000	ND	105	75-125	3	20	
Cobalt	0.146	0.0100	0.0003	mg/L	0.10000	ND	146	75-125	2	20	QM-02
Copper	0.102	0.0250	0.0003	mg/L	0.10000	ND	102	75-125	0.1	20	
Lead	0.0958	0.0050	0.00007	mg/L	0.10000	ND	96	75-125	1	20	
Molybdenum	0.100	0.0100	0.0010	mg/L	0.10000	ND	100	75-125	2	20	
Nickel	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125	4	20	
Selenium	0.0973	0.0100	0.0018	mg/L	0.10000	ND	97	75-125	3	20	
Silver	0.101	0.0100	0.0002	mg/L	0.10000	ND	101	75-125	0.09	20	
Thallium	0.0985	0.0010	0.00005	mg/L	0.10000	ND	98	75-125	0.2	20	
Vanadium	0.107	0.0100	0.0012	mg/L	0.10000	ND	107	75-125	5	20	
Zinc	0.102	0.0100	0.0012	mg/L	0.10000	ND	102	75-125	2	20	
Lithium	0.0994	0.0500	0.0015	mg/L	0.10000	ND	99	75-125	2	20	
Post Spike (7100297-PS1)											
Source: AAJ0248-19			Prepared: 10/11/17 Analyzed: 10/12/17								
Antimony	94.3			ug/L	100.00	0.00	94	80-120			
Arsenic	95.9			ug/L	100.00	0.00	96	80-120			
Barium	182			ug/L	100.00	0.00	182	80-120			QM-02
Beryllium	99.6			ug/L	100.00	0.00	100	80-120			
Boron	974			ug/L	1000.0	0.00	97	80-120			
Cadmium	94.3			ug/L	100.00	0.00	94	80-120			
Calcium	4460			ug/L	1000.0	0.00	446	80-120			QM-02
Chromium	103			ug/L	100.00	0.00	103	80-120			
Cobalt	145			ug/L	100.00	0.00	145	80-120			QM-02
Copper	103			ug/L	100.00	0.00	103	80-120			
Lead	92.8			ug/L	100.00	0.00	93	80-120			
Molybdenum	97.2			ug/L	100.00	0.00	97	80-120			
Nickel	99.8			ug/L	100.00	0.00	100	80-120			
Selenium	95.3			ug/L	100.00	0.00	95	80-120			
Silver	99.1			ug/L	100.00	0.00	99	80-120			
Thallium	96.0			ug/L	100.00	0.00	96	80-120			
Vanadium	104			ug/L	100.00	0.00	104	80-120			
Zinc	104			ug/L	100.00	0.00	104	80-120			
Lithium	101			ug/L	100.00	0.00	101	80-120			



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Atlanta GA, 30339

Attention: Mr. Joju Abraham

November 03, 2017

Legend

Definition of Laboratory Terms

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

Sample Information

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

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

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

Definition of Qualifiers

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

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

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



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

CHAIN OF CUSTODY RECORD

PAGE: _____ OF _____

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239		REPORT TO: Lauren Petty CC: Maria Padilla Heath McCorkle PO #: laburch@southernco.com		PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase 2 CCR & State D&O	
Collection DATE	Collection TIME	MATRIX CODE*	C O R M A B	SAMPLE IDENTIFICATION	ANALYSIS REQUESTED
10-4-17	1310	GW	X	GWC-4	Metals App. III & IV (EPA 6020/7470) *FIELD Filtered Metals (See attached) EPA 6020 Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SM-846 9315/9320)
10-4-17	1440	GW	X	GWA-7	
CONTAINERS → # of CONTAINERS REQUESTED					
CONTAINER TYPE PRESERVATION					
P - PLASTIC 1 - HCl, ≤6°C A - AMBER GLASS 2 - H ₂ SO 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 ₂ S ₂ O 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					
L A B I D N U M B E R → 1 2					
SAMPLED BY AND TITLE: D. PUPPIA (cc)				DATE/TIME: 5-4-17 1446	
RECEIVED BY:				DATE/TIME:	
RELINQUISHED BY:				DATE/TIME: 10-8-17 0800	
RELINQUISHED BY:				DATE/TIME:	
SAMPLE SHIPPED VIA: UPS				COURIER:	
Temperature: Min: Max:				Other: FS	
Seal: Intact Broken Not Present				Color ID:	
LAB #: AATJ 0129				FOR LAB USE ONLY	
Tracking #:				Entered into LIMS:	

Plant Kraft - Grumman Rd CCR Phase 2 CCR & State



Sample Condition Upon Receipt

Client Name: GIA power Project # AAJ0129

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-4 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 0.1 Biological Tissue Is Frozen: Yes No
Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/05/17 MK

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

Client Notification/ Resolution: _____ Date/Time: _____ Field Data Required? Y / N
Person Contacted: _____
Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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



PACE ANALYTICAL SERVICES, LLC.

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

LOG-IN CHECKLIST

Printed: 10/6/2017 10:05:42AM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 10/05/17 08:00

Work Order: AAJ0129

Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 2

#Containers: 2

Minimum Temp(C): 0.1

Maximum Temp(C): 0.1

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:

Product Name: Low-Flow System

Date: 2018-01-09 16:56:48

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Plant Kraft- Grumman Rd
Site Name Plant Kraft -Grumman Rd
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369807
Turbidity Make/Model Have 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 21.1 ft

Pump placement from TOC 16.1 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 21.1 ft
Screen Length 10 ft
Depth to Water 6.76 ft

Pumping Information:

Final Pumping Rate 225 mL/min
Total System Volume 0.1841782 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.08 in
Total Volume Pumped 6.7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	16:35:11	600.46	19.82	6.45	3311.87	957.00	7.00	0.05	-117.16
Last 5	16:40:11	900.46	19.88	6.44	3278.84	1000.00	7.00	0.04	-122.24
Last 5	16:45:11	1200.46	19.93	6.43	3217.57	1000.00	7.10	0.05	-123.17
Last 5	16:50:11	1500.46	19.90	6.43	3228.45	923.00	7.10	0.05	-123.83
Last 5	16:55:11	1800.46	19.90	6.43	3215.04	879.00	7.10	0.05	-124.29
Variance 0			0.05	-0.01	-61.26			0.01	-0.93
Variance 1			-0.02	-0.00	10.87			0.00	-0.66
Variance 2			0.00	-0.00	-13.41			-0.00	-0.47

Notes

Sunny. Sample time :1700, field filtered sample taken

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-09 11:28:20

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Plant Kraft- Grumman Rd
Site Name Plant Kraft -Grumman Rd
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369807
Turbidity Make/Model Have 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 20.9 ft

Pump placement from TOC 15.9 ft

Well Information:

Well ID GWA-8
Well diameter 2 in
Well Total Depth 20.9 ft
Screen Length 10 ft
Depth to Water 8.91 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.1832855 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12 in
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:05:02	2400.18	19.94	4.47	313.69	7.82	9.90	0.21	121.12
Last 5	11:10:02	2700.18	19.98	4.45	324.49	6.89	9.90	0.18	71.14
Last 5	11:15:02	3000.18	19.94	4.45	325.68	6.10	9.90	0.18	52.19
Last 5	11:20:02	3300.18	20.22	4.42	329.65	5.06	9.90	0.16	35.16
Last 5	11:25:02	3600.18	20.52	4.44	329.86	4.90	9.90	0.16	35.26
Variance 0			-0.04	-0.00	1.19			0.00	-18.95
Variance 1			0.28	-0.03	3.97			-0.02	-17.03
Variance 2			0.30	0.02	0.21			-0.00	0.10

Notes

Cloudy, sample time -1125

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-10 15:12:58

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Plant Kraft- Grumman Rd
Site Name Plant Kraft -Grumman Rd
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369807
Turbidity Make/Model Have 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.1 ft
Screen Length 10 ft
Depth to Water 19.01 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.4 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:50:28	1500.02	22.35	5.66	419.94	0.55	19.20	0.14	45.54
Last 5	14:55:28	1800.02	22.38	5.69	420.03	0.61	19.20	0.13	45.74
Last 5	15:00:28	2100.02	22.35	5.67	421.39	0.58	19.20	0.14	47.13
Last 5	15:05:28	2400.02	22.34	5.69	418.74	0.50	19.20	0.14	46.71
Last 5	15:10:28	2700.02	22.31	5.67	420.20	0.39	19.20	0.15	46.23
Variance 0			-0.03	-0.02	1.36			0.00	1.39
Variance 1			-0.02	0.02	-2.65			-0.00	-0.42
Variance 2			-0.03	-0.02	1.45			0.01	-0.48

Notes

Cloudy, sample time :1510, dup-2 here, 2nd rad

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-10 14:11:05

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 20.73"
Longitude -81° -11' -1.88"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 33 ft

Pump placement from TOC 28.60 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 31.10 ft
Screen Length 5 ft
Depth to Water 16.53 ft

Pumping Information:

Final Pumping Rate 225 mL/min
Total System Volume 0.237293 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 7.875 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 10
Last 5	13:50:00	600.02	20.33	5.43	69.99	9.20	16.70	0.12	87.46
Last 5	13:55:00	900.01	20.44	5.40	69.76	6.73	16.70	0.11	87.70
Last 5	14:00:00	1200.01	20.41	5.37	69.95	6.04	16.70	0.09	90.19
Last 5	14:05:00	1500.00	20.48	5.34	70.42	4.77	16.70	0.09	91.63
Last 5	14:10:00	1800.02	20.42	5.31	70.06	4.23	16.70	0.08	92.24
Variance 0			-0.03	-0.03	0.19			-0.01	2.49
Variance 1			0.07	-0.03	0.47			-0.01	1.43
Variance 2			-0.06	-0.03	-0.36			-0.01	0.61

Notes

Sampled at 1410. 66F cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-10 13:32:40

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Plant Kraft- Grumman Rd
Site Name Plant Kraft -Grumman Rd
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369807
Turbidity Make/Model Have 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 22.8 ft

Pump placement from TOC 17.8 ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 22.8 ft
Screen Length 10 ft
Depth to Water 20.26 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1917661 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.68 in
Total Volume Pumped 6.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:10:53	1500.02	20.95	6.52	466.32	2.10	20.40	0.25	-93.23
Last 5	13:15:53	1800.02	21.10	6.60	504.00	1.99	20.40	3.15	-87.89
Last 5	13:20:53	2100.02	21.01	6.61	491.16	2.19	20.40	0.33	-97.76
Last 5	13:25:53	2400.02	21.04	6.62	494.33	1.87	20.40	0.28	-97.82
Last 5	13:30:54	2700.26	21.10	6.64	502.79	1.34	20.40	0.27	-98.83
Variance 0			-0.09	0.01	-12.84			-2.81	-9.88
Variance 1			0.02	0.01	3.17			-0.05	-0.06
Variance 2			0.07	0.02	8.46			-0.01	-1.01

Notes

Cloudy , sample time : 1330

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-11 14:52:30

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 26.44"
Longitude -81° -10' -56.96"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 29 ft

Pump placement from TOC 24 ft

Well Information:

Well ID GWC-4
Well diameter 2 in
Well Total Depth 26.50 ft
Screen Length 5 ft
Depth to Water 14.74 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2194393 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 10
Last 5	14:30:56	1799.98	21.61	6.01	1294.04	398.00	16.00	0.29	117.97
Last 5	14:35:56	2099.98	21.64	6.02	1299.60	497.00	16.00	0.24	116.30
Last 5	14:40:56	2399.97	21.64	6.01	1300.04	465.00	16.00	0.21	114.89
Last 5	14:45:56	2699.98	21.63	5.99	1306.18	412.00	16.00	0.21	113.89
Last 5	14:50:56	2999.97	21.66	5.98	1316.76	424.00	16.00	0.20	112.65
Variance 0			0.00	-0.01	0.44			-0.03	-1.41
Variance 1			-0.01	-0.02	6.14			-0.00	-1.01
Variance 2			0.03	-0.01	10.58			-0.01	-1.24

Notes

Sampled at 1450. 65F light rain.

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-10 11:46:51

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Plant Kraft- Grumman Rd
Site Name Plant Kraft -Grumman Rd
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369807
Turbidity Make/Model Have 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 26.7 ft

Pump placement from TOC 21.7 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 10 ft
Depth to Water 10.65 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2091734 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 10.2 in
Total Volume Pumped 36 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:25:44	9608.83	21.01	5.84	725.81	7.77	10.50	0.07	-136.76
Last 5	11:30:44	9908.83	21.04	5.84	719.87	7.68	11.50	0.06	-136.61
Last 5	11:35:44	10208.83	21.05	5.83	720.28	7.23	11.50	0.07	-135.79
Last 5	11:40:43	10508.73	20.97	5.84	728.17	6.71	11.50	0.07	-136.86
Last 5	11:45:43	10808.73	20.97	5.83	722.47	6.17	11.50	0.07	-136.09
Variance 0			0.01	-0.01	0.41			0.00	0.82
Variance 1			-0.08	0.01	7.89			0.01	-1.07
Variance 2			-0.00	-0.00	-5.71			-0.00	0.76

Notes

Sample time: 1145, cloudy ,FB-2 here at 910

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-09 15:52:26

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Plant Kraft- Grumman Rd
Site Name Plant Kraft -Grumman Rd
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369807
Turbidity Make/Model Have 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 22.8 ft

Pump placement from TOC 17.8 ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 22.8 ft
Screen Length 10 ft
Depth to Water 8.38 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.1917661 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.84 in
Total Volume Pumped 36 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	15:30:53	9600.38	20.67	5.41	654.44	5.43	8.70	0.07	-79.52
Last 5	15:35:53	9900.38	20.76	5.42	653.22	5.32	8.70	0.07	-80.45
Last 5	15:40:53	10200.38	20.75	5.41	652.45	5.44	8.70	0.07	-80.74
Last 5	15:45:53	10500.38	20.79	5.41	655.02	5.55	8.70	0.07	-80.38
Last 5	15:50:53	10800.38	20.80	5.40	655.05	5.12	8.70	0.07	-81.12
Variance 0			-0.01	-0.00	-0.77			0.00	-0.29
Variance 1			0.04	0.00	2.57			-0.00	0.35
Variance 2			0.01	-0.01	0.03			-0.00	-0.74

Notes

Sunny, 3 hour purge-NTU above 5 but below 10. Sample time: 1550

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-10 16:51:06

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Plant Kraft- Grumman Rd
Site Name Plant Kraft -Grumman Rd
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369807
Turbidity Make/Model Have 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25.7 ft

Pump placement from TOC 20.5 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 25.7 ft
Screen Length 10 ft
Depth to Water 8.85 ft

Pumping Information:

Final Pumping Rate 75 mL/min
Total System Volume 0.20471 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	16:30:07	1800.02	20.35	3.74	264.12	4.04	15.50	0.37	403.56
Last 5	16:35:07	2100.02	20.30	3.76	264.01	4.25	16.40	0.40	377.32
Last 5	16:40:07	2400.14	20.31	3.78	263.47	4.77	17.40	0.41	391.62
Last 5	16:45:07	2700.14	20.33	3.77	263.61	4.60	18.60	0.42	382.08
Last 5	16:50:07	3000.14	20.44	3.80	262.56	3.95	20.00	0.43	367.46
Variance 0			0.00	0.02	-0.53			0.02	14.30
Variance 1			0.02	-0.01	0.14			0.01	-9.54
Variance 2			0.11	0.03	-1.05			0.00	-14.62

Notes

Well purged dry. Will allow for recharge and sample on 1-11-18

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-11 12:45:43

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 29.96"
Longitude -81° -11' -4.32"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 20.00 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 22.50 ft
Screen Length 5 ft
Depth to Water 14.30 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 10.12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 10
Last 5	12:10:01	5699.92	22.36	5.25	685.02	4.06	15.80	2.11	193.83
Last 5	12:15:01	5999.91	21.70	5.28	712.66	4.09	15.80	1.92	194.33
Last 5	12:20:01	6299.91	21.55	5.26	743.47	3.81	15.80	1.78	192.98
Last 5	12:25:01	6599.91	21.64	5.25	769.86	3.25	15.80	1.99	192.75
Last 5	12:30:01	6899.90	21.10	5.27	796.74	3.33	15.80	1.82	191.96
Variance 0			-0.15	-0.01	30.80			-0.14	-1.34
Variance 1			0.09	-0.01	26.39			0.21	-0.23
Variance 2			-0.55	0.02	26.88			-0.17	-0.79

Notes

1 of 2 data log. No sample. Insitu app froze.

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-11 13:16:11

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 29.93"
Longitude -81° -11' -4.38"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 20 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 22.5 ft
Screen Length 5 ft
Depth to Water 14.3 ft

Pumping Information:

Final Pumping Rate 0 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 130 in
Total Volume Pumped 21.19 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 10
Last 5	13:03:50	300.09	22.04	5.18	1002.35	9.94	15.80	0.18	194.06
Last 5	13:08:50	600.01	21.95	5.18	1024.29	5.73	15.80	0.18	193.75
Last 5	13:13:50	900.01	22.03	5.18	1045.23	4.39	15.80	0.17	193.28
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.09	0.00	21.94			-0.00	-0.31
Variance 2			0.07	-0.01	20.93			-0.01	-0.47

Notes

Page 2 of 2 data log. Collected at 1313 67F cloudy

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-11 13:53:32

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Plant Kraft- Grumman Rd
Site Name Plant Kraft -Grumman Rd
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369807
Turbidity Make/Model Have 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 26.7 ft

Pump placement from TOC 21.7 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 10 ft
Depth to Water 12.71 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.2091734 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.68 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:30:08	1200.02	21.49	3.91	1422.70	14.00	13.10	0.26	351.70
Last 5	13:35:08	1499.99	21.65	3.92	1422.18	12.00	13.10	0.23	307.34
Last 5	13:40:08	1799.99	21.73	3.94	1420.18	6.01	13.10	0.20	241.59
Last 5	13:45:08	2099.99	21.71	3.95	1420.61	5.05	13.10	0.18	199.36
Last 5	13:50:08	2399.99	21.69	3.96	1418.49	4.92	13.10	0.17	189.21
Variance 0			0.08	0.02	-2.00			-0.03	-65.75
Variance 1			-0.02	0.01	0.42			-0.02	-42.23
Variance 2			-0.02	0.01	-2.12			-0.01	-10.15

Notes

Cloudy, sample time :1350

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-10 16:00:30

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 24.17"
Longitude -81° -11' -2.93"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 26.3 ft

Well Information:

Well ID GWC-13
Well diameter 2 in
Well Total Depth 28.85 ft
Screen Length 5 ft
Depth to Water 13.90 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 80.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 10
Last 5	15:35:03	2699.97	20.88	5.20	78.83	9.75	15.00	0.07	94.65
Last 5	15:40:03	2999.97	20.97	5.20	77.01	9.78	15.00	0.07	94.80
Last 5	15:45:03	3299.96	20.82	5.19	77.63	8.67	15.00	0.07	95.47
Last 5	15:50:03	3599.95	20.74	5.18	77.31	9.85	15.00	0.06	96.43
Last 5	15:55:03	3899.95	20.72	5.17	76.91	9.40	15.00	0.07	96.27
Variance 0			-0.15	-0.01	0.61			-0.00	0.68
Variance 1			-0.09	-0.01	-0.32			-0.00	0.96
Variance 2			-0.01	-0.00	-0.40			0.00	-0.16

Notes

Sampled at 1555. 65F cloudy. Well historically requires large purge volume to achieve representative sample. Began purging at 08:15.

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-09 12:21:47

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 18"
Longitude -81° -11' -1.28"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 22 ft

Well Information:

Well ID GWC-14
Well diameter 2 in
Well Total Depth 27.05 ft
Screen Length 5 ft
Depth to Water 19.33 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 100
Last 5	12:05:00	300.09	20.39	4.94	888.65	2.28	19.60	0.34	131.55
Last 5	12:10:00	600.02	20.71	5.61	887.06	3.43	19.60	0.34	133.72
Last 5	12:15:00	900.01	20.71	5.59	891.67	3.23	19.60	0.34	134.52
Last 5	12:20:00	1200.01	20.71	5.59	893.37	2.91	19.60	0.34	134.44
Last 5									
Variance 0			0.32	0.67	-1.58			0.00	2.16
Variance 1			-0.00	-0.02	4.60			0.01	0.80
Variance 2			0.00	0.00	1.70			-0.01	-0.08

Notes

Sampled at 1220. 65F cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-09 14:51:17

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 16.4"
Longitude -81° -10' -58.41"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 29 ft

Pump placement from TOC 24.3 ft

Well Information:

Well ID GWC-15
Well diameter 2 in
Well Total Depth 26.8 ft
Screen Length 5 ft
Depth to Water 19.25 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2194393 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 24 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10	+/- 0
Last 5	14:30:01	5699.91	21.75	6.58	873.75	8.32	19.50	0.08	89.11
Last 5	14:35:01	5999.90	21.70	6.58	876.75	6.81	19.50	0.08	87.89
Last 5	14:40:01	6299.90	21.73	6.58	876.95	5.86	19.50	0.08	86.99
Last 5	14:45:01	6599.89	21.71	6.57	870.05	5.72	19.50	0.07	86.17
Last 5	14:50:01	6899.88	21.72	6.57	866.44	4.98	19.50	0.07	85.17
Variance 0			0.03	0.00	0.21			-0.00	-0.90
Variance 1			-0.02	-0.01	-6.91			-0.00	-0.82
Variance 2			0.01	-0.00	-3.60			-0.00	-1.00

Notes

Sampled at 1450 67F cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-10 11:31:33

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 17.2"
Longitude -81° -10' -55.23"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 31 ft

Pump placement from TOC 25.6 ft

Well Information:

Well ID GWC-16
Well diameter 2 in
Well Total Depth 28.10 ft
Screen Length 5 ft
Depth to Water 20.58 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2283661 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 36 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 10
Last 5	11:10:12	8999.83	22.08	5.99	1354.59	7.26	20.90	0.35	145.68
Last 5	11:15:12	9299.87	22.17	5.99	1349.39	7.15	20.90	0.35	145.33
Last 5	11:20:12	9599.86	22.08	5.99	1350.74	8.62	20.90	0.35	145.42
Last 5	11:25:12	9899.86	22.09	5.99	1354.20	6.85	20.90	0.35	145.45
Last 5	11:30:12	10199.85	22.09	5.99	1356.76	6.44	20.90	0.34	144.89
Variance 0			-0.10	0.00	1.35			-0.00	0.09
Variance 1			0.01	-0.00	3.46			-0.00	0.03
Variance 2			-0.00	0.01	2.55			-0.00	-0.56

Notes

Sampled at 1130. 64F Cloudy

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-11 12:21:40

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Plant Kraft- Grumman Rd
Site Name Plant Kraft -Grumman Rd
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369807
Turbidity Make/Model Have 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 23 ft

Pump placement from TOC 18 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 23 ft
Screen Length 10 ft
Depth to Water 6.01 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12.8 in
Total Volume Pumped 21 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:00:02	7199.93	20.97	4.36	4192.89	5.93	7.40	0.08	51.85
Last 5	12:05:02	7499.93	20.92	4.37	4173.60	5.01	7.40	0.08	49.88
Last 5	12:10:02	7799.93	21.02	4.35	4177.70	4.99	7.40	0.08	60.46
Last 5	12:15:02	8099.93	20.82	4.39	4143.39	3.81	7.40	0.08	44.95
Last 5	12:20:02	8399.93	20.57	4.40	4106.91	3.37	7.40	0.08	42.15
Variance 0			0.10	-0.02	4.10			-0.00	10.58
Variance 1			-0.20	0.04	-34.31			-0.00	-15.51
Variance 2			-0.25	0.01	-36.48			0.00	-2.80

Notes

Cloudy. Sample time :1220

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-10 13:07:15

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 19.5"
Longitude -81° -10' -55.15"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 22.40 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 24.90 ft
Screen Length 5 ft
Depth to Water 21.00 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 5.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 10
Last 5	12:45:24	1200.01	21.11	6.21	678.69	3.42	21.30	0.36	128.70
Last 5	12:50:24	1500.00	21.49	6.21	674.24	4.46	21.30	0.24	128.24
Last 5	12:55:24	1799.99	21.43	6.22	673.35	4.26	21.30	0.27	127.71
Last 5	13:00:24	2099.99	21.51	6.21	674.07	4.70	21.30	0.25	127.51
Last 5	13:05:24	2399.98	21.56	6.21	667.65	4.07	21.30	0.20	126.65
Variance 0			-0.06	0.01	-0.89			0.04	-0.53
Variance 1			0.08	-0.01	0.72			-0.02	-0.19
Variance 2			0.05	0.00	-6.41			-0.05	-0.86

Notes

Sampled at 1305. 65F cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-09 16:08:49

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 17.13"
Longitude -81° -10' -55.24"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 21.85 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 23.85 ft
Screen Length 5 ft
Depth to Water 20.50 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 6.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 10
Last 5	15:45:01	1200.00	22.09	6.05	241.06	9.76	20.60	1.70	85.20
Last 5	15:50:01	1500.00	22.10	6.08	281.98	7.02	20.60	1.59	88.11
Last 5	15:55:01	1800.00	22.03	6.12	307.22	5.62	20.60	1.48	89.45
Last 5	16:00:01	2099.99	22.02	6.12	314.48	4.37	20.60	1.40	91.35
Last 5	16:05:01	2399.98	21.99	6.14	318.28	3.25	20.60	1.39	91.13
Variance 0			-0.06	0.03	25.24			-0.11	1.35
Variance 1			-0.01	0.00	7.26			-0.08	1.89
Variance 2			-0.03	0.03	3.80			-0.01	-0.22

Notes

Sampled at 1605. 67F Mostly Cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-11 09:58:33

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 33.52"
Longitude -81° -11' -5.39"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 20 ft

Pump placement from TOC 15.50 ft

Well Information:

Well ID GWC-22
Well diameter 2 in
Well Total Depth 17.70 ft
Screen Length 5 ft
Depth to Water 8.11 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.1792685 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 12.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 10
Last 5	09:36:22	2699.97	18.96	5.25	668.76	9.32	8.30	0.11	165.18
Last 5	09:41:22	2999.96	18.97	5.24	666.81	7.84	8.30	0.12	166.97
Last 5	09:46:22	3299.96	19.04	5.23	668.53	7.38	8.30	0.11	168.48
Last 5	09:51:22	3599.95	19.05	5.23	674.21	6.24	8.30	0.10	170.01
Last 5	09:56:22	3899.95	19.13	5.22	681.38	4.76	8.30	0.09	172.04
Variance 0			0.07	-0.01	1.72			-0.01	1.51
Variance 1			0.01	-0.00	5.68			-0.01	1.53
Variance 2			0.08	-0.01	7.17			-0.01	2.03

Notes

Sampled at 0955. 66F light rain.

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-10 17:15:21

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name Phase 2 CCR & State D&O
Site Name Grumman Road
Latitude 32° 8' 35.47"
Longitude -81° -10' -59.81"
Sonde SN 466058
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter in
Tubing Length ft
Pump placement from TOC ft

Well Information:

Well ID Clifton Seep
Well diameter in
Well Total Depth ft
Screen Length ft
Depth to Water ft

Pumping Information:

Final Pumping Rate 0 mL/min
Total System Volume 0.09 L
Calculated Sample Rate 120 sec
Stabilization Drawdown 0 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10	+/- 0
Last 5	17:14:01	120.03	15.66	8.20	5822.08	83.00	--	12.43	204.89
Last 5									
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.00	0.00	0.00			0.00	0.00
Variance 2			0.00	0.00	0.00			0.00	0.00

Notes

Shallow flow, hard to collect sample. Area flooded due to recent weather events.

Grab Samples



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: ABA0303

January 25, 2018

Project: CCR Event

Project #:Plant Kraft

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

Approved:

A handwritten signature in black ink that reads "Betsy McDaniel" written over a horizontal line.

Project Manager

This report may not be reproduced, except in full, without written approval from Pace Analytical Services, LLC.
All test results relate only to the samples analyzed.



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 25, 2018

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-15	ABA0303-01	Ground Water	01/09/18 14:50	01/11/18 12:30
GWA-8	ABA0303-02	Ground Water	01/09/18 11:25	01/11/18 12:30
GWA-7	ABA0303-03	Ground Water	01/09/18 17:00	01/11/18 12:30
GWC-16	ABA0303-04	Ground Water	01/10/18 11:30	01/11/18 12:30
GWC-20	ABA0303-05	Ground Water	01/10/18 13:05	01/11/18 12:30
GWC-3	ABA0303-06	Ground Water	01/10/18 13:30	01/11/18 12:30



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 25, 2018

Case Narrative

The Radium analysis by methods EPA 9315/9320 and Tritium analysis by method EPA 906.0 were performed by Pace-Pittsburgh, 1638 Roseytown Road - Suites 2, 3, 4, Greensburg PA 15601. The Pace-Pittsburgh lab contact is Jacquelyn Collins at 724-850-5612.

The Methane analysis by RSK-175 was performed by Pace Analytical Energy Services, LLC, 220 William Pitt Way, Pittsburgh, PA 15238. The lab contact is Lauren McGrath at Telephone 412-826-5245. Please see the included subcontractor reports.



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
 110 Technology Parkway, Peachtree Corners, GA 30092
 (770) 734-4200 FAX (770) 734-4201

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 25, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0303
Client ID: GWC-15
Date/Time Sampled: 1/9/2018 2:50:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: ABA0303-01
Date/Time Received: 1/11/2018 12:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	390	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	390	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	520	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Total Organic Carbon	23.3	1.0	0.05	mg/L	EPA 9060A		1	01/12/18 14:30	01/12/18 16:29	8010303	FDS
Inorganic Anions											
Chloride	5.7	0.25	0.02	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 15:28	8010333	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 15:28	8010333	MWB
Sulfate	84	10	0.17	mg/L	EPA 300.0		10	01/15/18 10:51	01/20/18 11:47	8010333	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Arsenic	0.0731	0.0050	0.0005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Barium	0.0431	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Boron	1.35	0.0400	0.0060	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Calcium	135	25.0	2.02	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 19:06	8010279	CSW
Chromium	0.0012	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Iron	0.112	0.0400	0.0043	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Magnesium	23.1	2.50	0.314	mg/L	EPA 6020B		50	01/12/18 16:05	01/19/18 13:11	8010279	CSW
Molybdenum	0.106	0.0100	0.0010	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Potassium	14.4	5.00	0.824	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 19:06	8010279	CSW
Selenium	0.0019	0.0100	0.0018	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Sodium	9.15	0.100	0.0135	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Vanadium	0.0021	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:00	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 17:28	8010324	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

January 25, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0303

Project: CCR Event

Client ID: GWA-8

Lab Number ID: ABA0303-02

Date/Time Sampled: 1/9/2018 11:25:00AM

Date/Time Received: 1/11/2018 12:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	118	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Total Organic Carbon	4.6	1.0	0.05	mg/L	EPA 9060A		1	01/12/18 14:30	01/12/18 16:49	8010303	FDS
Inorganic Anions											
Chloride	13	0.25	0.02	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 16:30	8010333	MWB
Fluoride	0.21	0.30	0.03	mg/L	EPA 300.0	J	1	01/15/18 10:51	01/15/18 16:30	8010333	MWB
Sulfate	120	10	0.17	mg/L	EPA 300.0		10	01/15/18 10:51	01/20/18 12:09	8010333	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Arsenic	0.0009	0.0050	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Barium	0.0574	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Beryllium	0.0002	0.0030	0.00009	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Boron	0.123	0.0400	0.0060	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Calcium	23.2	5.00	2.02	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 19:29	8010279	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Cobalt	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Iron	4.85	0.0400	0.0043	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Magnesium	3.90	0.500	0.0628	mg/L	EPA 6020B		10	01/12/18 16:05	01/19/18 13:16	8010279	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Potassium	2.19	0.100	0.0165	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Sodium	17.5	5.00	0.674	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 19:29	8010279	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Vanadium	0.0014	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Zinc	0.0035	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:23	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 17:42	8010324	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

January 25, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0303

Project: CCR Event

Client ID: GWA-7

Lab Number ID: ABA0303-03

Date/Time Sampled: 1/9/2018 5:00:00PM

Date/Time Received: 1/11/2018 12:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	1300	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	1300	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	2640	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Total Organic Carbon	411	10.0	0.5	mg/L	EPA 9060A		10	01/12/18 14:30	01/12/18 17:11	8010303	FDS
Inorganic Anions											
Chloride	210	5.0	0.48	mg/L	EPA 300.0		20	01/15/18 10:51	01/20/18 12:32	8010333	MWB
Fluoride	0.46	0.30	0.03	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 16:50	8010333	MWB
Sulfate	45	1.0	0.02	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 16:50	8010333	MWB
Metals, Total											
Antimony	ND	0.0050	0.0030	mg/L	EPA 6020B	R-01	5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Arsenic	0.0091	0.0100	0.0026	mg/L	EPA 6020B	R-01, J	5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Barium	0.0901	0.0500	0.0021	mg/L	EPA 6020B		5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Beryllium	ND	0.0030	0.0005	mg/L	EPA 6020B		5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Boron	13.9	0.200	0.0298	mg/L	EPA 6020B		5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Cadmium	ND	0.0050	0.0007	mg/L	EPA 6020B		5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Calcium	4.68	2.50	0.202	mg/L	EPA 6020B		5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Chromium	0.0283	0.0500	0.0023	mg/L	EPA 6020B	R-01, J	5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Cobalt	0.0053	0.0500	0.0013	mg/L	EPA 6020B	R-01, J	5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Iron	1.41	0.200	0.0214	mg/L	EPA 6020B		5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Lead	0.0098	0.0050	0.0003	mg/L	EPA 6020B	R-01	5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Magnesium	1.45	0.250	0.0314	mg/L	EPA 6020B		5	01/12/18 16:05	01/19/18 15:49	8010279	CSW
Molybdenum	ND	0.0100	0.0051	mg/L	EPA 6020B		5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Potassium	12.0	0.500	0.0824	mg/L	EPA 6020B		5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Selenium	ND	0.0500	0.0088	mg/L	EPA 6020B	R-01	5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Sodium	805	25.0	3.37	mg/L	EPA 6020B		250	01/12/18 16:05	01/18/18 23:06	8010279	CSW
Thallium	ND	0.0020	0.0003	mg/L	EPA 6020B	R-01	5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Vanadium	0.194	0.0500	0.0060	mg/L	EPA 6020B		5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Zinc	0.0665	0.0500	0.0060	mg/L	EPA 6020B		5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Lithium	ND	0.250	0.0075	mg/L	EPA 6020B	R-01	5	01/12/18 16:05	01/18/18 23:29	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 17:44	8010324	MTC



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 25, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0303

Project: CCR Event

Client ID: GWC-16

Lab Number ID: ABA0303-04

Date/Time Sampled: 1/10/2018 11:30:00AM

Date/Time Received: 1/11/2018 12:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	103	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	103	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	935	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Total Organic Carbon	24.2	1.0	0.05	mg/L	EPA 9060A		1	01/12/18 14:30	01/12/18 17:56	8010303	FDS
Inorganic Anions											
Chloride	36	12	1.2	mg/L	EPA 300.0		50	01/15/18 10:51	01/20/18 12:54	8010333	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 17:11	8010333	MWB
Sulfate	470	50	0.85	mg/L	EPA 300.0		50	01/15/18 10:51	01/20/18 12:54	8010333	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:35	8010279	CSW
Arsenic	0.0850	0.0050	0.0005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:35	8010279	CSW
Barium	0.0603	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:35	8010279	CSW
Beryllium	0.0001	0.0030	0.00009	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:35	8010279	CSW
Boron	3.68	0.0400	0.0060	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:35	8010279	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:35	8010279	CSW
Calcium	161	25.0	2.02	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 19:40	8010279	CSW
Chromium	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:35	8010279	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:35	8010279	CSW
Iron	0.427	0.0400	0.0043	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:35	8010279	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:35	8010279	CSW
Magnesium	48.3	2.50	0.314	mg/L	EPA 6020B		50	01/12/18 16:05	01/19/18 13:22	8010279	CSW
Molybdenum	0.161	0.0100	0.0010	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:35	8010279	CSW
Potassium	20.2	5.00	0.824	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 19:40	8010279	CSW
Selenium	0.0018	0.0100	0.0018	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:35	8010279	CSW
Sodium	78.3	5.00	0.674	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 19:40	8010279	CSW
Thallium	0.00005	0.0010	0.00005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:35	8010279	CSW
Vanadium	0.0029	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:35	8010279	CSW
Zinc	0.0016	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:35	8010279	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:35	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 17:47	8010324	MTC



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 25, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0303

Project: CCR Event

Client ID: GWC-20

Lab Number ID: ABA0303-05

Date/Time Sampled: 1/10/2018 1:05:00PM

Date/Time Received: 1/11/2018 12:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	194	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	194	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	322	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Total Organic Carbon	18.6	1.0	0.05	mg/L	EPA 9060A		1	01/12/18 14:30	01/12/18 18:37	8010303	FDS
Inorganic Anions											
Chloride	9.7	0.25	0.02	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 17:32	8010333	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 17:32	8010333	MWB
Sulfate	99	10	0.17	mg/L	EPA 300.0		10	01/15/18 10:51	01/20/18 14:43	8010333	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:46	8010279	CSW
Arsenic	0.347	0.0050	0.0005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:46	8010279	CSW
Barium	0.0788	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:46	8010279	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:46	8010279	CSW
Boron	1.79	0.0400	0.0060	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:46	8010279	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:46	8010279	CSW
Calcium	60.1	25.0	2.02	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 19:52	8010279	CSW
Chromium	0.0008	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:46	8010279	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:46	8010279	CSW
Iron	0.129	0.0400	0.0043	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:46	8010279	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:46	8010279	CSW
Magnesium	24.5	2.50	0.314	mg/L	EPA 6020B		50	01/12/18 16:05	01/19/18 13:28	8010279	CSW
Molybdenum	0.229	0.0100	0.0010	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:46	8010279	CSW
Potassium	12.2	5.00	0.824	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 19:52	8010279	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:46	8010279	CSW
Sodium	15.0	5.00	0.674	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 19:52	8010279	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:46	8010279	CSW
Vanadium	0.0026	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:46	8010279	CSW
Zinc	0.0034	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:46	8010279	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:46	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 17:49	8010324	MTC



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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 (770) 734-4200 FAX (770) 734-4201

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 25, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0303

Project: CCR Event

Client ID: GWC-3

Lab Number ID: ABA0303-06

Date/Time Sampled: 1/10/2018 1:30:00PM

Date/Time Received: 1/11/2018 12:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	261	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	261	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	299	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Total Organic Carbon	20.3	1.0	0.05	mg/L	EPA 9060A		1	01/12/18 14:30	01/12/18 19:18	8010303	FDS
Inorganic Anions											
Chloride	2.4	0.25	0.02	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 17:52	8010333	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 17:52	8010333	MWB
Sulfate	15	1.0	0.02	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 17:52	8010333	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Arsenic	0.228	0.0050	0.0005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Barium	0.0461	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Boron	0.697	0.0400	0.0060	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Calcium	66.6	25.0	2.02	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 20:03	8010279	CSW
Chromium	0.0014	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Iron	0.154	0.0400	0.0043	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Magnesium	16.5	2.50	0.314	mg/L	EPA 6020B		50	01/12/18 16:05	01/19/18 13:33	8010279	CSW
Molybdenum	0.0385	0.0100	0.0010	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Potassium	13.0	5.00	0.824	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 20:03	8010279	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Sodium	5.00	0.100	0.0135	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Vanadium	0.0021	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Zinc	0.0013	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 19:58	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 17:56	8010324	MTC



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 25, 2018

Report No.: ABA0303

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010291 - SM 2540 C											
Blank (8010291-BLK1)						Prepared & Analyzed: 01/12/18					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (8010291-BS1)						Prepared & Analyzed: 01/12/18					
Total Dissolved Solids	355	25	10	mg/L	400.00		89	84-108			
Duplicate (8010291-DUP1)						Source: ABA0303-03 Prepared & Analyzed: 01/12/18					
Total Dissolved Solids	2720	25	10	mg/L		2640			3	10	
Duplicate (8010291-DUP2)						Source: ABA0306-07 Prepared & Analyzed: 01/12/18					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Batch 8010303 - EPA 9060A											
Blank (8010303-BLK1)						Prepared & Analyzed: 01/12/18					
Total Organic Carbon	0.2	1.0	0.05	mg/L							J
LCS (8010303-BS1)						Prepared & Analyzed: 01/12/18					
Total Organic Carbon	19.0	1.0	0.05	mg/L	20.000		95	88-112			
Matrix Spike (8010303-MS1)						Source: ABA0303-06 Prepared & Analyzed: 01/12/18					
Total Organic Carbon	39.9	1.0	0.05	mg/L	20.000	20.3	98	67-141			
Matrix Spike Dup (8010303-MSD1)						Source: ABA0303-06 Prepared & Analyzed: 01/12/18					
Total Organic Carbon	39.1	1.0	0.05	mg/L	20.000	20.3	94	67-141	2	16	
Batch 8010375 - SM 2320 B											
Blank (8010375-BLK1)						Prepared & Analyzed: 01/16/18					
Alkalinity as CaCO3	ND	1	1	mg/L							
Alkalinity, Bicarbonate as CaCO3	ND	1	1	mg/L							
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L							



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January 25, 2018

Report No.: ABA0303

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010375 - SM 2320 B											
LCS (8010375-BS1)						Prepared & Analyzed: 01/16/18					
Alkalinity as CaCO3	102	1	1	mg/L	100.00		102	85-115			
Alkalinity, Bicarbonate as CaCO3	102	1	1	mg/L	100.00		102	85-115			
Alkalinity, Carbonate as CaCO3	102	1	1	mg/L	100.00		102	85-115			
Duplicate (8010375-DUP1)						Source: ABA0172-01 Prepared & Analyzed: 01/16/18					
Alkalinity as CaCO3	26	1	1	mg/L		25			4	10	
Alkalinity, Bicarbonate as CaCO3	26	1	1	mg/L		25			4	10	
Alkalinity, Carbonate as CaCO3	26	1	1	mg/L		ND				10	



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Report No.: ABA0303

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010333 - EPA 300.0											
Blank (8010333-BLK1)						Prepared & Analyzed: 01/15/18					
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 (8010333-BS1)						Prepared & Analyzed: 01/15/18					
Chloride	9.81	0.25	0.02	mg/L	10.000		98	90-110			
Fluoride	9.51	0.30	0.03	mg/L	10.000		95	90-110			
Sulfate	9.70	1.0	0.02	mg/L	10.000		97	90-110			
Matrix Spike (8010333-MS1)						Source: ABA0303-01 Prepared & Analyzed: 01/15/18					
Chloride	15.0	0.25	0.02	mg/L	10.000	5.71	92	90-110			
Fluoride	9.97	0.30	0.03	mg/L	10.000	ND	100	90-110			
Sulfate	84.6	1.0	0.02	mg/L	10.000	84.5	1	90-110			QM-02
Matrix Spike (8010333-MS2)						Source: ABA0306-02 Prepared & Analyzed: 01/15/18					
Chloride	13.6	0.25	0.02	mg/L	10.000	4.38	93	90-110			
Fluoride	10.4	0.30	0.03	mg/L	10.000	ND	104	90-110			
Sulfate	35.6	1.0	0.02	mg/L	10.000	28.8	69	90-110			QM-02
Matrix Spike Dup (8010333-MSD1)						Source: ABA0303-01 Prepared & Analyzed: 01/15/18					
Chloride	15.0	0.25	0.02	mg/L	10.000	5.71	93	90-110	0.1	15	
Fluoride	10.0	0.30	0.03	mg/L	10.000	ND	100	90-110	0.5	15	
Sulfate	84.7	1.0	0.02	mg/L	10.000	84.5	1	90-110	0.04	15	QM-02



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Report No.: ABA0303

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8010279 - EPA 3005A

Blank (8010279-BLK1)

Prepared: 01/12/18 Analyzed: 01/18/18

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							
Iron	ND	0.0400	0.0043	mg/L							
Lead	ND	0.0050	0.00007	mg/L							
Magnesium	ND	0.0500	0.0063	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Potassium	ND	0.100	0.0165	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Sodium	ND	0.100	0.0135	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 (8010279-BS1)

Prepared: 01/12/18 Analyzed: 01/18/18

Antimony	0.109	0.0030	0.0006	mg/L	0.10000		109	80-120			
Arsenic	0.101	0.0050	0.0005	mg/L	0.10000		101	80-120			
Barium	0.0963	0.0100	0.0004	mg/L	0.10000		96	80-120			
Beryllium	0.102	0.0030	0.00009	mg/L	0.10000		102	80-120			
Boron	1.03	0.0400	0.0060	mg/L	1.0000		103	80-120			
Cadmium	0.0995	0.0010	0.0001	mg/L	0.10000		100	80-120			
Calcium	0.953	0.500	0.0404	mg/L	1.0000		95	80-120			
Chromium	0.0990	0.0100	0.0005	mg/L	0.10000		99	80-120			
Cobalt	0.104	0.0100	0.0003	mg/L	0.10000		104	80-120			
Copper	0.0999	0.0250	0.0003	mg/L	0.10000		100	80-120			
Iron	1.02	0.0400	0.0043	mg/L	1.0000		102	80-120			
Lead	0.0976	0.0050	0.00007	mg/L	0.10000		98	80-120			
Magnesium	1.05	0.0500	0.0063	mg/L	1.0000		105	80-120			
Molybdenum	0.0986	0.0100	0.0010	mg/L	0.10000		99	80-120			
Nickel	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			



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January 25, 2018

Report No.: ABA0303

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010279 - EPA 3005A											
LCS (8010279-BS1)						Prepared: 01/12/18 Analyzed: 01/18/18					
Potassium	0.970	0.100	0.0165	mg/L	1.0000		97	80-120			
Selenium	0.101	0.0100	0.0018	mg/L	0.10000		101	80-120			
Silver	0.0986	0.0100	0.0002	mg/L	0.10000		99	80-120			
Sodium	1.01	0.100	0.0135	mg/L	1.0000		101	80-120			
Thallium	0.0980	0.0010	0.00005	mg/L	0.10000		98	80-120			
Vanadium	0.102	0.0100	0.0012	mg/L	0.10000		102	80-120			
Zinc	0.103	0.0100	0.0012	mg/L	0.10000		103	80-120			
Lithium	0.101	0.0500	0.0015	mg/L	0.10000		101	80-120			
Matrix Spike (8010279-MS1)			Source: ABA0306-01			Prepared: 01/12/18 Analyzed: 01/18/18					
Antimony	0.109	0.0030	0.0006	mg/L	0.10000	ND	109	75-125			
Arsenic	0.103	0.0050	0.0005	mg/L	0.10000	0.0021	101	75-125			
Barium	0.121	0.0100	0.0004	mg/L	0.10000	0.0222	99	75-125			
Beryllium	0.0962	0.0030	0.00009	mg/L	0.10000	ND	96	75-125			
Boron	1.01	0.0400	0.0060	mg/L	1.0000	0.0679	94	75-125			
Cadmium	0.0987	0.0010	0.0001	mg/L	0.10000	ND	99	75-125			
Calcium	119	25.0	2.02	mg/L	1.0000	119	NR	75-125			QM-02
Chromium	0.0983	0.0100	0.0005	mg/L	0.10000	0.0006	98	75-125			
Cobalt	0.103	0.0100	0.0003	mg/L	0.10000	ND	103	75-125			
Copper	0.0955	0.0250	0.0003	mg/L	0.10000	0.0005	95	75-125			
Iron	1.69	0.0400	0.0043	mg/L	1.0000	0.640	105	75-125			
Lead	0.0921	0.0050	0.00007	mg/L	0.10000	ND	92	75-125			
Magnesium	26.1	2.50	0.314	mg/L	1.0000	23.6	250	75-125			QM-02
Molybdenum	0.108	0.0100	0.0010	mg/L	0.10000	0.0038	104	75-125			
Nickel	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125			
Potassium	3.50	0.100	0.0165	mg/L	1.0000	2.41	109	75-125			
Selenium	0.105	0.0100	0.0018	mg/L	0.10000	0.0019	103	75-125			
Silver	0.0961	0.0100	0.0002	mg/L	0.10000	ND	96	75-125			
Sodium	16.6	5.00	0.674	mg/L	1.0000	15.8	76	75-125			
Thallium	0.0936	0.0010	0.00005	mg/L	0.10000	ND	94	75-125			
Vanadium	0.108	0.0100	0.0012	mg/L	0.10000	0.0103	98	75-125			
Zinc	0.0999	0.0100	0.0012	mg/L	0.10000	0.0018	98	75-125			
Lithium	0.0942	0.0500	0.0015	mg/L	0.10000	ND	94	75-125			



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January 25, 2018

Report No.: ABA0303

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010279 - EPA 3005A											
Matrix Spike Dup (8010279-MSD1)			Source: ABA0306-01				Prepared: 01/12/18 Analyzed: 01/18/18				
Antimony	0.110	0.0030	0.0006	mg/L	0.10000	ND	110	75-125	0.9	20	
Arsenic	0.107	0.0050	0.0005	mg/L	0.10000	0.0021	105	75-125	4	20	
Barium	0.120	0.0100	0.0004	mg/L	0.10000	0.0222	98	75-125	0.8	20	
Beryllium	0.0959	0.0030	0.00009	mg/L	0.10000	ND	96	75-125	0.3	20	
Boron	1.02	0.0400	0.0060	mg/L	1.0000	0.0679	96	75-125	1	20	
Cadmium	0.0994	0.0010	0.0001	mg/L	0.10000	ND	99	75-125	0.7	20	
Calcium	122	25.0	2.02	mg/L	1.0000	119	245	75-125	2	20	QM-02
Chromium	0.0983	0.0100	0.0005	mg/L	0.10000	0.0006	98	75-125	0.02	20	
Cobalt	0.0977	0.0100	0.0003	mg/L	0.10000	ND	98	75-125	5	20	
Copper	0.0931	0.0250	0.0003	mg/L	0.10000	0.0005	93	75-125	3	20	
Iron	1.61	0.0400	0.0043	mg/L	1.0000	0.640	97	75-125	5	20	
Lead	0.0953	0.0050	0.00007	mg/L	0.10000	ND	95	75-125	3	20	
Magnesium	26.0	2.50	0.314	mg/L	1.0000	23.6	242	75-125	0.3	20	QM-02
Molybdenum	0.106	0.0100	0.0010	mg/L	0.10000	0.0038	103	75-125	2	20	
Nickel	0.0926	0.0100	0.0005	mg/L	0.10000	ND	93	75-125	8	20	
Potassium	3.51	0.100	0.0165	mg/L	1.0000	2.41	111	75-125	0.5	20	
Selenium	0.107	0.0100	0.0018	mg/L	0.10000	0.0019	105	75-125	2	20	
Silver	0.0945	0.0100	0.0002	mg/L	0.10000	ND	95	75-125	2	20	
Sodium	16.4	5.00	0.674	mg/L	1.0000	15.8	54	75-125	1	20	QM-02
Thallium	0.0946	0.0010	0.00005	mg/L	0.10000	ND	95	75-125	1	20	
Vanadium	0.110	0.0100	0.0012	mg/L	0.10000	0.0103	100	75-125	2	20	
Zinc	0.104	0.0100	0.0012	mg/L	0.10000	0.0018	102	75-125	4	20	
Lithium	0.0980	0.0500	0.0015	mg/L	0.10000	ND	98	75-125	4	20	
Post Spike (8010279-PS1)			Source: ABA0306-01				Prepared: 01/12/18 Analyzed: 01/18/18				
Antimony	107			ug/L	100.00	0.125	107	80-120			
Arsenic	104			ug/L	100.00	2.09	102	80-120			
Barium	122			ug/L	100.00	22.2	100	80-120			
Beryllium	97.4			ug/L	100.00	0.0608	97	80-120			
Boron	1030			ug/L	1000.0	67.9	97	80-120			
Cadmium	95.6			ug/L	100.00	0.128	95	80-120			
Calcium	111000			ug/L	1000.0	119000	NR	80-120			QM-02
Chromium	101			ug/L	100.00	0.595	100	80-120			
Cobalt	99.2			ug/L	100.00	0.166	99	80-120			
Copper	97.0			ug/L	100.00	0.501	96	80-120			
Iron	1630			ug/L	1000.0	640	99	80-120			
Lead	90.4			ug/L	100.00	0.0596	90	80-120			
Magnesium	23900			ug/L	1000.0	23600	31	80-120			QM-02
Molybdenum	106			ug/L	100.00	3.84	102	80-120			
Nickel	98.3			ug/L	100.00	0.379	98	80-120			



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January 25, 2018

Report No.: ABA0303

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010279 - EPA 3005A											
Post Spike (8010279-PS1)			Source: ABA0306-01			Prepared: 01/12/18 Analyzed: 01/18/18					
Potassium	3300			ug/L	1000.0	2410	89	80-120			
Selenium	108			ug/L	100.00	1.92	106	80-120			
Silver	96.4			ug/L	100.00	0.0110	96	80-120			
Sodium	15500			ug/L	1000.0	15800	NR	80-120			QM-02
Thallium	91.1			ug/L	100.00	0.0407	91	80-120			
Vanadium	112			ug/L	100.00	10.3	101	80-120			
Zinc	101			ug/L	100.00	1.80	100	80-120			
Lithium	96.3			ug/L	100.00	0.130	96	80-120			
Batch 8010324 - EPA 7470A											
Blank (8010324-BLK1)						Prepared & Analyzed: 01/18/18					
Mercury	ND	0.00050	0.000036	mg/L							
LCS (8010324-BS1)						Prepared & Analyzed: 01/18/18					
Mercury	0.00245	0.00050	0.000036	mg/L	2.5000E-3		98	80-120			
Matrix Spike (8010324-MS1)			Source: ABA0303-01			Prepared & Analyzed: 01/18/18					
Mercury	0.00234	0.00050	0.000036	mg/L	2.5000E-3	ND	94	75-125			
Matrix Spike Dup (8010324-MSD1)			Source: ABA0303-01			Prepared & Analyzed: 01/18/18					
Mercury	0.00229	0.00050	0.000036	mg/L	2.5000E-3	ND	92	75-125	2	20	
Post Spike (8010324-PS1)			Source: ABA0303-01			Prepared & Analyzed: 01/18/18					
Mercury	1.67			ug/L	1.6667	-0.0238	100	80-120			



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Legend

Definition of Laboratory Terms

- ND** - Not Detected at levels equal to or greater than the MDL
- BRL** - Not Detected at levels equal to or greater than the RL
- RL** - Reporting Limit **MDL** - Method Detection Limit
- SOP** - Method run per Pace Standard Operating Procedure
- CFU** - Colony Forming Units
- DF** - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrosodiphenylamine. Pace is not NELAC certified for N-Nitrosodiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

- R-01** Elevated reporting limit due to matrix interference.
- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

Note: Unless otherwise noted, all results are reported on an as received basis.



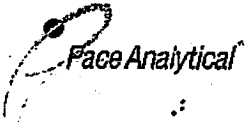
Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

PAGE: 1 OF 1

CHAIN OF CUSTODY RECORD

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 PO #: laburch@southernco.com		PROJECT NAME/STATE: Plant Kraft Grumman Road Phase 2 CCR & State D&O	
CONTAINER TYPE: P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		ANALYSIS REQUESTED P 3 P 3 P 3 Metals App. III & IV (EPA 6020/7470) Metals (See attached) EPA 6020 Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SW-846 9315/9320) Bicarbonate Alk, Carbonate Alk, Total Alk Fe, Mg, Na, K Tritium TOC Dissolved CH ₄		CONTAINER PRESERVATION: 1 - HCl, 56°C 2 - H ₂ SO ₄ , 56°C 3 - HNO ₃ 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na ₂ S ₂ O ₃ , 56°C 7 - 56°C not frozen	
CONTAINER TYPE: P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		MATRIX CODES: DW - DRINKING WATER WW - WASTEWATER GW - GROUNDWATER SW - SURFACE WATER ST - STORM WATER W - WATER S - SOIL SL - SLUDGE SD - SOLID A - AIR L - LIQUID P - PRODUCT		REMARKS/ADDITIONAL INFORMATION	
LAB #: Entered into LIMS: ABA0303 Tracking #: MB		LAB #: 0850 DATE/TIME: 1-11-18 0850 DATE/TIME:		RELINQUISHED BY: RELINQUISHED BY:	
SAMPLED BY AND TITLE: O. FURNERA + J. BURGESS		DATE/TIME: 1-10-18 1330 DATE/TIME: 1-11-18 0850		SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER Custody Seal: Broken Not Present	
RECEIVED BY LAB: Sheen O'Leary Temperature: 21/11/18 1230 Max: 0.5 Min:		RECEIVED BY LAB: M. Dalman Temperature: 21/11/18 1230 Max: 0.5 Min:		CLIENT OTHER FS: Cooler ID:	

Plant Kraft - Grumman Rd COC Phase 2 CCR & State

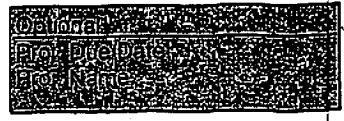


Sample Condition Upon Receipt

Client Name: GLA Power

Project # ADA 0303

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____
Tracking #: _____



Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used IR-4 Type of Ice: Ice Blue None Samples on ice, cooling process has begun

Cooler Temperature 0.5 Biological Tissue is Frozen: Yes No
Temp should be above freezing to 8°C

Date and initials of person examining contents: 1/11/18 MK

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.	
-Includes date/time/ID/Analysis Matrix: <u>GLW</u>			
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
exceptions: VOA, coliform, <u>TOC</u> O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.	
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.	
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution: _____ Date/Time: _____ Field Data Required? Y / N
Person Contacted: _____
Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp incorrect containers)



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

LOG-IN CHECKLIST

Printed: 1/12/2018 1:07:32PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 01/11/18 12:30

Work Order: ABA0303

Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 6

#Containers: 60

Minimum Temp(C): 0.5

Maximum Temp(C): 0.5

Custody Seal(s) Used: Yes

CHECKLIST ITEMS

- COC included with Samples YES
- Sample Container(s) Intact YES
- Chain of Custody Complete YES
- Sample Container(s) Match COC YES
- Custody seal Intact YES
- Temperature in Compliance YES
- Sufficient Sample Volume for Analysis YES
- Zero Headspace Maintained for VOA Analyses YES
- Samples labeled preserved (If Applicable) YES
- Samples received within Allowable Hold Times YES
- Samples Received on Ice YES
- Preservation Confirmed YES

Comments:

February 06, 2018

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: ABA0303 Plant Kraft
Pace Project No.: 30240914

Dear Mr. Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on January 16, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: ABA0303 Plant Kraft

Pace Project No.: 30240914

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

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SAMPLE SUMMARY

Project: ABA0303 Plant Kraft

Pace Project No.: 30240914

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30240914001	GWC-15	Water	01/09/18 14:50	01/16/18 11:10
30240914002	GWA-8	Water	01/09/18 11:25	01/16/18 11:10
30240914003	GWA-7	Water	01/09/18 17:00	01/16/18 11:10
30240914004	GWC-16	Water	01/10/18 11:30	01/16/18 11:10
30240914005	GWC-20	Water	01/10/18 13:05	01/16/18 11:10
30240914006	GWC-3	Water	01/10/18 13:30	01/16/18 11:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: ABA0303 Plant Kraft
Pace Project No.: 30240914

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30240914001	GWC-15	EPA 906.0	NJV	1
		EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240914002	GWA-8	EPA 906.0	NJV	1
		EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240914003	GWA-7	EPA 906.0	NJV	1
		EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240914004	GWC-16	EPA 906.0	NJV	1
		EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240914005	GWC-20	EPA 906.0	NJV	1
		EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240914006	GWC-3	EPA 906.0	NJV	1
		EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: ABA0303 Plant Kraft

Pace Project No.: 30240914

Sample: GWC-15		Lab ID: 30240914001	Collected: 01/09/18 14:50	Received: 01/16/18 11:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Tritium	EPA 906.0	11.8 ± 139 (246)		pCi/L	01/26/18 04:48	10028-17-8	
		C:NA T:NA					
Radium-226	EPA 9315	0.525 ± 0.221 (0.224)		pCi/L	01/22/18 10:37	13982-63-3	
		C:87% T:NA					
Radium-228	EPA 9320	0.645 ± 0.375 (0.683)		pCi/L	01/31/18 14:42	15262-20-1	
		C:79% T:80%					
Total Radium	Total Radium Calculation	1.17 ± 0.596 (0.907)		pCi/L	02/01/18 12:09	7440-14-4	

Sample: GWA-8		Lab ID: 30240914002	Collected: 01/09/18 11:25	Received: 01/16/18 11:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Tritium	EPA 906.0	244 ± 154 (240)		pCi/L	01/26/18 05:50	10028-17-8	
		C:NA T:NA					
Radium-226	EPA 9315	1.43 ± 0.408 (0.339)		pCi/L	01/22/18 10:37	13982-63-3	
		C:82% T:NA					
Radium-228	EPA 9320	0.963 ± 0.430 (0.695)		pCi/L	01/31/18 14:42	15262-20-1	
		C:77% T:78%					
Total Radium	Total Radium Calculation	2.39 ± 0.838 (1.03)		pCi/L	02/01/18 12:09	7440-14-4	

Sample: GWA-7		Lab ID: 30240914003	Collected: 01/09/18 17:00	Received: 01/16/18 11:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Tritium	EPA 906.0	769 ± 205 (239)		pCi/L	01/26/18 06:51	10028-17-8	
		C:NA T:NA					
Radium-226	EPA 9315	2.85 ± 0.440 (0.0479)		pCi/L	01/30/18 12:35	13982-63-3	
		C:84% T:NA					
Radium-228	EPA 9320	1.43 ± 0.533 (0.784)		pCi/L	01/31/18 14:42	15262-20-1	
		C:74% T:80%					
Total Radium	Total Radium Calculation	4.28 ± 0.973 (0.832)		pCi/L	02/01/18 12:09	7440-14-4	

Sample: GWC-16		Lab ID: 30240914004	Collected: 01/10/18 11:30	Received: 01/16/18 11:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Tritium	EPA 906.0	129 ± 144 (239)		pCi/L	01/26/18 07:52	10028-17-8	
		C:NA T:NA					
Radium-226	EPA 9315	0.613 ± 0.237 (0.223)		pCi/L	01/22/18 10:37	13982-63-3	
		C:90% T:NA					
Radium-228	EPA 9320	1.13 ± 0.435 (0.651)		pCi/L	01/31/18 14:42	15262-20-1	
		C:80% T:79%					
Total Radium	Total Radium Calculation	1.74 ± 0.672 (0.874)		pCi/L	02/01/18 12:09	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: ABA0303 Plant Kraft

Pace Project No.: 30240914

Sample: GWC-20		Lab ID: 30240914005	Collected: 01/10/18 13:05	Received: 01/16/18 11:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Tritium	EPA 906.0	278 ± 160 (244) C:NA T:NA	pCi/L	01/26/18 08:54	10028-17-8	
Radium-226	EPA 9315	0.938 ± 0.321 (0.300) C:80% T:NA	pCi/L	01/22/18 10:37	13982-63-3	
Radium-228	EPA 9320	1.02 ± 0.377 (0.505) C:79% T:83%	pCi/L	01/31/18 14:42	15262-20-1	
Total Radium	Total Radium Calculation	1.96 ± 0.698 (0.805)	pCi/L	02/01/18 12:09	7440-14-4	

Sample: GWC-3		Lab ID: 30240914006	Collected: 01/10/18 13:30	Received: 01/16/18 11:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Tritium	EPA 906.0	64.2 ± 142 (244) C:NA T:NA	pCi/L	01/26/18 09:55	10028-17-8	
Radium-226	EPA 9315	0.587 ± 0.236 (0.244) C:90% T:NA	pCi/L	01/22/18 10:32	13982-63-3	
Radium-228	EPA 9320	0.739 ± 0.359 (0.595) C:76% T:84%	pCi/L	01/31/18 14:42	15262-20-1	
Total Radium	Total Radium Calculation	1.33 ± 0.595 (0.839)	pCi/L	02/01/18 12:09	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: ABA0303 Plant Kraft

Pace Project No.: 30240914

QC Batch: 285232

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30240914001, 30240914002, 30240914003, 30240914004, 30240914005, 30240914006

METHOD BLANK: 1399116

Matrix: Water

Associated Lab Samples: 30240914001, 30240914002, 30240914003, 30240914004, 30240914005, 30240914006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.269 ± 0.338 (0.718) C:77% T:82%	pCi/L	01/31/18 11:25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: ABA0303 Plant Kraft

Pace Project No.: 30240914

QC Batch: 285875 Analysis Method: EPA 906.0

QC Batch Method: EPA 906.0 Analysis Description: 906.0 Tritium

Associated Lab Samples: 30240914001, 30240914002, 30240914003, 30240914004, 30240914005, 30240914006

METHOD BLANK: 1402249 Matrix: Water

Associated Lab Samples: 30240914001, 30240914002, 30240914003, 30240914004, 30240914005, 30240914006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Tritium	153 ± 149 (245) C:NA T:NA	pCi/L	01/26/18 02:45	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: ABA0303 Plant Kraft

Pace Project No.: 30240914

QC Batch: 285234

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30240914001, 30240914002, 30240914003, 30240914004, 30240914005, 30240914006

METHOD BLANK: 1399118

Matrix: Water

Associated Lab Samples: 30240914001, 30240914002, 30240914003, 30240914004, 30240914005, 30240914006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.254 ± 0.158 (0.223) C:89% T:NA	pCi/L	01/22/18 10:37	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: ABA0303 Plant Kraft

Pace Project No.: 30240914

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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Chain of Custody



Krafe
BmeD
1/12/2018

Workorder: ABA0303 Workorder Name: Plant Hammond Owner Received Date: 1/11/2018 Results Requested By: 2/7/2018

Report To:
Betsy McDaniel
Pace Analytical Atlanta
110 Technology Parkway
Peachtree Corners, GA 30092
Phone (770)-734-4200

Requested Analysis

WO#: 30240914
30240914

Subcontract To:
Pace - Pittsburgh
1638 Roseytown Road
Stes. 2,3,4
Greensburg, PA 15601
Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers			Radium 226, 228, Total	Tritium	LAB USE ONLY
						H	N	S			
1	GWC-15	G	1/9/2018 14:50	ABA0303-01	GW	2	1		X		001
2	GWA-8	G	1/9/2018 11:25	ABA0303-02	GW	2	1		X		002
3	GWA-7	G	1/9/2018 17:00	ABA0303-03	GW	2	1		X		003
4	GWC-16	G	1/10/2018 11:30	ABA0303-04	GW	2	1		X		004
5	GWC-20	G	1/10/2018 13:05	ABA0303-05	GW	2	1		X		005
6	GWC-3	G	1/10/2018 13:30	ABA0303-06	GW	2	1		X		006
7											
8											
9											
10											

Transfers Released By: _____ Date/Time: _____ Received By: *[Signature]* Date/Time: 1/16/18 11:25

Comments: ~~ETS deliverable required (Profile 7564)~~

Cooler Temperature on Receipt: 01 °C Custody Seal Y or N: N Received on Ice Y or N: N Sample Intact Y or N: N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
This chain of custody is considered complete as is since this information is available in the owner laboratory.



Client Name: Pace Atlanta Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Label	<u>ZH</u>
LIMS Login	<u>ANL</u>

Tracking #: 741366610720

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Thermometer Used LIA Type of Ice: Wet Blue None

Cooler Temperature Observed Temp _____ °C Correction Factor: _____ °C Final Temp: _____ °C
Temp should be above freezing to 6°C

Date and Initials of person examining contents: ZH 1/16/18

Comments:	Yes	No	N/A	
Chain of Custody Present:	/			1.
Chain of Custody Filled Out:	/			2.
Chain of Custody Relinquished:		/		3.
Sampler Name & Signature on COC:		/		4.
Sample Labels match COC:	/			5.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	/			6.
Short Hold Time Analysis (<72hr remaining):		/		7.
Rush Turn Around Time Requested:		/		8.
Sufficient Volume:	/			9.
Correct Containers Used:	/			10.
-Pace Containers Used:	/			
Containers Intact:	/			11.
Orthophosphate field filtered			/	12.
Hex Cr Aqueous Compliance/NPDES sample field filtered			/	13.
Organic Samples checked for dechlorination:			/	14.
Filtered volume received for Dissolved tests			/	15.
All containers have been checked for preservation.	/			16. <u>DH22</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	/			
exceptions: VOA, coliform, TOC, O&G, Phenolics				
				Initial when completed: <u>ZH</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			/	17.
Trip Blank Present:			/	18.
Trip Blank Custody Seals Present			/	
Rad Aqueous Samples Screened > 0.5 mrem/hr		/		Initial when completed: <u>ZH</u> Date: <u>1/16/18</u>

Client Notification/ Resolution:
 Person Contacted: _____ Date/Time: _____ Contacted By: _____
 Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)
 *PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JC2
Date: 1/19/2018
Worklist: 39545
Matrix: DW

Method Blank Assessment	
MB Sample ID	1399118
MB concentration:	0.254
MB Counting Uncertainty:	0.154
MB MDC:	0.223
MB Numerical Performance Indicator:	3.23
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	See Comment*

Laboratory Control Sample Assessment	
Count Date:	1/22/2018
Sample I.D.:	17-030
Spike Concentration (pCi/mL):	80.180
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.509
Target Conc. (pCi/L, g, F):	15.766
Uncertainty (Calculated):	1.452
Result (pCi/L, g, F):	14.366
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.053
Numerical Performance Indicator:	-1.53
Percent Recovery:	91.12%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30240905009
Duplicate Sample I.D.:	30240905009DUP
Sample Result (pCi/L, g, F):	0.990
Sample Result Counting Uncertainty (pCi/L, g, F):	0.280
Sample Duplicate Result (pCi/L, g, F):	1.037
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.284
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-0.228
Duplicate RPD:	4.57%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*The method blank result is below the reporting limit for this analysis and is acceptable.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MSD Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

Jan 13 11:18

Jan 13/18

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 1/22/2018
Worklist: 39543
Matrix: DW

Method Blank Assessment	
MB Sample ID	1399116
MB concentration:	0.269
M/B Counting Uncertainty:	0.335
MB MDC:	0.718
MB Numerical Performance Indicator:	1.58
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS (Y or N)?	N
		LCS39543	LCS39543
Count Date:	1/31/2018		
Spike I.D.:	17-033		
Spike Concentration (pCi/mL):	22.452		
Volume Used (mL):	0.20		
Aliquot Volume (L, g, F):	0.816		
Target Conc. (pCi/L, g, F):	5.501		
Uncertainty (Calculated):	0.396		
Result (pCi/L, g, F):	4.713		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.583		
Numerical Performance Indicator:	-2.19		
Percent Recovery:	85.67%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		

Duplicate Sample Assessment	
Sample I.D.:	30240905009
Duplicate Sample I.D.:	30240905009DUP
Sample Result (pCi/L, g, F):	1.116
Sample Duplicate Result (pCi/L, g, F):	0.392
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	1.015
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.363
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	0.370
Duplicate RPD:	9.46%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Handwritten notes:
 30240905009
 30240905009DUP
 DW
 JLW

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
Duplicate Numerical Performance Indicator (Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

Quality Control Sample Performance Assessment



Analyst: NJV
Date: 1/31/2018
Worklist: 39629
Matrix: Water

Method: EPA 906.0
SOP: PGR-021
MB Sample ID: 1402249

Method Blank Assessment		Sample Matrix Spike Control Assessment	
Analyte	Tritium	Analyte:	Tritium
1.96 Sig Unc.	148.1000	Sample Collection Date:	1/8/2018
Activity	152.5900	Sample I.D.	92369240001
MDC	245.0000	Sample MS I.D.	92369240001MS
Critical Value	116.27000	Sample MSD I.D.	
Flag		Spike I.D.	15-024
Assessment			
MS/MSD Decay Corrected Spike Conc. (pCi/L): 2337.075			
Spike Volume Used in MS (mL): 0.20			
MS Aliquot (L, g, F): 0.1014			
MS Target Conc. (pCi/L, g, F): 4608.707			
MSD Aliquot (L, g, F):			
MSD Target Conc. (pCi/L, g, F):			
MS Spike uncertainty (calculated): 343.256			
MSD Spike uncertainty (calculated):			
Sample Result:			
Sample 1.96 Sigma Unc.: 2044.460			
Sample Matrix Spike Result: 236.800			
Sample MS 1.96 Sigma Unc.: 248.800			
Sample Matrix Spike Duplicate Result:			
Sample MSD 1.96 Sigma Unc.:			
MS % Recovery: 76.07%			
MSD % Recovery:			
MS Assessment: Pass			
MSD Assessment:			
MS/MSD Upper % Recovery Limits: 125.00%			
MS/MSD Lower % Recovery Limits: 75.00%			
Matrix Spike/Matrix Spike Duplicate Sample Assessment			
Sample Matrix Spike % Recovery:			
Sample Matrix Spike Duplicate % Recovery:			
MS/MSD Relative Percent Difference:			
MS/MSD RPD Assessment:			
% RPD Limit:			

Method Blank Assessment		Laboratory Control Sample Assessment	
Analyte	Tritium	Analyte:	Tritium
1.96 Sig Unc.	148.1000	Count Date:	1/26/18 17:04
Activity	152.5900	Spike I.D.:	15-024
MDC	245.0000	Spike Concentration (pCi/L):	2330.497
Critical Value	116.27000	Volume Used (mL):	0.100
Flag		Aliquot Volume (L, g, F):	0.102
Assessment		Target Conc. (pCi/L, g, F):	2334.246
1.96 Sigma Uncertainty (Calculated): 173.855			
Result (pCi/L, g, F): 2102.400			
1.96 Sigma Unc: 241.900			
% Recovery: 90.07%			
Assessment: Pass			
Upper % Recovery Limits: 125.00%			
Lower % Recovery Limits: 75.00%			
Duplicate Sample Assessment			
LCS/LCSD Y or NT:	Y	LCS	LCS
Analyte:	Tritium	LCS	LCS
Sample I.D.:	LCS39629	LCS	LCS
Duplicate Sample I.D.:	LCS39629	LCS	LCS
Sample % Recovery:	0.9007	LCS	LCS
Duplicate Sample % Recovery:	1.0102	LCS	LCS
Relative Percent Difference:	11.46%	LCS	LCS
Assessment:	Pass	LCS	LCS
% RPD Limit:	25.00%	LCS	LCS

Method Blank Assessment		Laboratory Control Sample Assessment	
Analyte	Tritium	Analyte:	Tritium
1.96 Sig Unc.	148.1000	Count Date:	1/26/18 17:04
Activity	152.5900	Spike I.D.:	15-024
MDC	245.0000	Spike Concentration (pCi/L):	2330.497
Critical Value	116.27000	Volume Used (mL):	0.100
Flag		Aliquot Volume (L, g, F):	0.102
Assessment		Target Conc. (pCi/L, g, F):	2334.246
1.96 Sigma Uncertainty (Calculated): 173.855			
Result (pCi/L, g, F): 2102.400			
1.96 Sigma Unc: 241.900			
% Recovery: 90.07%			
Assessment: Pass			
Upper % Recovery Limits: 125.00%			
Lower % Recovery Limits: 75.00%			
Duplicate Sample Assessment			
LCS/LCSD Y or NT:	Y	LCS	LCS
Analyte:	Tritium	LCS	LCS
Sample I.D.:	LCS39629	LCS	LCS
Duplicate Sample I.D.:	LCS39629	LCS	LCS
Sample % Recovery:	0.9007	LCS	LCS
Duplicate Sample % Recovery:	1.0102	LCS	LCS
Relative Percent Difference:	11.46%	LCS	LCS
Assessment:	Pass	LCS	LCS
% RPD Limit:	25.00%	LCS	LCS

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

NJV
1-31-18

0118113118



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: ABA0304

January 24, 2018

Project: CCR Event

Project #:Plant Kraft

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

A handwritten signature in black ink that reads "Betsy McDaniel" written over a horizontal line.

Project Manager

This report may not be reproduced, except in full, without written approval from Pace Analytical Services, LLC.
All test results relate only to the samples analyzed.



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 24, 2018

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWA-7 (Field Filtered)	ABA0304-01	Ground Water	01/09/18 17:00	01/11/18 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

January 24, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0304
Client ID: GWA-7 (Field Filtered)
Date/Time Sampled: 1/9/2018 5:00:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: ABA0304-01
Date/Time Received: 1/11/2018 12:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Metals, Dissolved											
Antimony	ND	0.0300	0.0060	mg/L	EPA 6020B	R-01	10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Arsenic	0.0066	0.0500	0.0052	mg/L	EPA 6020B	B-01, R-01, J	10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Barium	0.0668	0.100	0.0042	mg/L	EPA 6020B	R-01, J	10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Beryllium	ND	0.0300	0.0009	mg/L	EPA 6020B	R-01	10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Boron	13.6	0.400	0.0595	mg/L	EPA 6020B		10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Cadmium	ND	0.0100	0.0014	mg/L	EPA 6020B	R-01	10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Calcium	4.47	1.00	0.404	mg/L	EPA 6020B		10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Chromium	0.0196	0.100	0.0045	mg/L	EPA 6020B	R-01, J	10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Cobalt	0.0036	0.100	0.0026	mg/L	EPA 6020B	R-01, J	10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Iron	0.375	0.200	0.0214	mg/L	EPA 6020B		5	01/12/18 10:20	01/15/18 19:51	8010273	:ticpm
Lead	0.0015	0.0500	0.0007	mg/L	EPA 6020B	R-01, J	10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Magnesium	1.35	0.250	0.0314	mg/L	EPA 6020B		5	01/12/18 10:20	01/15/18 19:51	8010273	:ticpm
Molybdenum	ND	0.100	0.0102	mg/L	EPA 6020B	R-01	10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Potassium	12.2	1.00	0.165	mg/L	EPA 6020B		10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Selenium	ND	0.100	0.0176	mg/L	EPA 6020B	R-01	10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Sodium	714	25.0	3.37	mg/L	EPA 6020B		250	01/12/18 10:20	01/13/18 20:34	8010273	:ticpm
Thallium	ND	0.0100	0.0005	mg/L	EPA 6020B	R-01	10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Vanadium	0.174	0.100	0.0120	mg/L	EPA 6020B	B-01	10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Zinc	0.0129	0.100	0.0120	mg/L	EPA 6020B	R-01, J	10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Lithium	ND	0.500	0.0149	mg/L	EPA 6020B	R-01	10	01/12/18 10:20	01/13/18 20:45	8010273	:ticpm
Mercury	ND	0.0005	0.00004	mg/L	EPA 7470A		1	01/24/18 10:55	01/24/18 15:59	8010384	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 24, 2018

Report No.: ABA0304

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010273 - EPA 3005A											
Blank (8010273-BLK1)						Prepared: 01/12/18 Analyzed: 01/13/18					
Antimony	ND	0.0030	0.0006	mg/L							
Arsenic	0.0006	0.0050	0.0005	mg/L							J
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							
Iron	ND	0.0400	0.0043	mg/L							
Lead	ND	0.0050	0.00007	mg/L							
Magnesium	ND	0.0500	0.0063	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Potassium	ND	0.100	0.0165	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Sodium	ND	0.100	0.0135	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	0.0021	0.0100	0.0012	mg/L							J
Zinc	ND	0.0100	0.0012	mg/L							
Lithium	ND	0.0500	0.0015	mg/L							

LCS (8010273-BS1)					Prepared: 01/12/18 Analyzed: 01/13/18		
Antimony	0.101	0.0030	0.0006	mg/L	0.10000	101	80-120
Arsenic	0.0999	0.0050	0.0005	mg/L	0.10000	100	80-120
Barium	0.0982	0.0100	0.0004	mg/L	0.10000	98	80-120
Beryllium	0.0986	0.0030	0.00009	mg/L	0.10000	99	80-120
Boron	0.954	0.0400	0.0060	mg/L	1.0000	95	80-120
Cadmium	0.103	0.0010	0.0001	mg/L	0.10000	103	80-120
Calcium	0.971	0.500	0.0404	mg/L	1.0000	97	80-120
Chromium	0.0956	0.0100	0.0005	mg/L	0.10000	96	80-120
Cobalt	0.0933	0.0100	0.0003	mg/L	0.10000	93	80-120
Copper	0.0962	0.0250	0.0003	mg/L	0.10000	96	80-120
Iron	0.915	0.0400	0.0043	mg/L	1.0000	91	80-120
Lead	0.100	0.0050	0.00007	mg/L	0.10000	100	80-120
Magnesium	1.03	0.0500	0.0063	mg/L	1.0000	103	80-120
Molybdenum	0.0950	0.0100	0.0010	mg/L	0.10000	95	80-120
Nickel	0.0950	0.0100	0.0005	mg/L	0.10000	95	80-120



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 24, 2018

Report No.: ABA0304

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010273 - EPA 3005A											
LCS (8010273-BS1)						Prepared: 01/12/18 Analyzed: 01/13/18					
Potassium	0.987	0.100	0.0165	mg/L	1.0000		99	80-120			
Selenium	0.0978	0.0100	0.0018	mg/L	0.10000		98	80-120			
Silver	0.0998	0.0100	0.0002	mg/L	0.10000		100	80-120			
Sodium	1.02	0.100	0.0135	mg/L	1.0000		102	80-120			
Thallium	0.102	0.0010	0.00005	mg/L	0.10000		102	80-120			
Vanadium	0.0960	0.0100	0.0012	mg/L	0.10000		96	80-120			
Zinc	0.0966	0.0100	0.0012	mg/L	0.10000		97	80-120			
Lithium	0.0991	0.0500	0.0015	mg/L	0.10000		99	80-120			
Matrix Spike (8010273-MS1)						Source: ABA0125-29 Prepared: 01/12/18 Analyzed: 01/13/18					
Antimony	0.110	0.0030	0.0006	mg/L	0.10000	ND	110	75-125			
Arsenic	0.103	0.0050	0.0005	mg/L	0.10000	ND	103	75-125			
Barium	0.113	0.0100	0.0004	mg/L	0.10000	0.0053	108	75-125			
Beryllium	0.0991	0.0030	0.00009	mg/L	0.10000	ND	99	75-125			
Boron	0.969	0.0400	0.0060	mg/L	1.0000	0.0088	96	75-125			
Cadmium	0.105	0.0010	0.0001	mg/L	0.10000	ND	105	75-125			
Calcium	2.51	0.500	0.0404	mg/L	1.0000	1.53	98	75-125			
Chromium	0.101	0.0100	0.0005	mg/L	0.10000	0.0005	100	75-125			
Cobalt	0.0993	0.0100	0.0003	mg/L	0.10000	ND	99	75-125			
Copper	0.102	0.0250	0.0003	mg/L	0.10000	0.0005	101	75-125			
Iron	1.12	0.0400	0.0043	mg/L	1.0000	0.129	99	75-125			
Lead	0.101	0.0050	0.00007	mg/L	0.10000	ND	101	75-125			
Magnesium	1.86	0.0500	0.0063	mg/L	1.0000	0.742	111	75-125			
Molybdenum	0.104	0.0100	0.0010	mg/L	0.10000	ND	104	75-125			
Nickel	0.101	0.0100	0.0005	mg/L	0.10000	ND	101	75-125			
Potassium	1.74	0.100	0.0165	mg/L	1.0000	0.826	91	75-125			
Selenium	0.101	0.0100	0.0018	mg/L	0.10000	ND	101	75-125			
Silver	0.106	0.0100	0.0002	mg/L	0.10000	ND	106	75-125			
Sodium	3.58	0.100	0.0135	mg/L	1.0000	2.65	93	75-125			
Thallium	0.103	0.0010	0.00005	mg/L	0.10000	ND	103	75-125			
Vanadium	0.102	0.0100	0.0012	mg/L	0.10000	0.0022	100	75-125			
Zinc	0.103	0.0100	0.0012	mg/L	0.10000	0.0058	98	75-125			
Lithium	0.0996	0.0500	0.0015	mg/L	0.10000	ND	100	75-125			



PACE ANALYTICAL SERVICES, LLC.

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(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 24, 2018

Report No.: ABA0304

Metals, Dissolved - Quality Control

Table with 11 columns: Analyte, Result, RL, MDL, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Notes

Batch 8010273 - EPA 3005A

Matrix Spike Dup (8010273-MSD1) Source: ABA0125-29 Prepared: 01/12/18 Analyzed: 01/13/18

Main data table listing analytes (Antimony, Arsenic, Barium, etc.) with their respective results, RL, MDL, units, spike levels, source results, and RPD values.

Post Spike (8010273-PS1) Source: ABA0125-29 Prepared: 01/12/18 Analyzed: 01/13/18

Table listing analytes (Antimony, Arsenic, Barium, etc.) with their respective results, units, spike levels, source results, and RPD values for the post-spike analysis.



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Attention: Mr. Joju Abraham

January 24, 2018

Report No.: ABA0304

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010273 - EPA 3005A											
Post Spike (8010273-PS1)			Source: ABA0125-29			Prepared: 01/12/18 Analyzed: 01/13/18					
Potassium	1690			ug/L	1000.0	826	86	80-120			
Selenium	96.0			ug/L	100.00	-0.312	96	80-120			
Silver	98.8			ug/L	100.00	0.0065	99	80-120			
Sodium	3480			ug/L	1000.0	2650	84	80-120			
Thallium	98.1			ug/L	100.00	-0.0088	98	80-120			
Vanadium	91.6			ug/L	100.00	2.15	89	80-120			
Zinc	97.3			ug/L	100.00	5.77	91	80-120			
Lithium	96.8			ug/L	100.00	0.178	97	80-120			
Batch 8010384 - EPA 7470A											
Blank (8010384-BLK1)						Prepared & Analyzed: 01/24/18					
Mercury	ND	0.0005	0.00004	mg/L							
LCS (8010384-BS1)						Prepared & Analyzed: 01/24/18					
Mercury	0.0024	0.0005	0.00004	mg/L	2.5000E-3		98	80-120			
Matrix Spike (8010384-MS1)			Source: ABA0304-01			Prepared & Analyzed: 01/24/18					
Mercury	0.0022	0.0005	0.00004	mg/L	2.5000E-3	ND	90	75-125			
Matrix Spike Dup (8010384-MSD1)			Source: ABA0304-01			Prepared & Analyzed: 01/24/18					
Mercury	0.0022	0.0005	0.00004	mg/L	2.5000E-3	ND	87	75-125	4	20	
Post Spike (8010384-PS1)			Source: ABA0304-01			Prepared & Analyzed: 01/24/18					
Mercury	1.55			ug/L	1.6667	0.0037	93	80-120			



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January 24, 2018

Legend

Definition of Laboratory Terms

- ND** - Not Detected at levels equal to or greater than the MDL
BRL - Not Detected at levels equal to or greater than the RL
RL - Reporting Limit **MDL** - Method Detection Limit
SOP - Method run per Pace Standard Operating Procedure
CFU - Colony Forming Units
DF - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrosodiphenylamine. Pace is not NELAC certified for N-Nitrosodiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

- R-01** Elevated reporting limit due to matrix interference.
- 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

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 Peaty CC: Maria Padilla Heath McCorkle REQUESTED COMPLETION DATE: PO #: laburch@southernco.com PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase 2 CCR & State D&O		CONTAINER TYPE: PRESERVATION # of CONTAINERS → 1		ANALYSIS REQUESTED P 3 P 3 P 3 P 7 P 3 Metals App. III & IV (EPA 6020/7470) *FIELD TESTED Metals (See attached) EPA 6020 Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SM-846 9315/9320) Bicarbonate Alk, Carbonate Alk, Total Alk Fe, Mg, Na, K Tritium TOC Dissolved CH4							CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	PRESERVATION 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen
Collection DATE 1-9-18	Collection TIME 1700	MATRIX CODE* GW	C O M P C X O M P	SAMPLE IDENTIFICATION GWA-7	RELINQUISHED BY: [Signature]			DATE/TIME: 1-9-18 1700	LAB #: ABA0304	FOR LAB USE ONLY Entered into LIMS: Tracking #:		
SAMPLED BY AND TITLE: O. KELLEY (ACC)					RELINQUISHED BY: [Signature]			DATE/TIME: 1-11-18 0830	Entered into LIMS: Tracking #:			
RECEIVED BY: O. KELLEY					RELINQUISHED BY: [Signature]			DATE/TIME: 1-11-18 0830	Entered into LIMS: Tracking #:			
RECEIVED BY LAB: O. KELLEY					SAMPLE SHIPPED VIA: UPS			DATE/TIME: 1-11-18 1230	CLIENT Courier	OTHER FS		
Checked: No NA [Signature] No NA [Signature]					Temperature: 2.5 Max			Received by Lab: M. Labman				

Plant Kraft - Grumman Rd COC Phase 2 CCR & State



Sample Condition Upon Receipt

Client Name: GLA power

Project # AR0A0304

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used IR-4 Type of Ice: Wet Blue None Samples on Ice, cooling process has begun

Cooler Temperature 0.5

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 1/11/18 MK

Temp should be above freezing to 6°C

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.	
-Includes date/time/ID/Analysis Matrix:	<u>GLA</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.	
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.	
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):	_____		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



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: 1/12/2018 1:19:07PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 01/11/18 12:30

Work Order: ABA0304

Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 1

#Containers: 1

Minimum Temp(C): 0.5

Maximum Temp(C): 0.5

Custody Seal(s) Used: Yes

CHECKLIST ITEMS

- COC included with Samples YES
- Sample Container(s) Intact YES
- Chain of Custody Complete YES
- Sample Container(s) Match COC YES
- Custody seal Intact YES
- Temperature in Compliance YES
- Sufficient Sample Volume for Analysis YES
- Zero Headspace Maintained for VOA Analyses YES
- Samples labeled preserved (If Applicable) YES
- Samples received within Allowable Hold Times YES
- Samples Received on Ice YES
- Preservation Confirmed YES

Comments:



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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(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: ABA0305

January 25, 2018

Project: CCR Event - Clifton LF Seep

Project #:Plant Kraft

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

A handwritten signature in black ink that reads "Betsy McDaniel" is written over a horizontal line.

Project Manager

This report may not be reproduced, except in full, without written approval from Pace Analytical Services, LLC.
All test results relate only to the samples analyzed.



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 25, 2018

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Clifton Seep	ABA0305-01	Water	01/10/18 16:40	01/11/18 12:30



PACE ANALYTICAL SERVICES, LLC.

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Attention: Mr. Joju Abraham

January 25, 2018

Case Narrative

The Radium analysis by methods EPA 9315/9320 and Tritium analysis by method EPA 906.0 were performed by Pace-Pittsburgh, 1638 Roseytown Road - Suites 2, 3, 4, Greensburg PA 15601. The Pace-Pittsburgh lab contact is Jacquelyn Collins at 724-850-5612.

The Methane analysis by RSK-175 was performed by Pace Analytical Energy Services, LLC, 220 William Pitt Way, Pittsburgh, PA 15238. The lab contact is Lauren McGrath at Telephone 412-826-5245. Please see the included subcontractor reports.



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 25, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0305

Project: CCR Event - Clifton LF Seep

Client ID: Clifton Seep

Lab Number ID: ABA0305-01

Date/Time Sampled: 1/10/2018 4:40:00PM

Date/Time Received: 1/11/2018 12:30:00PM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	2400	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	1600	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	800	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	3680	50	20	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Total Organic Carbon	106	10.0	10.0	mg/L	EPA 9060A		10	01/12/18 14:30	01/12/18 20:42	8010303	FDS
Inorganic Anions											
Chloride	220	5.0	0.26	mg/L	EPA 300.0		20	01/15/18 10:51	01/20/18 15:27	8010333	MWB
Fluoride	1.4	0.30	0.004	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 18:13	8010333	MWB
Sulfate	5.9	1.0	0.09	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 18:13	8010333	MWB
Metals, Total											
Antimony	0.0315	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:38	8010279	CSW
Arsenic	0.0359	0.0050	0.0005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:38	8010279	CSW
Barium	0.639	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:38	8010279	CSW
Beryllium	0.0003	0.0030	0.00009	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 22:38	8010279	CSW
Boron	42.4	10.0	1.49	mg/L	EPA 6020B		250	01/12/18 16:05	01/19/18 15:43	8010279	CSW
Cadmium	0.0007	0.0010	0.0001	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 22:38	8010279	CSW
Calcium	34.3	25.0	2.02	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 22:43	8010279	CSW
Chromium	0.0336	0.0100	0.0005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:38	8010279	CSW
Cobalt	0.0098	0.0100	0.0003	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 22:38	8010279	CSW
Iron	14.9	0.200	0.0214	mg/L	EPA 6020B		5	01/12/18 16:05	01/18/18 22:49	8010279	CSW
Lead	0.647	0.0050	0.00007	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:38	8010279	CSW
Magnesium	70.4	12.5	1.57	mg/L	EPA 6020B		250	01/12/18 16:05	01/19/18 15:43	8010279	CSW
Molybdenum	0.0023	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 22:38	8010279	CSW
Potassium	196	5.00	0.824	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 22:43	8010279	CSW
Selenium	0.0026	0.0100	0.0018	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 22:38	8010279	CSW
Sodium	1170	25.0	3.37	mg/L	EPA 6020B		250	01/12/18 16:05	01/19/18 15:43	8010279	CSW
Thallium	0.00008	0.0010	0.00005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 22:38	8010279	CSW
Vanadium	0.0282	0.0100	0.0012	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:38	8010279	CSW
Zinc	3.80	0.0500	0.0060	mg/L	EPA 6020B		5	01/12/18 16:05	01/18/18 22:49	8010279	CSW
Lithium	0.361	0.0500	0.0015	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:38	8010279	CSW
Mercury	0.00004	0.00050	0.000036	mg/L	EPA 7470A	J	1	01/18/18 09:00	01/18/18 17:58	8010324	MTC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 25, 2018

Report No.: ABA0305

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010291 - SM 2540 C											
Blank (8010291-BLK1)						Prepared & Analyzed: 01/12/18					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (8010291-BS1)						Prepared & Analyzed: 01/12/18					
Total Dissolved Solids	355	25	10	mg/L	400.00		89	84-108			
Duplicate (8010291-DUP1)						Source: ABA0303-03 Prepared & Analyzed: 01/12/18					
Total Dissolved Solids	2720	25	10	mg/L		2640			3	10	
Duplicate (8010291-DUP2)						Source: ABA0306-07 Prepared & Analyzed: 01/12/18					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Batch 8010303 - EPA 9060A											
Blank (8010303-BLK1)						Prepared & Analyzed: 01/12/18					
Total Organic Carbon	ND	1.0	0.05	mg/L							
LCS (8010303-BS1)						Prepared & Analyzed: 01/12/18					
Total Organic Carbon	19.0	1.0	0.05	mg/L	20.000		95	88-112			
Matrix Spike (8010303-MS1)						Source: ABA0303-06 Prepared & Analyzed: 01/12/18					
Total Organic Carbon	39.9	1.0	0.05	mg/L	20.000	20.3	98	67-141			
Matrix Spike Dup (8010303-MSD1)						Source: ABA0303-06 Prepared & Analyzed: 01/12/18					
Total Organic Carbon	39.1	1.0	0.05	mg/L	20.000	20.3	94	67-141	2	16	
Batch 8010375 - SM 2320 B											
Blank (8010375-BLK1)						Prepared & Analyzed: 01/16/18					
Alkalinity as CaCO3	ND	1	1	mg/L							
Alkalinity, Bicarbonate as CaCO3	ND	1	1	mg/L							
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L							



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January 25, 2018

Report No.: ABA0305

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010375 - SM 2320 B											
LCS (8010375-BS1)						Prepared & Analyzed: 01/16/18					
Alkalinity as CaCO3	102	1	1	mg/L	100.00		102	85-115			
Alkalinity, Bicarbonate as CaCO3	102	1	1	mg/L	100.00		102	85-115			
Alkalinity, Carbonate as CaCO3	102	1	1	mg/L	100.00		102	85-115			
Duplicate (8010375-DUP1)						Source: ABA0172-01 Prepared & Analyzed: 01/16/18					
Alkalinity as CaCO3	26	1	1	mg/L		25			4	10	
Alkalinity, Bicarbonate as CaCO3	26	1	1	mg/L		25			4	10	
Alkalinity, Carbonate as CaCO3	26	1	1	mg/L		ND				10	



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 25, 2018

Report No.: ABA0305

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010333 - EPA 300.0											
Blank (8010333-BLK1)						Prepared & Analyzed: 01/15/18					
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 (8010333-BS1)						Prepared & Analyzed: 01/15/18					
Chloride	9.81	0.25	0.01	mg/L	10.000		98	90-110			
Fluoride	9.51	0.30	0.004	mg/L	10.000		95	90-110			
Sulfate	9.70	1.0	0.09	mg/L	10.000		97	90-110			
Matrix Spike (8010333-MS1)						Source: ABA0303-01 Prepared & Analyzed: 01/15/18					
Chloride	15.0	0.25	0.01	mg/L	10.000	5.71	92	90-110			
Fluoride	9.97	0.30	0.004	mg/L	10.000	ND	100	90-110			
Sulfate	84.6	1.0	0.09	mg/L	10.000	84.5	1	90-110			QM-02
Matrix Spike (8010333-MS2)						Source: ABA0306-02 Prepared & Analyzed: 01/15/18					
Chloride	13.6	0.25	0.01	mg/L	10.000	4.38	93	90-110			
Fluoride	10.4	0.30	0.004	mg/L	10.000	ND	104	90-110			
Sulfate	35.6	1.0	0.09	mg/L	10.000	28.8	69	90-110			QM-02
Matrix Spike Dup (8010333-MSD1)						Source: ABA0303-01 Prepared & Analyzed: 01/15/18					
Chloride	15.0	0.25	0.01	mg/L	10.000	5.71	93	90-110	0.1	15	
Fluoride	10.0	0.30	0.004	mg/L	10.000	ND	100	90-110	0.5	15	
Sulfate	84.7	1.0	0.09	mg/L	10.000	84.5	1	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

January 25, 2018

Report No.: ABA0305

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8010279 - EPA 3005A

Blank (8010279-BLK1)

Prepared: 01/12/18 Analyzed: 01/18/18

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							
Iron	ND	0.0400	0.0043	mg/L							
Lead	ND	0.0050	0.00007	mg/L							
Magnesium	ND	0.0500	0.0063	mg/L							
Manganese	ND	0.0100	0.0008	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Potassium	ND	0.100	0.0165	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Sodium	ND	0.100	0.0135	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 (8010279-BS1)

Prepared: 01/12/18 Analyzed: 01/18/18

Antimony	0.109	0.0030	0.0006	mg/L	0.10000		109	80-120			
Arsenic	0.101	0.0050	0.0005	mg/L	0.10000		101	80-120			
Barium	0.0963	0.0100	0.0004	mg/L	0.10000		96	80-120			
Beryllium	0.102	0.0030	0.00009	mg/L	0.10000		102	80-120			
Boron	1.03	0.0400	0.0060	mg/L	1.0000		103	80-120			
Cadmium	0.0995	0.0010	0.0001	mg/L	0.10000		100	80-120			
Calcium	0.953	0.500	0.0404	mg/L	1.0000		95	80-120			
Chromium	0.0990	0.0100	0.0005	mg/L	0.10000		99	80-120			
Cobalt	0.104	0.0100	0.0003	mg/L	0.10000		104	80-120			
Copper	0.0999	0.0250	0.0003	mg/L	0.10000		100	80-120			
Iron	1.02	0.0400	0.0043	mg/L	1.0000		102	80-120			
Lead	0.0976	0.0050	0.00007	mg/L	0.10000		98	80-120			
Magnesium	1.05	0.0500	0.0063	mg/L	1.0000		105	80-120			
Manganese	0.102	0.0100	0.0008	mg/L	0.10000		102	80-120			



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January 25, 2018

Report No.: ABA0305

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010279 - EPA 3005A											
LCS (8010279-BS1)						Prepared: 01/12/18 Analyzed: 01/18/18					
Molybdenum	0.0986	0.0100	0.0010	mg/L	0.10000		99	80-120			
Nickel	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			
Potassium	0.970	0.100	0.0165	mg/L	1.0000		97	80-120			
Selenium	0.101	0.0100	0.0018	mg/L	0.10000		101	80-120			
Silver	0.0986	0.0100	0.0002	mg/L	0.10000		99	80-120			
Sodium	1.01	0.100	0.0135	mg/L	1.0000		101	80-120			
Thallium	0.0980	0.0010	0.00005	mg/L	0.10000		98	80-120			
Vanadium	0.102	0.0100	0.0012	mg/L	0.10000		102	80-120			
Zinc	0.103	0.0100	0.0012	mg/L	0.10000		103	80-120			
Lithium	0.101	0.0500	0.0015	mg/L	0.10000		101	80-120			
Matrix Spike (8010279-MS1)						Source: ABA0306-01 Prepared: 01/12/18 Analyzed: 01/18/18					
Antimony	0.109	0.0030	0.0006	mg/L	0.10000	ND	109	75-125			
Arsenic	0.103	0.0050	0.0005	mg/L	0.10000	0.0021	101	75-125			
Barium	0.121	0.0100	0.0004	mg/L	0.10000	0.0222	99	75-125			
Beryllium	0.0962	0.0030	0.00009	mg/L	0.10000	ND	96	75-125			
Boron	1.01	0.0400	0.0060	mg/L	1.0000	0.0679	94	75-125			
Cadmium	0.0987	0.0010	0.0001	mg/L	0.10000	ND	99	75-125			
Calcium	119	25.0	2.02	mg/L	1.0000	119	NR	75-125			QM-02
Chromium	0.0983	0.0100	0.0005	mg/L	0.10000	0.0006	98	75-125			
Cobalt	0.103	0.0100	0.0003	mg/L	0.10000	ND	103	75-125			
Copper	0.0955	0.0250	0.0003	mg/L	0.10000	0.0005	95	75-125			
Iron	1.69	0.0400	0.0043	mg/L	1.0000	0.640	105	75-125			
Lead	0.0921	0.0050	0.00007	mg/L	0.10000	ND	92	75-125			
Magnesium	26.1	2.50	0.314	mg/L	1.0000	23.6	250	75-125			QM-02
Manganese	0.285	0.0100	0.0008	mg/L	0.10000	0.176	108	75-125			
Molybdenum	0.108	0.0100	0.0010	mg/L	0.10000	0.0038	104	75-125			
Nickel	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125			
Potassium	3.50	0.100	0.0165	mg/L	1.0000	2.41	109	75-125			
Selenium	0.105	0.0100	0.0018	mg/L	0.10000	0.0019	103	75-125			
Silver	0.0961	0.0100	0.0002	mg/L	0.10000	ND	96	75-125			
Sodium	16.6	5.00	0.674	mg/L	1.0000	15.8	76	75-125			
Thallium	0.0936	0.0010	0.00005	mg/L	0.10000	ND	94	75-125			
Vanadium	0.108	0.0100	0.0012	mg/L	0.10000	0.0103	98	75-125			
Zinc	0.0999	0.0100	0.0012	mg/L	0.10000	0.0018	98	75-125			
Lithium	0.0942	0.0500	0.0015	mg/L	0.10000	ND	94	75-125			



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Georgia Power
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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 25, 2018

Report No.: ABA0305

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010279 - EPA 3005A											
Matrix Spike Dup (8010279-MSD1)			Source: ABA0306-01				Prepared: 01/12/18 Analyzed: 01/18/18				
Antimony	0.110	0.0030	0.0006	mg/L	0.10000	ND	110	75-125	0.9	20	
Arsenic	0.107	0.0050	0.0005	mg/L	0.10000	0.0021	105	75-125	4	20	
Barium	0.120	0.0100	0.0004	mg/L	0.10000	0.0222	98	75-125	0.8	20	
Beryllium	0.0959	0.0030	0.00009	mg/L	0.10000	ND	96	75-125	0.3	20	
Boron	1.02	0.0400	0.0060	mg/L	1.0000	0.0679	96	75-125	1	20	
Cadmium	0.0994	0.0010	0.0001	mg/L	0.10000	ND	99	75-125	0.7	20	
Calcium	122	25.0	2.02	mg/L	1.0000	119	245	75-125	2	20	QM-02
Chromium	0.0983	0.0100	0.0005	mg/L	0.10000	0.0006	98	75-125	0.02	20	
Cobalt	0.0977	0.0100	0.0003	mg/L	0.10000	ND	98	75-125	5	20	
Copper	0.0931	0.0250	0.0003	mg/L	0.10000	0.0005	93	75-125	3	20	
Iron	1.61	0.0400	0.0043	mg/L	1.0000	0.640	97	75-125	5	20	
Lead	0.0953	0.0050	0.00007	mg/L	0.10000	ND	95	75-125	3	20	
Magnesium	26.0	2.50	0.314	mg/L	1.0000	23.6	242	75-125	0.3	20	QM-02
Manganese	0.282	0.0100	0.0008	mg/L	0.10000	0.176	105	75-125	1	20	
Molybdenum	0.106	0.0100	0.0010	mg/L	0.10000	0.0038	103	75-125	2	20	
Nickel	0.0926	0.0100	0.0005	mg/L	0.10000	ND	93	75-125	8	20	
Potassium	3.51	0.100	0.0165	mg/L	1.0000	2.41	111	75-125	0.5	20	
Selenium	0.107	0.0100	0.0018	mg/L	0.10000	0.0019	105	75-125	2	20	
Silver	0.0945	0.0100	0.0002	mg/L	0.10000	ND	95	75-125	2	20	
Sodium	16.4	5.00	0.674	mg/L	1.0000	15.8	54	75-125	1	20	QM-02
Thallium	0.0946	0.0010	0.00005	mg/L	0.10000	ND	95	75-125	1	20	
Vanadium	0.110	0.0100	0.0012	mg/L	0.10000	0.0103	100	75-125	2	20	
Zinc	0.104	0.0100	0.0012	mg/L	0.10000	0.0018	102	75-125	4	20	
Lithium	0.0980	0.0500	0.0015	mg/L	0.10000	ND	98	75-125	4	20	

Post Spike (8010279-PS1)			Source: ABA0306-01				Prepared: 01/12/18 Analyzed: 01/18/18				
Antimony	107			ug/L	100.00	0.125	107	80-120			
Arsenic	104			ug/L	100.00	2.09	102	80-120			
Barium	122			ug/L	100.00	22.2	100	80-120			
Beryllium	97.4			ug/L	100.00	0.0608	97	80-120			
Boron	1030			ug/L	1000.0	67.9	97	80-120			
Cadmium	95.6			ug/L	100.00	0.128	95	80-120			
Calcium	111000			ug/L	1000.0	119000	NR	80-120			QM-02
Chromium	101			ug/L	100.00	0.595	100	80-120			
Cobalt	99.2			ug/L	100.00	0.166	99	80-120			
Copper	97.0			ug/L	100.00	0.501	96	80-120			
Iron	1630			ug/L	1000.0	640	99	80-120			
Lead	90.4			ug/L	100.00	0.0596	90	80-120			
Magnesium	23900			ug/L	1000.0	23600	31	80-120			QM-02
Manganese	280			ug/L	100.00	176	104	80-120			



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 25, 2018

Report No.: ABA0305

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010279 - EPA 3005A											
Post Spike (8010279-PS1)			Source: ABA0306-01			Prepared: 01/12/18 Analyzed: 01/18/18					
Molybdenum	106			ug/L	100.00	3.84	102	80-120			
Nickel	98.3			ug/L	100.00	0.379	98	80-120			
Potassium	3300			ug/L	1000.0	2410	89	80-120			
Selenium	108			ug/L	100.00	1.92	106	80-120			
Silver	96.4			ug/L	100.00	0.0110	96	80-120			
Sodium	15500			ug/L	1000.0	15800	NR	80-120			QM-02
Thallium	91.1			ug/L	100.00	0.0407	91	80-120			
Vanadium	112			ug/L	100.00	10.3	101	80-120			
Zinc	101			ug/L	100.00	1.80	100	80-120			
Lithium	96.3			ug/L	100.00	0.130	96	80-120			
Batch 8010324 - EPA 7470A											
Blank (8010324-BLK1)			Prepared & Analyzed: 01/18/18								
Mercury	ND	0.00050	0.000036	mg/L							
LCS (8010324-BS1)			Prepared & Analyzed: 01/18/18								
Mercury	0.00245	0.00050	0.000036	mg/L	2.5000E-3		98	80-120			
Matrix Spike (8010324-MS1)			Source: ABA0303-01			Prepared & Analyzed: 01/18/18					
Mercury	0.00234	0.00050	0.000036	mg/L	2.5000E-3	ND	94	75-125			
Matrix Spike Dup (8010324-MSD1)			Source: ABA0303-01			Prepared & Analyzed: 01/18/18					
Mercury	0.00229	0.00050	0.000036	mg/L	2.5000E-3	ND	92	75-125	2	20	
Post Spike (8010324-PS1)			Source: ABA0303-01			Prepared & Analyzed: 01/18/18					
Mercury	1.67			ug/L	1.6667	-0.0238	100	80-120			



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January 25, 2018

Legend

Definition of Laboratory Terms

- ND** - Not Detected at levels equal to or greater than the MDL
BRL - Not Detected at levels equal to or greater than the RL
RL - Reporting Limit **MDL** - Method Detection Limit
SOP - Method run per Pace Standard Operating Procedure
CFU - Colony Forming Units
DF - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrosodiphenylamine. Pace is not NELAC certified for N-Nitrosodiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

QM-02 The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

J Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

Note: Unless otherwise noted, all results are reported on an as received basis.



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January 25, 2018

Report Notes

The lid came off of 1-500ml unpreserved plastic container during transit. MMR



Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CHAIN OF CUSTODY RECORD

PAGE: 1 OF 1

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239 REPORT TO: Lauren Petty REQUESTED COMPLETION DATE: CC: Maria Padilla Heath McCorkle PROJECT NAME/STATE: PO #: laburch@southernco.com Plant Kraft Grumman Road Phase 2 CCR & State D&O		CONTAINER TYPE PRESERVATION # of CONTAINERS		ANALYSIS REQUESTED P 3 P 3 P 7 P 3 Metals App. III & IV (EPA 6020/7470) ✓ Metals (See attached) (EPA 6020) ✓ Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) ✓ Radum 226 & 228 (SM-846 9315/9320) ✓ Bicarbonate Alk, Carbonate Alk, Total Alk ✓ Fe, Mg, Na, K ✓ Tritium ✓ TOC ✓ Dissolved CH ₄ ✓							CONTAINER TYPE PRESERVATION P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O 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 (9 containers, 1 in shell sample) collected 1 - soon unpyserved plastic container BIT. MA 1/11/18
Collection DATE 1-10-18 Collection TIME 1640 MATRIX CODE W Sample Identification Clifton Seep Collection X Container 910 of 120-18	DATE/TIME 1-10-18 1640 DATE/TIME 1-11-18 0830 DATE/TIME 1-11-18 1230 Temperature: Max: 20.5	SAMPLED BY AND TITLE D. FURVA RECEIVED BY: RECEIVED BY LAB: M. ORRLEY RECEIVED BY: M. ORRLEY DATE/TIME: 1-11-18 1230 Temperature: Max: 20.5 Broken Not Present	RELINQUISHED BY: RELINQUISHED BY: SAMPLE SHIPPED VIA: UPS Courier Seal: (match) Broken Not Present	DATE/TIME: 1-11-18 0830 DATE/TIME: CLIENT: COURIER OTHER: FS Tracking #:	LAB #: ABA0305 Entered into LIMS: Tracking #:							

Received by Lab: Madalman
Plant Kraft - Grumman Rd CCR Phase 2 CCR & State



Sample Condition Upon Receipt

Client Name: GLA Powder

Project # ABA0305

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: _____



Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used IR-4 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 0.5 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and initials of person examining contents: 1/11/18 MK

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	10. <u>Lid came off of 1-500ml unpr. plastic container</u>
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>(u)</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform <u>(u)</u> O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp incorrect containers)



PACE ANALYTICAL SERVICES, LLC.

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LOG-IN CHECKLIST

Printed: 1/12/2018 2:09:17PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event - Clifton LF Seep

Date Received: 01/11/18 12:30

Work Order: ABA0305

Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 1

#Containers: 8

Minimum Temp(C): 0.5

Maximum Temp(C): 0.5

Custody Seal(s) Used: Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	NO
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 lid came off of 1-500ml unpreserved plastic container during transit. MMR

February 06, 2018

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: ABA0305 Plant Kraft
Pace Project No.: 30240915

Dear Mr. Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on January 16, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: ABA0305 Plant Kraft
Pace Project No.: 30240915

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235

Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: ABA0305 Plant Kraft

Pace Project No.: 30240915

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30240915001	Clifton Seep	Water	01/10/18 16:40	01/16/18 11:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: ABA0305 Plant Kraft

Pace Project No.: 30240915

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30240915001	Clifton Seep	EPA 906.0	NJV	1
		EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: ABA0305 Plant Kraft

Pace Project No.: 30240915

Sample: Clifton Seep **Lab ID: 30240915001** Collected: 01/10/18 16:40 Received: 01/16/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • Low volume, client notified, proceed at low volume as per client.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Tritium	EPA 906.0	1,904 ± 339 (245) C:NA T:NA	pCi/L	01/26/18 10:56	10028-17-8	
Radium-226	EPA 9315	1.43 ± 0.674 (0.928) C:58% T:NA	pCi/L	01/22/18 10:29	13982-63-3	
Radium-228	EPA 9320	3.99 ± 1.04 (0.972) C:80% T:59%	pCi/L	01/31/18 14:42	15262-20-1	
Total Radium	Total Radium Calculation	5.42 ± 1.71 (1.90)	pCi/L	02/01/18 12:09	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: ABA0305 Plant Kraft

Pace Project No.: 30240915

QC Batch: 285232

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 30240915001

METHOD BLANK: 1399116

Matrix: Water

Associated Lab Samples: 30240915001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.269 ± 0.338 (0.718) C:77% T:82%	pCi/L	01/31/18 11:25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: ABA0305 Plant Kraft

Pace Project No.: 30240915

QC Batch: 285875

Analysis Method: EPA 906.0

QC Batch Method: EPA 906.0

Analysis Description: 906.0 Tritium

Associated Lab Samples: 30240915001

METHOD BLANK: 1402249

Matrix: Water

Associated Lab Samples: 30240915001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Tritium	153 ± 149 (245) C:NA T:NA	pCi/L	01/26/18 02:45	

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.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: ABA0305 Plant Kraft

Pace Project No.: 30240915

QC Batch: 285234

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 30240915001

METHOD BLANK: 1399118

Matrix: Water

Associated Lab Samples: 30240915001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.254 ± 0.158 (0.223) C:89% T:NA	pCi/L	01/22/18 10:37	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: ABA0305 Plant Kraft
Pace Project No.: 30240915

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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Pittsburgh Lab Sample Condition Upon Receipt

30240915



Client Name: Pace Atlanta Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Label	<u>ZH</u>
LIMS Login	<u>ANV</u>

Tracking #: 741366610720

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:	<u>ZH 1/16/18</u>
---	-------------------

Comments:	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9. <u>Low volume only 1 preserved</u>
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
-Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Orthophosphate field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
Hex Cr Aqueous Compliance/NPDES sample field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.
Organic Samples checked for dechlorination:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.
All containers have been checked for preservation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16. <u>PHLZ</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>ZH</u> Date/time of preservation: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	18.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rad Aqueous Samples Screened > 0.5 mrem/hr	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>ZH</u> Date: <u>1/16/18</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JC2
Date: 1/19/2018
Worklist: 39545
Matrix: DW

Method Blank Assessment	
MB Sample ID	1399118
MB concentration:	0.254
MB Counting Uncertainty:	0.154
MB MDC:	0.223
MB Numerical Performance Indicator:	3.23
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	See Comment*

Laboratory Control Sample Assessment	
Count Date:	1/22/2018
Sample I.D.:	17-030
Spike Concentration (pCi/mL):	80.180
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.509
Target Conc. (pCi/L, g, F):	15.766
Uncertainty (Calculated):	1.452
Result (pCi/L, g, F):	14.366
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.053
Numerical Performance Indicator:	-1.53
Percent Recovery:	91.12%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	30240905009
Duplicate Sample I.D.:	30240905009DUP
Sample Result (pCi/L, g, F):	0.990
Sample Result Counting Uncertainty (pCi/L, g, F):	0.280
Sample Duplicate Result (pCi/L, g, F):	1.037
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.284
Are sample and/or duplicate results below MDC?	See Below ##
Duplicate Numerical Performance Indicator:	-0.228
Duplicate RPD:	4.57%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*The method blank result is below the reporting limit for this analysis and is acceptable.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MSD Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

Jan 13 11:18

Jan 13 11:18

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 1/22/2018
Worklist: 39543
Matrix: DW

Method Blank Assessment	
MB Sample ID	1399116
MB concentration:	0.269
M/B Counting Uncertainty:	0.335
MB MDC:	0.718
MB Numerical Performance Indicator:	1.58
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS (Y or N)?	N
		LCS39543	LCS39543
Count Date:	1/31/2018		
Spike I.D.:	17-033		
Spike Concentration (pCi/mL):	22.452		
Aliquot Volume (L, g, F):	0.20		
Target Conc. (pCi/L, g, F):	0.816		
Uncertainty (Calculated):	5.501		
Result (pCi/L, g, F):	4.713		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.583		
Numerical Performance Indicator:	-2.19		
Percent Recovery:	85.67%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		

Duplicate Sample Assessment	
Sample I.D.:	30240905009
Duplicate Sample I.D.:	30240905009DUP
Sample Result Counting Uncertainty (pCi/L, g, F):	1.116
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.392
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.015
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.363
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	0.370
Duplicate RPD:	9.46%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Handwritten notes:
 30240905009
 30240905009DUP
 See Below #

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

Quality Control Sample Performance Assessment

Analyst: NJV
Date: 1/31/2018
Worklist: 39629
Matrix: Water

Method: EPA 906.0
SOP: PGR-021
MB Sample ID: 1402249



Sample Matrix Spike Control Assessment	
Analyte:	Tritium
Sample Collection Date:	1/8/2018
Sample I.D.:	92369240001
Sample MS I.D.:	92369240001MS
Sample MSD I.D.:	
Spike I.D.:	15-024
MS/MSD Decay Corrected Spike Conc. (pCi/L):	2337.075
Spike Volume Used in MS (mL):	0.20
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	0.1014
MS Target Conc. (pCi/L, g, F):	4608.707
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
MS Spike uncertainty (calculated):	343.256
MSD Spike uncertainty (calculated):	
Sample Result:	2044.460
Sample 1.96 Sigma Unc.:	236.800
Sample Matrix Spike Result:	5560.380
Sample MS 1.96 Sigma Unc.:	248.800
Sample Matrix Spike Duplicate Result:	
Sample MSD 1.96 Sigma Unc.:	
MS % Recovery:	76.07%
MSD % Recovery:	
MS Assessment:	Pass
MSD Assessment:	
MS/MSD Upper % Recovery Limits:	125.00%
MS/MSD Lower % Recovery Limits:	75.00%
Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Analyte:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike % Recovery:	
Sample Matrix Spike Duplicate % Recovery:	
MS/MSD Relative Percent Difference:	
MS/MSD RPD Assessment:	
% RPD Limit:	

Method Blank Assessment	
Analyte	Tritium
Activity	152.5900
1.96 Sig Unc.	148.1000
MDC	245.0000
Critical Value	116.27000
Flag	
Assessment	

Laboratory Control Sample Assessment			
	LCS	LCS	LCS
Analyte:	Tritium		
Count Date:	1/26/18 16:03	1/26/18 17:04	
Spike I.D.:	15-024	15-024	
Spike Concentration (pCi/L):	2330.512	2330.497	
Volume Used (mL):	0.100	0.100	
Aliquot Volume (L, g, F):	0.100	0.102	
Target Conc. (pCi/L, g, F):	2334.246	2282.116	
Result (pCi/L, g, F):	173.855	169.972	
1.96 Sigma Uncertainty (Calculated):	2102.460	2305.320	
1.96 Sigma Unc:	241.900	244.900	
% Recovery:	90.07%	101.02%	
Assessment:	Pass	Pass	
Upper % Recovery Limits:	125.00%	125.00%	
Lower % Recovery Limits:	75.00%	75.00%	
Duplicate Sample Assessment			
LCS/LCSD Y or N?:	Y		
Analyte:	Tritium		
Sample I.D.:	LCS39629		
Duplicate Sample I.D.:	LCS039629		
Sample % Recovery:	0.9007		
Duplicate Sample % Recovery:	1.0102		
Relative Percent Difference:	11.46%		
Assessment:	Pass		
% RPD Limit:	25.00%		

Duplicate Sample Assessment	
Analyte:	Tritium
Sample I.D.:	LCS39629
Duplicate Sample I.D.:	LCS039629
Sample % Recovery:	0.9007
Duplicate Sample % Recovery:	1.0102
Relative Percent Difference:	11.46%
Assessment:	Pass
% RPD Limit:	25.00%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

NJV
1-31-18

01181113118



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: ABA0306

January 31, 2018

Project: CCR Event

Project #:Plant Kraft

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

A handwritten signature in black ink that reads "Betsy McDaniel" written over a horizontal line.

Project Manager

This report may not be reproduced, except in full, without written approval from Pace Analytical Services, LLC.
All test results relate only to the samples analyzed.



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 31, 2018

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-14	ABA0306-01	Ground Water	01/09/18 12:20	01/11/18 12:30
GWC-21	ABA0306-02	Ground Water	01/09/18 16:05	01/11/18 12:30
EB-1-1-9-18	ABA0306-03	Water	01/09/18 16:30	01/11/18 12:30
GWC-2	ABA0306-04	Ground Water	01/10/18 14:10	01/11/18 12:30
GWC-13	ABA0306-05	Ground Water	01/10/18 15:55	01/11/18 12:30
GWC-6	ABA0306-06	Ground Water	01/09/18 15:50	01/11/18 12:30
FB-2-1-10-18	ABA0306-07	Water	01/10/18 09:10	01/11/18 12:30
GWC-5	ABA0306-08	Ground Water	01/10/18 11:45	01/11/18 12:30
GWC-1	ABA0306-09	Ground Water	01/10/18 15:10	01/11/18 12:30
Dup-1-1-10-18	ABA0306-10	Ground Water	01/10/18 00:00	01/11/18 12:30
Dup-2-1-10-18	ABA0306-11	Ground Water	01/10/18 00:00	01/11/18 12:30



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 31, 2018

Case Narrative

The Radium analysis by methods EPA 9315/9320 analysis by method EPA 906.0 were 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. Please see the included subcontractor reports.



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 31, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0306

Project: CCR Event

Client ID: GWC-14

Lab Number ID: ABA0306-01

Date/Time Sampled: 1/9/2018 12:20:00PM

Date/Time Received: 1/11/2018 12:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	8	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	8	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	653	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Inorganic Anions											
Chloride	24	2.5	0.24	mg/L	EPA 300.0		10	01/15/18 10:51	01/25/18 16:54	8010333	RLC
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 18:34	8010333	MWB
Sulfate	440	25	0.42	mg/L	EPA 300.0		25	01/15/18 10:51	01/30/18 14:25	8010333	RLC
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Arsenic	0.0021	0.0050	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Barium	0.0222	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Boron	0.0679	0.0400	0.0060	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Calcium	119	25.0	2.02	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 20:15	8010279	CSW
Chromium	0.0006	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Iron	0.640	0.0400	0.0043	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Magnesium	23.6	2.50	0.314	mg/L	EPA 6020B		50	01/12/18 16:05	01/19/18 13:39	8010279	CSW
Molybdenum	0.0038	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Potassium	2.41	0.100	0.0165	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Selenium	0.0019	0.0100	0.0018	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Sodium	15.8	5.00	0.674	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 20:15	8010279	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Vanadium	0.0103	0.0100	0.0012	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Zinc	0.0018	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:09	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 18:01	8010324	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 31, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0306

Project: CCR Event

Client ID: GWC-21

Lab Number ID: ABA0306-02

Date/Time Sampled: 1/9/2018 4:05:00PM

Date/Time Received: 1/11/2018 12:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	142	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	142	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	167	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Inorganic Anions											
Chloride	4.4	0.25	0.02	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 20:17	8010333	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 20:17	8010333	MWB
Sulfate	29	1.0	0.02	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 20:17	8010333	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Arsenic	0.0033	0.0050	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Barium	0.0704	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Boron	0.783	0.0400	0.0060	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Calcium	40.5	25.0	2.02	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 20:38	8010279	CSW
Chromium	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Iron	0.0282	0.0400	0.0043	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Lead	0.00009	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Magnesium	8.14	2.50	0.314	mg/L	EPA 6020B		50	01/12/18 16:05	01/19/18 13:45	8010279	CSW
Molybdenum	0.0900	0.0100	0.0010	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Potassium	8.80	0.100	0.0165	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Selenium	0.0162	0.0100	0.0018	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Sodium	6.67	0.100	0.0135	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Vanadium	0.0046	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Zinc	0.0016	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:32	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 18:03	8010324	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 31, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0306

Project: CCR Event

Client ID: EB-1-1-9-18

Lab Number ID: ABA0306-03

Date/Time Sampled: 1/9/2018 4:30:00PM

Date/Time Received: 1/11/2018 12:30:00PM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Inorganic Anions											
Chloride	0.05	0.25	0.02	mg/L	EPA 300.0	J	1	01/15/18 10:51	01/15/18 20:58	8010333	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 20:58	8010333	MWB
Sulfate	ND	1.0	0.02	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 20:58	8010333	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Iron	ND	0.0400	0.0043	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Magnesium	ND	0.0500	0.0063	mg/L	EPA 6020B		1	01/12/18 16:05	01/19/18 14:32	8010279	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Potassium	0.0270	0.100	0.0165	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Sodium	0.0390	0.100	0.0135	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Vanadium	ND	0.0100	0.0012	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Zinc	0.0015	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:43	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 18:06	8010324	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 31, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0306

Project: CCR Event

Client ID: GWC-2

Lab Number ID: ABA0306-04

Date/Time Sampled: 1/10/2018 2:10:00PM

Date/Time Received: 1/11/2018 12:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	1	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	1	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Inorganic Anions											
Chloride	8.2	0.25	0.02	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 21:19	8010333	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 21:19	8010333	MWB
Sulfate	9.5	1.0	0.02	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 21:19	8010333	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Arsenic	0.0006	0.0050	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Barium	0.0527	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Boron	0.0203	0.0400	0.0060	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Calcium	0.177	0.500	0.0404	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Iron	0.891	0.0400	0.0043	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Lead	0.00008	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Magnesium	0.754	0.250	0.0314	mg/L	EPA 6020B		5	01/12/18 16:05	01/19/18 14:38	8010279	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Potassium	0.513	0.100	0.0165	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Sodium	7.69	0.100	0.0135	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Vanadium	ND	0.0100	0.0012	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 20:49	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 18:08	8010324	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 31, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0306

Project: CCR Event

Client ID: GWC-13

Lab Number ID: ABA0306-05

Date/Time Sampled: 1/10/2018 3:55:00PM

Date/Time Received: 1/11/2018 12:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	1	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	1	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Inorganic Anions											
Chloride	3.4	0.25	0.02	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 21:40	8010333	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 21:40	8010333	MWB
Sulfate	22	1.0	0.02	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 21:40	8010333	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Arsenic	0.0006	0.0050	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Barium	0.0166	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Boron	0.101	0.0400	0.0060	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Calcium	2.28	0.500	0.0404	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Chromium	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Iron	0.349	0.0400	0.0043	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Lead	0.0009	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Magnesium	2.80	0.500	0.0628	mg/L	EPA 6020B		10	01/12/18 16:05	01/19/18 14:43	8010279	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Potassium	0.672	0.100	0.0165	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Sodium	3.16	0.100	0.0135	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Vanadium	0.0019	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Zinc	0.0021	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:00	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 18:10	8010324	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

January 31, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0306
Client ID: GWC-6
Date/Time Sampled: 1/9/2018 3:50:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: ABA0306-06
Date/Time Received: 1/11/2018 12:30:00PM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	52	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	52	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	415	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Inorganic Anions											
Chloride	61	2.5	0.24	mg/L	EPA 300.0		10	01/15/18 10:51	01/20/18 15:49	8010333	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 22:00	8010333	MWB
Sulfate	140	10	0.17	mg/L	EPA 300.0		10	01/15/18 10:51	01/20/18 15:49	8010333	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Arsenic	0.0017	0.0050	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Barium	0.0969	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Boron	2.81	0.0400	0.0060	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Calcium	4.73	0.500	0.0404	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Chromium	0.0019	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Iron	1.52	0.0400	0.0043	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Lead	0.0003	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Magnesium	3.28	0.500	0.0628	mg/L	EPA 6020B		10	01/12/18 16:05	01/19/18 14:49	8010279	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Potassium	19.4	5.00	0.824	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 21:18	8010279	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Sodium	116	5.00	0.674	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 21:18	8010279	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Vanadium	0.0086	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Zinc	0.0036	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:12	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 18:13	8010324	MTC



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 31, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0306

Project: CCR Event

Client ID: FB-2-1-10-18

Lab Number ID: ABA0306-07

Date/Time Sampled: 1/10/2018 9:10:00AM

Date/Time Received: 1/11/2018 12:30:00PM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Inorganic Anions											
Chloride	0.06	0.25	0.02	mg/L	EPA 300.0	J	1	01/15/18 10:51	01/15/18 22:21	8010333	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 22:21	8010333	MWB
Sulfate	0.04	1.0	0.02	mg/L	EPA 300.0	J	1	01/15/18 10:51	01/15/18 22:21	8010333	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Boron	0.0072	0.0400	0.0060	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Iron	ND	0.0400	0.0043	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Magnesium	ND	0.0500	0.0063	mg/L	EPA 6020B		1	01/12/18 16:05	01/19/18 14:55	8010279	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Potassium	ND	0.100	0.0165	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Sodium	0.0320	0.100	0.0135	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Vanadium	ND	0.0100	0.0012	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Zinc	0.0013	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:23	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 18:15	8010324	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 31, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0306

Project: CCR Event

Client ID: GWC-5

Lab Number ID: ABA0306-08

Date/Time Sampled: 1/10/2018 11:45:00AM

Date/Time Received: 1/11/2018 12:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	128	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	128	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	493	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Inorganic Anions											
Chloride	59	2.5	0.24	mg/L	EPA 300.0		10	01/15/18 10:51	01/20/18 16:11	8010333	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 22:42	8010333	MWB
Sulfate	110	10	0.17	mg/L	EPA 300.0		10	01/15/18 10:51	01/20/18 16:11	8010333	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Arsenic	0.0012	0.0050	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Barium	0.158	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Beryllium	0.0003	0.0030	0.00009	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Boron	3.21	0.0400	0.0060	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Calcium	15.5	5.00	2.02	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 21:46	8010279	CSW
Chromium	0.0016	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Cobalt	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Iron	5.35	0.0400	0.0043	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Lead	0.0003	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Magnesium	9.38	2.50	0.314	mg/L	EPA 6020B		50	01/12/18 16:05	01/19/18 15:01	8010279	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Potassium	8.37	0.100	0.0165	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Sodium	107	5.00	0.674	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 21:46	8010279	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Vanadium	0.0077	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Zinc	0.0022	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Lithium	0.0041	0.0500	0.0015	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:40	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 18:17	8010324	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 31, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0306

Project: CCR Event

Client ID: GWC-1

Lab Number ID: ABA0306-09

Date/Time Sampled: 1/10/2018 3:10:00PM

Date/Time Received: 1/11/2018 12:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	111	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	111	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	277	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Inorganic Anions											
Chloride	6.9	0.25	0.02	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 23:02	8010333	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 23:02	8010333	MWB
Sulfate	86	10	0.17	mg/L	EPA 300.0		10	01/15/18 10:51	01/20/18 16:32	8010333	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Arsenic	0.0023	0.0050	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Barium	0.0530	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Boron	0.876	0.0400	0.0060	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Calcium	36.5	25.0	2.02	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 21:58	8010279	CSW
Chromium	0.0017	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Iron	0.180	0.0400	0.0043	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Magnesium	18.0	2.50	0.314	mg/L	EPA 6020B		50	01/12/18 16:05	01/19/18 15:06	8010279	CSW
Molybdenum	0.117	0.0100	0.0010	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Potassium	8.41	0.100	0.0165	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Selenium	0.0018	0.0100	0.0018	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Sodium	18.0	5.00	0.674	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 21:59	8010279	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Vanadium	0.0056	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Zinc	0.0014	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 21:52	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 18:24	8010324	MTC



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 31, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0306

Project: CCR Event

Client ID: Dup-1-1-10-18

Lab Number ID: ABA0306-10

Date/Time Sampled: 1/10/2018 12:00:00AM

Date/Time Received: 1/11/2018 12:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	130	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	130	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	908	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Inorganic Anions											
Chloride	35	6.2	0.60	mg/L	EPA 300.0		25	01/15/18 10:51	01/20/18 16:54	8010333	MWB
Fluoride	0.61	0.30	0.03	mg/L	EPA 300.0		1	01/15/18 10:51	01/15/18 23:23	8010333	MWB
Sulfate	540	25	0.42	mg/L	EPA 300.0		25	01/15/18 10:51	01/20/18 16:54	8010333	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:03	8010279	CSW
Arsenic	0.0827	0.0050	0.0005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:03	8010279	CSW
Barium	0.0592	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:03	8010279	CSW
Beryllium	0.0001	0.0030	0.00009	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 22:03	8010279	CSW
Boron	3.75	0.0400	0.0060	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:03	8010279	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:03	8010279	CSW
Calcium	156	25.0	2.02	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 22:09	8010279	CSW
Chromium	0.0007	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 22:03	8010279	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:03	8010279	CSW
Iron	0.416	0.0400	0.0043	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:03	8010279	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 22:03	8010279	CSW
Magnesium	46.9	2.50	0.314	mg/L	EPA 6020B		50	01/12/18 16:05	01/19/18 15:12	8010279	CSW
Molybdenum	0.157	0.0100	0.0010	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:03	8010279	CSW
Potassium	19.2	5.00	0.824	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 22:09	8010279	CSW
Selenium	0.0020	0.0100	0.0018	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 22:03	8010279	CSW
Sodium	74.0	5.00	0.674	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 22:09	8010279	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:03	8010279	CSW
Vanadium	0.0031	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 22:03	8010279	CSW
Zinc	0.0020	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 22:03	8010279	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:03	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 18:27	8010324	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

January 31, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0306

Project: CCR Event

Client ID: Dup-2-1-10-18

Lab Number ID: ABA0306-11

Date/Time Sampled: 1/10/2018 12:00:00AM

Date/Time Received: 1/11/2018 12:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	111	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Bicarbonate as CaCO3	111	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/16/18 16:50	01/16/18 16:50	8010375	JAD
Total Dissolved Solids	273	25	10	mg/L	SM 2540 C		1	01/12/18 12:40	01/12/18 12:40	8010291	JPT
Inorganic Anions											
Chloride	6.6	0.25	0.02	mg/L	EPA 300.0		1	01/15/18 10:51	01/16/18 01:06	8010333	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/15/18 10:51	01/16/18 01:06	8010333	MWB
Sulfate	82	10	0.17	mg/L	EPA 300.0		10	01/15/18 10:51	01/20/18 17:16	8010333	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Arsenic	0.0026	0.0050	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Barium	0.0539	0.0100	0.0004	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Boron	0.945	0.0400	0.0060	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Calcium	37.2	25.0	2.02	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 22:20	8010279	CSW
Chromium	0.0018	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Iron	0.188	0.0400	0.0043	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Lead	ND	0.0050	0.00007	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Magnesium	18.0	2.50	0.314	mg/L	EPA 6020B		50	01/12/18 16:05	01/19/18 15:38	8010279	CSW
Molybdenum	0.119	0.0100	0.0010	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Potassium	8.85	0.100	0.0165	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Selenium	0.0028	0.0100	0.0018	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Sodium	16.9	5.00	0.674	mg/L	EPA 6020B		50	01/12/18 16:05	01/18/18 22:20	8010279	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Vanadium	0.0056	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/12/18 16:05	01/18/18 22:15	8010279	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/18/18 09:00	01/18/18 18:29	8010324	MTC



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Georgia Power
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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 31, 2018

Report No.: ABA0306

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010291 - SM 2540 C											
Blank (8010291-BLK1)						Prepared & Analyzed: 01/12/18					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (8010291-BS1)						Prepared & Analyzed: 01/12/18					
Total Dissolved Solids	355	25	10	mg/L	400.00		89	84-108			
Duplicate (8010291-DUP1)						Source: ABA0303-03 Prepared & Analyzed: 01/12/18					
Total Dissolved Solids	2720	25	10	mg/L		2640			3	10	
Duplicate (8010291-DUP2)						Source: ABA0306-07 Prepared & Analyzed: 01/12/18					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Batch 8010375 - SM 2320 B											
Blank (8010375-BLK1)						Prepared & Analyzed: 01/16/18					
Alkalinity as CaCO3	ND	1	1	mg/L							
Alkalinity, Bicarbonate as CaCO3	ND	1	1	mg/L							
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L							
LCS (8010375-BS1)						Prepared & Analyzed: 01/16/18					
Alkalinity as CaCO3	102	1	1	mg/L	100.00		102	85-115			
Alkalinity, Bicarbonate as CaCO3	102	1	1	mg/L	100.00		102	85-115			
Alkalinity, Carbonate as CaCO3	102	1	1	mg/L	100.00		102	85-115			
Duplicate (8010375-DUP1)						Source: ABA0172-01 Prepared & Analyzed: 01/16/18					
Alkalinity as CaCO3	26	1	1	mg/L		25			4	10	
Alkalinity, Bicarbonate as CaCO3	26	1	1	mg/L		25			4	10	
Alkalinity, Carbonate as CaCO3	26	1	1	mg/L		ND				10	



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Report No.: ABA0306

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010414 - SM 2540 C											
Blank (8010414-BLK1)						Prepared & Analyzed: 01/18/18					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (8010414-BS1)						Prepared & Analyzed: 01/18/18					
Total Dissolved Solids	385	25	10	mg/L	400.00		96	84-108			
Duplicate (8010414-DUP1)						Source: ABA0306-07RE1 Prepared & Analyzed: 01/18/18					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (8010414-DUP2)						Source: ABA0339-07RE1 Prepared & Analyzed: 01/18/18					
Total Dissolved Solids	ND	25	10	mg/L		10				10	
Duplicate (8010414-DUP3)						Source: ABA0339-08RE1 Prepared & Analyzed: 01/18/18					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (8010414-DUP4)						Source: ABA0432-01 Prepared & Analyzed: 01/18/18					
Total Dissolved Solids	12300	25	10	mg/L		12300			0.1	10	



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Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010333 - EPA 300.0											
Blank (8010333-BLK1)						Prepared & Analyzed: 01/15/18					
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 (8010333-BS1)						Prepared & Analyzed: 01/15/18					
Chloride	9.81	0.25	0.02	mg/L	10.000		98	90-110			
Fluoride	9.51	0.30	0.03	mg/L	10.000		95	90-110			
Sulfate	9.70	1.0	0.02	mg/L	10.000		97	90-110			
Matrix Spike (8010333-MS1)						Source: ABA0303-01 Prepared & Analyzed: 01/15/18					
Chloride	15.0	0.25	0.02	mg/L	10.000	5.71	92	90-110			
Fluoride	9.97	0.30	0.03	mg/L	10.000	ND	100	90-110			
Sulfate	84.6	1.0	0.02	mg/L	10.000	84.5	1	90-110			QM-02
Matrix Spike (8010333-MS2)						Source: ABA0306-02 Prepared & Analyzed: 01/15/18					
Chloride	13.6	0.25	0.02	mg/L	10.000	4.38	93	90-110			
Fluoride	10.4	0.30	0.03	mg/L	10.000	ND	104	90-110			
Sulfate	35.6	1.0	0.02	mg/L	10.000	28.8	69	90-110			QM-02
Matrix Spike Dup (8010333-MSD1)						Source: ABA0303-01 Prepared & Analyzed: 01/15/18					
Chloride	15.0	0.25	0.02	mg/L	10.000	5.71	93	90-110	0.1	15	
Fluoride	10.0	0.30	0.03	mg/L	10.000	ND	100	90-110	0.5	15	
Sulfate	84.7	1.0	0.02	mg/L	10.000	84.5	1	90-110	0.04	15	QM-02



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8010279 - EPA 3005A

Blank (8010279-BLK1)

Prepared: 01/12/18 Analyzed: 01/18/18

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							
Iron	ND	0.0400	0.0043	mg/L							
Lead	ND	0.0050	0.00007	mg/L							
Magnesium	ND	0.0500	0.0063	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Potassium	ND	0.100	0.0165	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Sodium	ND	0.100	0.0135	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 (8010279-BS1)

Prepared: 01/12/18 Analyzed: 01/18/18

Antimony	0.109	0.0030	0.0006	mg/L	0.10000		109	80-120			
Arsenic	0.101	0.0050	0.0005	mg/L	0.10000		101	80-120			
Barium	0.0963	0.0100	0.0004	mg/L	0.10000		96	80-120			
Beryllium	0.102	0.0030	0.00009	mg/L	0.10000		102	80-120			
Boron	1.03	0.0400	0.0060	mg/L	1.0000		103	80-120			
Cadmium	0.0995	0.0010	0.0001	mg/L	0.10000		100	80-120			
Calcium	0.953	0.500	0.0404	mg/L	1.0000		95	80-120			
Chromium	0.0990	0.0100	0.0005	mg/L	0.10000		99	80-120			
Cobalt	0.104	0.0100	0.0003	mg/L	0.10000		104	80-120			
Copper	0.0999	0.0250	0.0003	mg/L	0.10000		100	80-120			
Iron	1.02	0.0400	0.0043	mg/L	1.0000		102	80-120			
Lead	0.0976	0.0050	0.00007	mg/L	0.10000		98	80-120			
Magnesium	1.05	0.0500	0.0063	mg/L	1.0000		105	80-120			
Molybdenum	0.0986	0.0100	0.0010	mg/L	0.10000		99	80-120			
Nickel	0.101	0.0100	0.0005	mg/L	0.10000		101	80-120			



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Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010279 - EPA 3005A											
LCS (8010279-BS1)						Prepared: 01/12/18 Analyzed: 01/18/18					
Potassium	0.970	0.100	0.0165	mg/L	1.0000		97	80-120			
Selenium	0.101	0.0100	0.0018	mg/L	0.10000		101	80-120			
Silver	0.0986	0.0100	0.0002	mg/L	0.10000		99	80-120			
Sodium	1.01	0.100	0.0135	mg/L	1.0000		101	80-120			
Thallium	0.0980	0.0010	0.00005	mg/L	0.10000		98	80-120			
Vanadium	0.102	0.0100	0.0012	mg/L	0.10000		102	80-120			
Zinc	0.103	0.0100	0.0012	mg/L	0.10000		103	80-120			
Lithium	0.101	0.0500	0.0015	mg/L	0.10000		101	80-120			
Matrix Spike (8010279-MS1)						Source: ABA0306-01 Prepared: 01/12/18 Analyzed: 01/18/18					
Antimony	0.109	0.0030	0.0006	mg/L	0.10000	ND	109	75-125			
Arsenic	0.103	0.0050	0.0005	mg/L	0.10000	0.0021	101	75-125			
Barium	0.121	0.0100	0.0004	mg/L	0.10000	0.0222	99	75-125			
Beryllium	0.0962	0.0030	0.00009	mg/L	0.10000	ND	96	75-125			
Boron	1.01	0.0400	0.0060	mg/L	1.0000	0.0679	94	75-125			
Cadmium	0.0987	0.0010	0.0001	mg/L	0.10000	ND	99	75-125			
Calcium	119	25.0	2.02	mg/L	1.0000	119	NR	75-125			QM-02
Chromium	0.0983	0.0100	0.0005	mg/L	0.10000	0.0006	98	75-125			
Cobalt	0.103	0.0100	0.0003	mg/L	0.10000	ND	103	75-125			
Copper	0.0955	0.0250	0.0003	mg/L	0.10000	0.0005	95	75-125			
Iron	1.69	0.0400	0.0043	mg/L	1.0000	0.640	105	75-125			
Lead	0.0921	0.0050	0.00007	mg/L	0.10000	ND	92	75-125			
Magnesium	26.1	2.50	0.314	mg/L	1.0000	23.6	250	75-125			QM-02
Molybdenum	0.108	0.0100	0.0010	mg/L	0.10000	0.0038	104	75-125			
Nickel	0.100	0.0100	0.0005	mg/L	0.10000	ND	100	75-125			
Potassium	3.50	0.100	0.0165	mg/L	1.0000	2.41	109	75-125			
Selenium	0.105	0.0100	0.0018	mg/L	0.10000	0.0019	103	75-125			
Silver	0.0961	0.0100	0.0002	mg/L	0.10000	ND	96	75-125			
Sodium	16.6	5.00	0.674	mg/L	1.0000	15.8	76	75-125			
Thallium	0.0936	0.0010	0.00005	mg/L	0.10000	ND	94	75-125			
Vanadium	0.108	0.0100	0.0012	mg/L	0.10000	0.0103	98	75-125			
Zinc	0.0999	0.0100	0.0012	mg/L	0.10000	0.0018	98	75-125			
Lithium	0.0942	0.0500	0.0015	mg/L	0.10000	ND	94	75-125			



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Report No.: ABA0306

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010279 - EPA 3005A											
Matrix Spike Dup (8010279-MSD1)			Source: ABA0306-01			Prepared: 01/12/18 Analyzed: 01/18/18					
Antimony	0.110	0.0030	0.0006	mg/L	0.10000	ND	110	75-125	0.9	20	
Arsenic	0.107	0.0050	0.0005	mg/L	0.10000	0.0021	105	75-125	4	20	
Barium	0.120	0.0100	0.0004	mg/L	0.10000	0.0222	98	75-125	0.8	20	
Beryllium	0.0959	0.0030	0.00009	mg/L	0.10000	ND	96	75-125	0.3	20	
Boron	1.02	0.0400	0.0060	mg/L	1.0000	0.0679	96	75-125	1	20	
Cadmium	0.0994	0.0010	0.0001	mg/L	0.10000	ND	99	75-125	0.7	20	
Calcium	122	25.0	2.02	mg/L	1.0000	119	245	75-125	2	20	QM-02
Chromium	0.0983	0.0100	0.0005	mg/L	0.10000	0.0006	98	75-125	0.02	20	
Cobalt	0.0977	0.0100	0.0003	mg/L	0.10000	ND	98	75-125	5	20	
Copper	0.0931	0.0250	0.0003	mg/L	0.10000	0.0005	93	75-125	3	20	
Iron	1.61	0.0400	0.0043	mg/L	1.0000	0.640	97	75-125	5	20	
Lead	0.0953	0.0050	0.00007	mg/L	0.10000	ND	95	75-125	3	20	
Magnesium	26.0	2.50	0.314	mg/L	1.0000	23.6	242	75-125	0.3	20	QM-02
Molybdenum	0.106	0.0100	0.0010	mg/L	0.10000	0.0038	103	75-125	2	20	
Nickel	0.0926	0.0100	0.0005	mg/L	0.10000	ND	93	75-125	8	20	
Potassium	3.51	0.100	0.0165	mg/L	1.0000	2.41	111	75-125	0.5	20	
Selenium	0.107	0.0100	0.0018	mg/L	0.10000	0.0019	105	75-125	2	20	
Silver	0.0945	0.0100	0.0002	mg/L	0.10000	ND	95	75-125	2	20	
Sodium	16.4	5.00	0.674	mg/L	1.0000	15.8	54	75-125	1	20	QM-02
Thallium	0.0946	0.0010	0.00005	mg/L	0.10000	ND	95	75-125	1	20	
Vanadium	0.110	0.0100	0.0012	mg/L	0.10000	0.0103	100	75-125	2	20	
Zinc	0.104	0.0100	0.0012	mg/L	0.10000	0.0018	102	75-125	4	20	
Lithium	0.0980	0.0500	0.0015	mg/L	0.10000	ND	98	75-125	4	20	
Post Spike (8010279-PS1)			Source: ABA0306-01			Prepared: 01/12/18 Analyzed: 01/18/18					
Antimony	107			ug/L	100.00	0.125	107	80-120			
Arsenic	104			ug/L	100.00	2.09	102	80-120			
Barium	122			ug/L	100.00	22.2	100	80-120			
Beryllium	97.4			ug/L	100.00	0.0608	97	80-120			
Boron	1030			ug/L	1000.0	67.9	97	80-120			
Cadmium	95.6			ug/L	100.00	0.128	95	80-120			
Calcium	111000			ug/L	1000.0	119000	NR	80-120			QM-02
Chromium	101			ug/L	100.00	0.595	100	80-120			
Cobalt	99.2			ug/L	100.00	0.166	99	80-120			
Copper	97.0			ug/L	100.00	0.501	96	80-120			
Iron	1630			ug/L	1000.0	640	99	80-120			
Lead	90.4			ug/L	100.00	0.0596	90	80-120			
Magnesium	23900			ug/L	1000.0	23600	31	80-120			QM-02
Molybdenum	106			ug/L	100.00	3.84	102	80-120			
Nickel	98.3			ug/L	100.00	0.379	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

January 31, 2018

Report No.: ABA0306

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010279 - EPA 3005A											
Post Spike (8010279-PS1)			Source: ABA0306-01			Prepared: 01/12/18 Analyzed: 01/18/18					
Potassium	3300			ug/L	1000.0	2410	89	80-120			
Selenium	108			ug/L	100.00	1.92	106	80-120			
Silver	96.4			ug/L	100.00	0.0110	96	80-120			
Sodium	15500			ug/L	1000.0	15800	NR	80-120			QM-02
Thallium	91.1			ug/L	100.00	0.0407	91	80-120			
Vanadium	112			ug/L	100.00	10.3	101	80-120			
Zinc	101			ug/L	100.00	1.80	100	80-120			
Lithium	96.3			ug/L	100.00	0.130	96	80-120			
Batch 8010324 - EPA 7470A											
Blank (8010324-BLK1)						Prepared & Analyzed: 01/18/18					
Mercury	ND	0.00050	0.000036	mg/L							
LCS (8010324-BS1)						Prepared & Analyzed: 01/18/18					
Mercury	0.00245	0.00050	0.000036	mg/L	2.5000E-3		98	80-120			
Matrix Spike (8010324-MS1)			Source: ABA0303-01			Prepared & Analyzed: 01/18/18					
Mercury	0.00234	0.00050	0.000036	mg/L	2.5000E-3	ND	94	75-125			
Matrix Spike Dup (8010324-MSD1)			Source: ABA0303-01			Prepared & Analyzed: 01/18/18					
Mercury	0.00229	0.00050	0.000036	mg/L	2.5000E-3	ND	92	75-125	2	20	
Post Spike (8010324-PS1)			Source: ABA0303-01			Prepared & Analyzed: 01/18/18					
Mercury	1.67			ug/L	1.6667	-0.0238	100	80-120			



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Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 31, 2018

Legend

Definition of Laboratory Terms

- ND** - Not Detected at levels equal to or greater than the MDL
- BRL** - Not Detected at levels equal to or greater than the RL
- RL** - Reporting Limit **MDL** - Method Detection Limit
- SOP** - Method run per Pace Standard Operating Procedure
- CFU** - Colony Forming Units
- DF** - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrosodiphenylamine. Pace is not NELAC certified for N-Nitrosodiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

QM-02 The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.

J Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

Note: Unless otherwise noted, all results are reported on an as received basis.



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 31, 2018

Report Notes

There were 7 containers present instead of 5 as listed on the COC for GWC-1. 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

PAGE: 2 OF 2

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@southerncco.com		PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase 2 CCR & State D&O	
Collection DATE	Collection TIME	MATRIX CODE*	C O M P	G O R A B	SAMPLE IDENTIFICATION
1-9-18	1550	6w	X	X	GWC-6
1-10-18	0910	W	X	X	FB-2-1-10-18
1-10-18	1145	6w	X	X	GWC-5
1-10-18	1510	6w	X	X	GWC-1
1-10-18	-	6w	X	X	DUP-1-1-10-18
-	-	6w	X	X	Dup-2-1-10-18

SAMPLED BY AND TITLE:	DATE/TIME:	RELINQUISHED BY:	DATE/TIME:
J. BERSBERG	1-10-18 1510	[Signature]	1-10-18 0830
RECEIVED BY:	DATE/TIME:	RELINQUISHED BY:	DATE/TIME:
Sharon D'Kellely	1-11-18 1230	[Signature]	1-11-18 0830

RECEIVED BY LAB:	DATE/TIME:	TEMPERATURE:	MIN:	MAX:
Sharon D'Kellely	1-11-18 1230	10	5	5

ANALYSIS REQUESTED	CONTAINER TYPE	PRESERVATION	# of CONTAINERS	METALS APP. III & IV (EPA 6020/7470)	METALS (SEE ATTACHED) (EPA 6020)	CI, T, SO ₄ & TDS (EPA 300.0 & SM 2540C)	RADIUM 226 & 228 (SM-846 9315/9320)	BICARBONATE ALK, CARBONATE ALK, TOTAL ALK	Fe, Mg, Na, K	TRITIUM	TCC	DISSOLVED CH4
			5	✓	✓	✓	✓	✓	✓			
			5	✓	✓	✓	✓	✓	✓			
			5	✓	✓	✓	✓	✓	✓			
			5	✓	✓	✓	✓	✓	✓			
			5	✓	✓	✓	✓	✓	✓			
			5	✓	✓	✓	✓	✓	✓			

CONTAINER TYPE	PRESERVATION	LAB #	DATE/TIME	DATE/TIME
P - PLASTIC	1 - HCl, 56°C	ATBA0006	1-10-18 0830	
A - AMBER GLASS	2 - H ₂ SO ₄ , 56°C			
G - CLEAR GLASS	3 - HNO ₃			
V - VOA VIAL	4 - NaOH, 56°C			
S - STERILE	5 - NaOH/ZnAc, 56°C			
O - OTHER	6 - Na ₂ S ₂ O ₃ , 56°C			
	7 - 56°C not frozen			

MATRIX CODES:	REMARKS/ADDITIONAL INFORMATION
DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

Plant Kraft - Grumman Rd CCR Phase 2 CCR & State



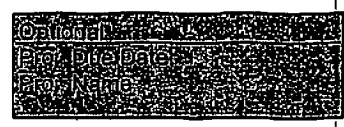
Sample Condition Upon Receipt

Client Name: GIA Power Project # ATBA0306

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no



Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used IR-4 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 0.5 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 8°C

Date and initials of person examining contents: 1/11/18 MA

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.	<u>GCWC-1 had 7 containers present instead of 5 as listed on COC.</u>
-Includes date/time/ID/Analysis Matrix: <u>GCW</u>			
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.	
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.	
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

LOG-IN CHECKLIST

Printed: 1/12/2018 2:16:31PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 01/11/18 12:30

Work Order: ABA0306

Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 11

#Containers: 57

Minimum Temp(C): 0.5

Maximum Temp(C): 0.5

Custody Seal(s) Used: Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	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 7 containers present instead of 5 as listed on the COC for GWC-1. MMR

February 06, 2018

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: ABA0306 Plant Kraft
Pace Project No.: 30240905

Dear Mr. Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on January 16, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: ABA0306 Plant Kraft
Pace Project No.: 30240905

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235

Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: ABA0306 Plant Kraft

Pace Project No.: 30240905

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30240905001	GWC-14	Water	01/09/18 12:20	01/16/18 11:10
30240905002	GWC-21	Water	01/09/18 16:05	01/16/18 11:10
30240905003	EB-1-1-9-18	Water	01/09/18 16:30	01/16/18 11:10
30240905004	GWC-2	Water	01/10/18 14:10	01/16/18 11:10
30240905005	GWC-13	Water	01/10/18 15:55	01/16/18 11:10
30240905006	GWC-6	Water	01/09/18 15:50	01/16/18 11:10
30240905007	FB-2-1-10-18	Water	01/10/18 09:10	01/16/18 11:10
30240905008	GWC-5	Water	01/10/18 11:45	01/16/18 11:10
30240905009	GWC-1	Water	01/10/18 15:10	01/16/18 11:10
30240905010	DUP-1-1-10-18	Water	01/10/18 00:00	01/16/18 11:10
30240905011	DUP-2-1-10-18	Water	01/10/18 00:00	01/16/18 11:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: ABA0306 Plant Kraft
Pace Project No.: 30240905

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30240905001	GWC-14	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240905002	GWC-21	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240905003	EB-1-1-9-18	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240905004	GWC-2	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240905005	GWC-13	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240905006	GWC-6	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240905007	FB-2-1-10-18	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240905008	GWC-5	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240905009	GWC-1	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240905010	DUP-1-1-10-18	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240905011	DUP-2-1-10-18	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: ABA0306 Plant Kraft

Pace Project No.: 30240905

Sample: GWC-14		Lab ID: 30240905001	Collected: 01/09/18 12:20	Received: 01/16/18 11:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.370 ± 0.194 (0.268)		pCi/L	01/22/18 08:58	13982-63-3	
		C:87% T:NA					
Radium-228	EPA 9320	0.491 ± 0.334 (0.636)		pCi/L	01/30/18 15:28	15262-20-1	
		C:79% T:89%					
Total Radium	Total Radium Calculation	0.861 ± 0.528 (0.904)		pCi/L	02/01/18 11:49	7440-14-4	

Sample: GWC-21		Lab ID: 30240905002	Collected: 01/09/18 16:05	Received: 01/16/18 11:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.09 ± 0.346 (0.330)		pCi/L	01/22/18 08:58	13982-63-3	
		C:93% T:NA					
Radium-228	EPA 9320	0.344 ± 0.332 (0.681)		pCi/L	01/30/18 15:29	15262-20-1	
		C:71% T:93%					
Total Radium	Total Radium Calculation	1.43 ± 0.678 (1.01)		pCi/L	02/01/18 11:49	7440-14-4	

Sample: EB-1-1-9-18		Lab ID: 30240905003	Collected: 01/09/18 16:30	Received: 01/16/18 11:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.370 ± 0.225 (0.372)		pCi/L	01/22/18 08:58	13982-63-3	
		C:86% T:NA					
Radium-228	EPA 9320	0.266 ± 0.366 (0.783)		pCi/L	01/30/18 15:29	15262-20-1	
		C:77% T:75%					
Total Radium	Total Radium Calculation	0.636 ± 0.591 (1.16)		pCi/L	02/01/18 11:49	7440-14-4	

Sample: GWC-2		Lab ID: 30240905004	Collected: 01/10/18 14:10	Received: 01/16/18 11:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.342 ± 0.189 (0.275)		pCi/L	01/22/18 10:31	13982-63-3	
		C:88% T:NA					
Radium-228	EPA 9320	0.356 ± 0.347 (0.713)		pCi/L	01/30/18 15:29	15262-20-1	
		C:82% T:80%					
Total Radium	Total Radium Calculation	0.698 ± 0.536 (0.988)		pCi/L	02/01/18 11:49	7440-14-4	

Sample: GWC-13		Lab ID: 30240905005	Collected: 01/10/18 15:55	Received: 01/16/18 11:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.917 ± 0.317 (0.330)		pCi/L	01/22/18 10:31	13982-63-3	
		C:87% T:NA					
Radium-228	EPA 9320	0.294 ± 0.347 (0.729)		pCi/L	01/30/18 15:29	15262-20-1	
		C:80% T:76%					

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: ABA0306 Plant Kraft
Pace Project No.: 30240905

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-13 Lab ID: 30240905005 Collected: 01/10/18 15:55 Received: 01/16/18 11:10 Matrix: Water PWS: Site ID: Sample Type:						
Total Radium	Total Radium Calculation	1.21 ± 0.664 (1.06)	pCi/L	02/01/18 11:49	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-6 Lab ID: 30240905006 Collected: 01/09/18 15:50 Received: 01/16/18 11:10 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	1.63 ± 0.436 (0.273) C:85% T:NA	pCi/L	01/22/18 10:32	13982-63-3	
Radium-228	EPA 9320	0.438 ± 0.357 (0.712) C:83% T:82%	pCi/L	01/30/18 15:29	15262-20-1	
Total Radium	Total Radium Calculation	2.07 ± 0.793 (0.985)	pCi/L	02/01/18 12:09	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FB-2-1-10-18 Lab ID: 30240905007 Collected: 01/10/18 09:10 Received: 01/16/18 11:10 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.442 ± 0.206 (0.245) C:90% T:NA	pCi/L	01/22/18 10:32	13982-63-3	
Radium-228	EPA 9320	0.235 ± 0.356 (0.770) C:78% T:80%	pCi/L	01/30/18 15:29	15262-20-1	
Total Radium	Total Radium Calculation	0.677 ± 0.562 (1.02)	pCi/L	02/01/18 12:09	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-5 Lab ID: 30240905008 Collected: 01/10/18 11:45 Received: 01/16/18 11:10 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	1.54 ± 0.412 (0.229) C:85% T:NA	pCi/L	01/22/18 10:37	13982-63-3	
Radium-228	EPA 9320	1.01 ± 0.396 (0.596) C:79% T:86%	pCi/L	01/31/18 11:25	15262-20-1	
Total Radium	Total Radium Calculation	2.55 ± 0.808 (0.825)	pCi/L	02/01/18 12:09	7440-14-4	

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-1 Lab ID: 30240905009 Collected: 01/10/18 15:10 Received: 01/16/18 11:10 Matrix: Water PWS: Site ID: Sample Type:						
Radium-226	EPA 9315	0.990 ± 0.316 (0.244) C:85% T:NA	pCi/L	01/22/18 10:37	13982-63-3	
Radium-228	EPA 9320	1.12 ± 0.440 (0.666) C:81% T:79%	pCi/L	01/31/18 11:26	15262-20-1	
Total Radium	Total Radium Calculation	2.11 ± 0.756 (0.910)	pCi/L	02/01/18 12:09	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: ABA0306 Plant Kraft

Pace Project No.: 30240905

Sample: DUP-1-1-10-18		Lab ID: 30240905010	Collected: 01/10/18 00:00	Received: 01/16/18 11:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.03 ± 0.320 (0.228) C:88% T:NA	pCi/L	01/22/18 10:37	13982-63-3	
Radium-228	EPA 9320	0.911 ± 0.415 (0.684) C:81% T:74%	pCi/L	01/31/18 11:26	15262-20-1	
Total Radium	Total Radium Calculation	1.94 ± 0.735 (0.912)	pCi/L	02/01/18 12:09	7440-14-4	

Sample: DUP-2-1-10-18		Lab ID: 30240905011	Collected: 01/10/18 00:00	Received: 01/16/18 11:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.07 ± 0.329 (0.222) C:86% T:NA	pCi/L	01/22/18 10:37	13982-63-3	
Radium-228	EPA 9320	1.08 ± 0.383 (0.493) C:81% T:83%	pCi/L	01/31/18 11:26	15262-20-1	
Total Radium	Total Radium Calculation	2.15 ± 0.712 (0.715)	pCi/L	02/01/18 12:09	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: ABA0306 Plant Kraft

Pace Project No.: 30240905

QC Batch: 285232 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Associated Lab Samples: 30240905008, 30240905009, 30240905010, 30240905011

METHOD BLANK: 1399116 Matrix: Water

Associated Lab Samples: 30240905008, 30240905009, 30240905010, 30240905011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.269 ± 0.338 (0.718) C:77% T:82%	pCi/L	01/31/18 11:25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: ABA0306 Plant Kraft

Pace Project No.: 30240905

QC Batch: 285234 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Associated Lab Samples: 30240905008, 30240905009, 30240905010, 30240905011

METHOD BLANK: 1399118 Matrix: Water

Associated Lab Samples: 30240905008, 30240905009, 30240905010, 30240905011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.254 ± 0.158 (0.223) C:89% T:NA	pCi/L	01/22/18 10:37	

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.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: ABA0306 Plant Kraft

Pace Project No.: 30240905

QC Batch: 285231 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Associated Lab Samples: 30240905001, 30240905002, 30240905003, 30240905004, 30240905005, 30240905006, 30240905007

METHOD BLANK: 1399115 Matrix: Water

Associated Lab Samples: 30240905001, 30240905002, 30240905003, 30240905004, 30240905005, 30240905006, 30240905007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.237 ± 0.301 (0.640) C:83% T:87%	pCi/L	01/30/18 15:27	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: ABA0306 Plant Kraft

Pace Project No.: 30240905

QC Batch: 285233 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Associated Lab Samples: 30240905001, 30240905002, 30240905003, 30240905004, 30240905005, 30240905006, 30240905007

METHOD BLANK: 1399117 Matrix: Water

Associated Lab Samples: 30240905001, 30240905002, 30240905003, 30240905004, 30240905005, 30240905006, 30240905007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.375 ± 0.191 (0.230) C:89% T:NA	pCi/L	01/22/18 08:48	

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.

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QUALIFIERS

Project: ABA0306 Plant Kraft

Pace Project No.: 30240905

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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WO#: 30240905



30240905

Chain of Custody



Workorder: ABA0306

Workorder Name: Plant Kraft

Owner Received Date: 1/12/2018

Results Requested By: 2/7/2018

Report To: Betsy McDaniel
 Pace Analytical Atlanta
 110 Technology Parkway
 Peachtree Corners, GA 30092
 Phone (770)-734-4200

Subcontract To: Pace - Pittsburgh
 1638 Roseytown Road
 Stes. 2,3,4
 Greensburg, PA 15601
 Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		Date/Time	Comments
						CON	H		
1	GWC-14	G	1/9/2018 12:20	ABA0306-01	GW	2			
2	GWC-21	G	1/9/2018 16:05	ABA0306-02	GW	2			
3	EB-1-1-9-18	G	1/9/2018 16:30	ABA0306-03	W	2			
4	GWC-2	G	1/10/2018 14:10	ABA0306-04	GW	2			
5	GWC-13	G	1/10/2018 15:55	ABA0306-05	GW	2			
6	GWC-6	G	1/9/2018 15:50	ABA0306-06	GW	2			
7	FB-2-1-10-18	G	1/10/2018 9:10	ABA0306-07	W	2			
8	GWC-5	G	1/10/2018 11:45	ABA0306-08	GW	2			
9	GWC-1	G	1/10/2018 15:10	ABA0306-09	GW	4			
10	DUP-1-1-10-18	G	1/10/2018 0:00	ABA0306-10	GW	2			
Radium 226, 228, Total									
1									
2									
3									

Transfers Released By	Date/Time	Received By	Date/Time	Comments
		<i>[Signature]</i>	1/10/18	

Cooler Temperature on Receipt N/A °C Custody Seal Y (of N) Y Received on Ice Y or N Y Sample Intact Y or N Y

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC

This chain of custody is considered complete as is since this information is available in the owner laboratory.

Chain of Custody



Workorder: ABA0306 Workorder Name: Plant Kraft Owner Received Date: 1/12/2018 Results Requested By: 2/7/2018

Report To: Betsy McDaniel
 Pace Analytical Atlanta
 110 Technology Parkway
 Peachtree Corners, GA 30092
 Phone (770)-734-4200

Subcontract To: Pace - Pittsburgh
 1638 Roseytown Road
 Stes. 2,3,4
 Greensburg, PA 15601
 Phone (724) 850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		LAB USE ONLY
						CON	NH	
11	DUP-2-1-10-18	G	1/10/2018 0:00	ABA0306-11	GW	2		
12								
13								
14								
15								
16								
17								
18								
19								
20								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1			<i>[Signature]</i>	1/12/18 11:10	
2					
3					

Cooler Temperature on Receipt NA °C Custody Seal Y or N Received on Ice Y or N Sample Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pittsburgh Lab Sample Condition Upon Receipt



Client Name: PACE ATLANTA

Project # 30240905

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 741366610720

Label	<u>ZH</u>
LIMS Login	<u>DNV</u>

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp _____ °C Correction Factor: _____ °C Final Temp: _____ °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: ZH 1/16/18

Comments:	Yes	No	N/A	
Chain of Custody Present:	/			1.
Chain of Custody Filled Out:	/			2.
Chain of Custody Relinquished:		/		3.
Sampler Name & Signature on COC:		/		4.
Sample Labels match COC:	/			5.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	/			6.
Short Hold Time Analysis (<72hr remaining):		/		7.
Rush Turn Around Time Requested:		/		8.
Sufficient Volume:	/			9.
Correct Containers Used:	/			10.
-Pace Containers Used:	/			
Containers Intact:	/			11.
Orthophosphate field filtered			/	12.
Hex Cr Aqueous Compliance/NPDES sample field filtered			/	13.
Organic Samples checked for dechlorination:			/	14.
Filtered volume received for Dissolved tests			/	15.
All containers have been checked for preservation.	/			16. <u>PHLZ</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	/			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>ZH</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			/	17.
Trip Blank Present:			/	18.
Trip Blank Custody Seals Present			/	
Rad Aqueous Samples Screened > 0.5 mrem/hr		/		Initial when completed: <u>ZH</u> Date: <u>1/16/18</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JC2
Date: 1/19/2018
Worklist: 39544
Matrix: DW

Method Blank Assessment

MB Sample ID: 1399117
MB concentration: 0.375
M/F Counting Uncertainty: 0.183
MB MDC: 0.230
MB Numerical Performance Indicator: 4.02
MB Status vs Numerical Indicator: N/A
MB Status vs. MDC: See Comment*

Laboratory Control Sample Assessment

Count Date:	LCSD (Y or N)?
1/22/2018	Y
17-030	LCSD39544
80.180	1/22/2018
0.10	17-030
0.504	80.180
16.012	0.10
1.475	0.504
14.276	16.012
13.111	1.475
0.940	14.276
-3.14	13.111
82.46%	0.940
N/A	-3.14
Pass	82.46%
	N/A
	Pass

Duplicate Sample Assessment

Sample I.D.: LCS39544
Duplicate Sample I.D.: LCS39544
Sample Result (pCi/L, g, F): 14.276
Sample Result Counting Uncertainty (pCi/L, g, F): 1.019
Sample Duplicate Result (pCi/L, g, F): 13.111
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.940
Are sample and/or duplicate results below MDC? NO
Duplicate Numerical Performance Indicator: 1.646
Duplicate RPD: 8.51%
Duplicate Status vs Numerical Indicator: N/A
Duplicate Status vs RPD: Pass

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.

Sample Matrix Spike Control Assessment

Sample Collection Date:
Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Spike I.D.:
MS/MSD Decay Corrected Spike Concentration (pCi/mL):
Spike Volume Used in MS (mL):
Spike Volume Used in MSD (mL):
MS Aliquot (L, g, F):
MS Target Conc. (pCi/L, g, F):
MSD Aliquot (L, g, F):
MSD Target Conc. (pCi/L, g, F):
Spike uncertainty (calculated):
Sample Result:
Sample Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Result:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
MS Numerical Performance Indicator:
MS Percent Recovery:
MSD Percent Recovery:
MS Status vs Numerical Indicator:
MSD Status vs Numerical Indicator:
MS Status vs Recovery:
MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Sample Matrix Spike Result:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Duplicate Numerical Performance Indicator:
MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:

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.

M/1/23/18

Quality Control Sample Performance Assessment



Test: Ra-226
Analyst: JC2
Date: 1/19/2018
Worklist: 39545
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID: 13991118
MB concentration: 0.254
MB Counting Uncertainty: 0.154
MB MDC: 0.223
MB Numerical Performance Indicator: 3.23
MB Status vs Numerical Indicator: N/A
MB Status vs MDC: See Comment*

Laboratory Control Sample Assessment

Count Date:	LCS39545	N	LCS39545
1/22/2018	17-030		
Spike I.D.:	80.180		
Spike Concentration (pCi/mL):	0.10		
Volume Used (mL):	0.509		
Aliquot Volume (L, g, F):	15.766		
Target Conc. (pCi/L, g, F):	1.452		
Uncertainty (Calculated):	14.366		
Result (pCi/L, g, F):	1.053		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	-1.53		
Numerical Performance Indicator:	91.12%		
Percent Recovery:	N/A		
Status vs Numerical Indicator:	Pass		
Status vs Recovery:			

Sample Matrix Spike Control Assessment

Sample Collection Date:
Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Spike I.D.:

MS/MSD Decay Corrected Spike Concentration (pCi/mL):
Spike Volume Used in MS (mL):
Spike Volume Used in MSD (mL):
MS Aliquot (L, g, F):
MS Target Conc. (pCi/L, g, F):
MSD Aliquot (L, g, F):
MSD Target Conc. (pCi/L, g, F):
Spike uncertainty (calculated):

Sample Result:
Sample Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Result:
Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result:
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.: 30240905009
Duplicate Sample I.D.: 30240905009DUP

Sample Result (pCi/L, g, F): 0.990
Sample Result Counting Uncertainty (pCi/L, g, F): 0.280
Sample Duplicate Result (pCi/L, g, F): 1.037
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.284
Are sample and/or duplicate results below MDC? See Below ##
Duplicate Numerical Performance Indicator: -0.228
Duplicate RPD: 4.57%
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:
Sample Matrix Spike Duplicate Result:
Duplicate Numerical Performance Indicator:
MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:

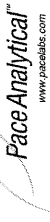
Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable.

Jan 13/18

Jan 13/18

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 1/22/2018
Worklist: 39542
Matrix: DW

Method Blank Assessment	
MB Sample ID	1399115
MB concentration:	0.237
M/B Counting Uncertainty:	0.298
MB MDC:	0.640
MB Numerical Performance Indicator:	1.55
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?
Count Date:	1/30/2018	LCSD39542
Spike I.D.:	17-033	1/30/2018
Spike Concentration (pCi/mL):	22.458	17-033
Volume Used (mL):	0.20	22.458
Aliquot Volume (L, g, F):	0.803	0.20
Target Conc. (pCi/L, g, F):	5.592	0.804
Uncertainty (Calculated):	0.403	5.584
Result (pCi/L, g, F):	4.016	0.402
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.584	5.234
Numerical Performance Indicator:	-4.35	0.635
Percent Recovery:	71.83%	-0.91
Status vs Numerical Indicator:	N/A	93.73%
Status vs Recovery:	Pass	N/A
		Pass

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS39542	
Duplicate Sample I.D.:	LCS39542	
Sample Result (pCi/L, g, F):	4.016	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.584	
Sample Duplicate Result (pCi/L, g, F):	5.234	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.635	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-2.768	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	26.46%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Handwritten notes:
DW 1/22/18
JLW
39542

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 1/22/2018
Worklist: 39543
Matrix: DW

Method Blank Assessment	
MB Sample ID	1399116
MB concentration:	0.269
M/B Counting Uncertainty:	0.335
MB MDC:	0.718
MB Numerical Performance Indicator:	1.58
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS (Y or N)?	N
		LCS39543	LCS39543
Count Date:	1/31/2018		
Spike I.D.:	17-033		
Spike Concentration (pCi/mL):	22.452		
Aliquot Volume (L, g, F):	0.20		
Target Conc. (pCi/L, g, F):	0.816		
Uncertainty (Calculated):	5.501		
Result (pCi/L, g, F):	4.713		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.583		
Numerical Performance Indicator:	-2.19		
Percent Recovery:	85.67%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		

Duplicate Sample Assessment	
Sample I.D.:	30240905009
Duplicate Sample I.D.:	30240905009DUP
Sample Result Counting Uncertainty (pCi/L, g, F):	1.116
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.392
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.015
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.363
Are sample and/or duplicate results below MDC?	See Below #
Duplicate Numerical Performance Indicator:	0.370
Duplicate RPD:	9.46%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Handwritten notes:
TJH
DW
1/11/18

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
Spike uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
Duplicate RPD:	
Duplicate Status vs Numerical Indicator:	
Duplicate Status vs RPD:	



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

**Georgia Power
2480 Maner Road
Atlanta, GA 30339**

Attention: Mr. Joju Abraham

Report Number: ABA0339

January 30, 2018

Project: CCR Event

Project #:Plant Kraft

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

A handwritten signature in black ink that reads "Betsy McDaniel" written over a horizontal line.

Project Manager

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All test results relate only to the samples analyzed.



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 30, 2018

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-22	ABA0339-01	Ground Water	01/11/18 09:55	01/12/18 08:00
GWC-9	ABA0339-02	Ground Water	01/11/18 08:55	01/12/18 08:00
GWC-11	ABA0339-03	Ground Water	01/11/18 13:13	01/12/18 08:00
GWC-17	ABA0339-04	Ground Water	01/11/18 12:20	01/12/18 08:00
GWC-12	ABA0339-05	Ground Water	01/11/18 13:50	01/12/18 08:00
GWC-4	ABA0339-06	Ground Water	01/11/18 14:50	01/12/18 08:00
FB-1-1-11-18	ABA0339-07	Water	01/11/18 13:15	01/12/18 08:00
EB-2-1-11-18	ABA0339-08	Water	01/11/18 14:30	01/12/18 08:00



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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 30, 2018

Case Narrative

The Radium analysis by methods EPA 9315/9320 was performed by Pace-Pittsburgh, 1638 Roseytown Road - Suites 2, 3, 4, Greensburg PA 15601. The Pace-Pittsburgh lab contact is Jacquelyn Collins at 724-850-5612.



PACE ANALYTICAL SERVICES, LLC.

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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 30, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0339

Project: CCR Event

Client ID: GWC-22

Lab Number ID: ABA0339-01

Date/Time Sampled: 1/11/2018 9:55:00AM

Date/Time Received: 1/12/2018 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	2	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Alkalinity, Bicarbonate as CaCO3	2	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Total Dissolved Solids	438	25	10	mg/L	SM 2540 C		1	01/16/18 13:38	01/16/18 13:38	8010374	JPT
Inorganic Anions											
Chloride	74	5.0	0.48	mg/L	EPA 300.0		20	01/18/18 13:24	01/20/18 17:38	8010428	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/18/18 13:24	01/18/18 23:44	8010428	MWB
Sulfate	180	20	0.34	mg/L	EPA 300.0		20	01/18/18 13:24	01/20/18 17:38	8010428	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Arsenic	0.0006	0.0050	0.0005	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Barium	0.0702	0.0100	0.0004	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Boron	0.838	0.0400	0.0060	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Cadmium	0.0002	0.0010	0.0001	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Calcium	47.6	25.0	2.02	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 18:47	8010319	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Iron	0.477	0.0400	0.0043	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Lead	0.0009	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Magnesium	13.9	2.50	0.314	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 18:47	8010319	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Potassium	9.11	0.200	0.0165	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Sodium	32.3	5.00	0.674	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 18:47	8010319	CSW
Thallium	0.00006	0.0010	0.00005	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Vanadium	0.0012	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Zinc	0.0106	0.0100	0.0012	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 18:41	8010319	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/24/18 10:55	01/25/18 12:04	8010325	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 30, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0339

Project: CCR Event

Client ID: GWC-9

Lab Number ID: ABA0339-02

Date/Time Sampled: 1/11/2018 8:55:00AM

Date/Time Received: 1/12/2018 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Alkalinity, Bicarbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Total Dissolved Solids	190	25	10	mg/L	SM 2540 C		1	01/16/18 13:38	01/16/18 13:38	8010374	JPT
Inorganic Anions											
Chloride	16	0.25	0.02	mg/L	EPA 300.0		1	01/18/18 13:24	01/19/18 00:05	8010428	MWB
Fluoride	0.98	0.30	0.03	mg/L	EPA 300.0		1	01/18/18 13:24	01/19/18 00:05	8010428	MWB
Sulfate	110	10	0.17	mg/L	EPA 300.0		10	01/18/18 13:24	01/20/18 17:59	8010428	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Barium	0.226	0.0100	0.0004	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Beryllium	0.0003	0.0030	0.00009	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Boron	0.0180	0.0400	0.0060	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Calcium	9.78	0.500	0.0404	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Chromium	0.0010	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Cobalt	0.0017	0.0100	0.0003	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Iron	6.17	0.0400	0.0043	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Magnesium	4.23	0.0500	0.0063	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Potassium	1.78	0.200	0.0165	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Sodium	14.2	5.00	0.674	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 19:18	8010319	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Vanadium	ND	0.0100	0.0012	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Zinc	0.0046	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Lithium	0.0022	0.0500	0.0015	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:12	8010319	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/24/18 10:55	01/25/18 12:06	8010325	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 30, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0339

Project: CCR Event

Client ID: GWC-11

Lab Number ID: ABA0339-03

Date/Time Sampled: 1/11/2018 1:13:00PM

Date/Time Received: 1/12/2018 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	8	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Alkalinity, Bicarbonate as CaCO3	8	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Total Dissolved Solids	681	25	10	mg/L	SM 2540 C		1	01/16/18 13:38	01/16/18 13:38	8010374	JPT
Inorganic Anions											
Chloride	100	2.5	0.24	mg/L	EPA 300.0		10	01/18/18 13:24	01/20/18 19:48	8010428	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/18/18 13:24	01/19/18 00:26	8010428	MWB
Sulfate	270	10	0.17	mg/L	EPA 300.0		10	01/18/18 13:24	01/20/18 19:48	8010428	MWB
Metals, Total											
Antimony	0.0007	0.0030	0.0006	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:24	8010319	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:24	8010319	CSW
Barium	0.166	0.0100	0.0004	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:24	8010319	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:24	8010319	CSW
Boron	0.169	0.0400	0.0060	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:24	8010319	CSW
Cadmium	0.0006	0.0010	0.0001	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:24	8010319	CSW
Calcium	65.6	25.0	2.02	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 19:29	8010319	CSW
Chromium	0.0098	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:24	8010319	CSW
Cobalt	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:24	8010319	CSW
Iron	0.153	0.0400	0.0043	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:24	8010319	CSW
Lead	0.0003	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:24	8010319	CSW
Magnesium	16.0	2.50	0.314	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 19:29	8010319	CSW
Molybdenum	0.0018	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:24	8010319	CSW
Potassium	10.5	10.0	0.824	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 19:29	8010319	CSW
Selenium	0.0054	0.0100	0.0018	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:24	8010319	CSW
Sodium	78.5	5.00	0.674	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 19:29	8010319	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:24	8010319	CSW
Vanadium	0.0019	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:24	8010319	CSW
Zinc	0.0018	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:24	8010319	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:24	8010319	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/24/18 10:55	01/25/18 12:09	8010325	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

January 30, 2018

Report No.: ABA0339

Project: CCR Event

Client ID: GWC-17

Lab Number ID: ABA0339-04

Date/Time Sampled: 1/11/2018 12:20:00PM

Date/Time Received: 1/12/2018 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Alkalinity, Bicarbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Total Dissolved Solids	2350	25	10	mg/L	SM 2540 C		1	01/16/18 13:38	01/16/18 13:38	8010374	JPT
Inorganic Anions											
Chloride	940	25	2.4	mg/L	EPA 300.0		100	01/18/18 13:24	01/20/18 20:10	8010428	MWB
Fluoride	1.5	0.30	0.03	mg/L	EPA 300.0		1	01/18/18 13:24	01/19/18 00:46	8010428	MWB
Sulfate	810	100	1.7	mg/L	EPA 300.0		100	01/18/18 13:24	01/20/18 20:10	8010428	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Arsenic	0.0015	0.0050	0.0005	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Barium	0.0412	0.0100	0.0004	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Beryllium	0.0033	0.0030	0.00009	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Boron	1.28	0.0400	0.0060	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Calcium	139	25.0	2.02	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 19:41	8010319	CSW
Chromium	0.0009	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Cobalt	0.0061	0.0100	0.0003	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Iron	39.4	0.0400	0.0043	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Magnesium	99.5	2.50	0.314	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 19:41	8010319	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Potassium	9.56	0.200	0.0165	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Sodium	426	5.00	0.674	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 19:41	8010319	CSW
Thallium	0.0001	0.0010	0.00005	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Vanadium	0.0026	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Zinc	0.0120	0.0100	0.0012	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Lithium	0.0061	0.0500	0.0015	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:35	8010319	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/24/18 10:55	01/25/18 12:11	8010325	MTC



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 110 Technology Parkway, Peachtree Corners, GA 30092
 (770) 734-4200 FAX (770) 734-4201

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 30, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0339

Project: CCR Event

Client ID: GWC-12

Lab Number ID: ABA0339-05

Date/Time Sampled: 1/11/2018 1:50:00PM

Date/Time Received: 1/12/2018 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Alkalinity, Bicarbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Total Dissolved Solids	1020	25	10	mg/L	SM 2540 C		1	01/16/18 13:38	01/16/18 13:38	8010374	JPT
Inorganic Anions											
Chloride	78	6.2	0.60	mg/L	EPA 300.0		25	01/18/18 13:24	01/20/18 20:32	8010428	MWB
Fluoride	1.4	0.30	0.03	mg/L	EPA 300.0		1	01/18/18 13:24	01/19/18 01:07	8010428	MWB
Sulfate	780	25	0.42	mg/L	EPA 300.0		25	01/18/18 13:24	01/20/18 20:32	8010428	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Barium	0.0180	0.0100	0.0004	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Beryllium	0.0006	0.0030	0.00009	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Boron	5.16	0.0400	0.0060	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Calcium	78.1	25.0	2.02	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 19:52	8010319	CSW
Chromium	0.0010	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Cobalt	0.0011	0.0100	0.0003	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Iron	1.81	0.0400	0.0043	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Lead	0.0002	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Magnesium	30.1	2.50	0.314	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 19:52	8010319	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Potassium	9.20	0.200	0.0165	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Sodium	126	5.00	0.674	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 19:52	8010319	CSW
Thallium	0.0002	0.0010	0.00005	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Vanadium	0.0025	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Zinc	0.0031	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:47	8010319	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/24/18 10:55	01/25/18 12:13	8010325	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

January 30, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0339

Project: CCR Event

Client ID: GWC-4

Lab Number ID: ABA0339-06

Date/Time Sampled: 1/11/2018 2:50:00PM

Date/Time Received: 1/12/2018 8:00:00AM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	265	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Alkalinity, Bicarbonate as CaCO3	265	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Total Dissolved Solids	838	25	10	mg/L	SM 2540 C		1	01/16/18 13:38	01/16/18 13:38	8010374	JPT
Inorganic Anions											
Chloride	60	5.0	0.48	mg/L	EPA 300.0		20	01/18/18 13:24	01/20/18 20:54	8010428	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/18/18 13:24	01/19/18 01:28	8010428	MWB
Sulfate	210	20	0.34	mg/L	EPA 300.0		20	01/18/18 13:24	01/20/18 20:54	8010428	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Arsenic	0.0015	0.0050	0.0005	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Barium	0.0880	0.0100	0.0004	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Beryllium	0.0001	0.0030	0.00009	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Boron	6.95	0.0400	0.0060	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Cadmium	0.0002	0.0010	0.0001	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Calcium	12.9	5.00	2.02	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 20:04	8010319	CSW
Chromium	0.0109	0.0100	0.0005	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Cobalt	0.0008	0.0100	0.0003	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Iron	1.19	0.0400	0.0043	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Lead	0.0085	0.0050	0.00007	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Magnesium	9.70	0.0500	0.0063	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Molybdenum	0.0237	0.0100	0.0010	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Potassium	17.8	10.0	0.824	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 20:04	8010319	CSW
Selenium	0.0029	0.0100	0.0018	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Sodium	211	5.00	0.674	mg/L	EPA 6020B		50	01/15/18 09:20	01/19/18 20:04	8010319	CSW
Thallium	0.00007	0.0010	0.00005	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Vanadium	0.0327	0.0100	0.0012	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Zinc	0.0095	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Lithium	0.0052	0.0500	0.0015	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 19:58	8010319	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/24/18 10:55	01/25/18 12:20	8010325	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

January 30, 2018

Report No.: ABA0339

Project: CCR Event

Client ID: FB-1-1-11-18

Lab Number ID: ABA0339-07

Date/Time Sampled: 1/11/2018 1:15:00PM

Date/Time Received: 1/12/2018 8:00:00AM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	1	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Alkalinity, Bicarbonate as CaCO3	1	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Total Dissolved Solids	10	25	10	mg/L	SM 2540 C	B-01, J	1	01/18/18 18:55	01/18/18 18:55	8010414	JPT
Inorganic Anions											
Chloride	0.18	0.25	0.02	mg/L	EPA 300.0	J	1	01/18/18 13:24	01/19/18 01:48	8010428	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/18/18 13:24	01/19/18 01:48	8010428	MWB
Sulfate	0.11	1.0	0.02	mg/L	EPA 300.0	J	1	01/18/18 13:24	01/19/18 01:48	8010428	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Iron	ND	0.0400	0.0043	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Lead	0.00007	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Magnesium	ND	0.0500	0.0063	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Potassium	ND	0.200	0.0165	mg/L	EPA 6020B	R-01	1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Sodium	0.0381	0.100	0.0135	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Vanadium	ND	0.0100	0.0012	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Zinc	0.0124	0.0100	0.0012	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:21	8010319	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/24/18 10:55	01/25/18 12:23	8010325	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

January 30, 2018

Report No.: ABA0339

Project: CCR Event

Client ID: EB-2-1-11-18

Lab Number ID: ABA0339-08

Date/Time Sampled: 1/11/2018 2:30:00PM

Date/Time Received: 1/12/2018 8:00:00AM

Matrix: Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Alkalinity as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Alkalinity, Bicarbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L	SM 2320 B		1	01/19/18 15:00	01/19/18 15:00	8010459	JAD
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	01/18/18 18:55	01/18/18 18:55	8010414	JPT
Inorganic Anions											
Chloride	0.06	0.25	0.02	mg/L	EPA 300.0	J	1	01/18/18 13:24	01/19/18 02:09	8010428	MWB
Fluoride	ND	0.30	0.03	mg/L	EPA 300.0		1	01/18/18 13:24	01/19/18 02:09	8010428	MWB
Sulfate	0.04	1.0	0.02	mg/L	EPA 300.0	J	1	01/18/18 13:24	01/19/18 02:09	8010428	MWB
Metals, Total											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Barium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Boron	ND	0.0400	0.0060	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Calcium	ND	0.500	0.0404	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Chromium	ND	0.0100	0.0005	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Iron	ND	0.0400	0.0043	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Lead	0.00008	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Magnesium	ND	0.0500	0.0063	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Molybdenum	ND	0.0100	0.0010	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Potassium	ND	0.200	0.0165	mg/L	EPA 6020B	R-01	1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Sodium	0.0329	0.100	0.0135	mg/L	EPA 6020B	J	1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Vanadium	ND	0.0100	0.0012	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Zinc	ND	0.0100	0.0012	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Lithium	ND	0.0500	0.0015	mg/L	EPA 6020B		1	01/15/18 09:20	01/19/18 20:27	8010319	CSW
Mercury	ND	0.00050	0.000036	mg/L	EPA 7470A		1	01/24/18 10:55	01/25/18 12:25	8010325	MTC



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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 (770) 734-4200 FAX (770) 734-4201

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 30, 2018

Report No.: ABA0339

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010374 - SM 2540 C											
Blank (8010374-BLK1)						Prepared & Analyzed: 01/16/18					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (8010374-BS1)						Prepared & Analyzed: 01/16/18					
Total Dissolved Solids	417	25	10	mg/L	400.00		104	84-108			
Duplicate (8010374-DUP1)						Source: ABA0339-06 Prepared & Analyzed: 01/16/18					
Total Dissolved Solids	841	25	10	mg/L		838			0.4	10	
Duplicate (8010374-DUP2)						Source: ABA0339-08 Prepared & Analyzed: 01/16/18					
Total Dissolved Solids	33	25	10	mg/L		28			16	10	QR-03
Batch 8010414 - SM 2540 C											
Blank (8010414-BLK1)						Prepared & Analyzed: 01/18/18					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (8010414-BS1)						Prepared & Analyzed: 01/18/18					
Total Dissolved Solids	385	25	10	mg/L	400.00		96	84-108			
Duplicate (8010414-DUP1)						Source: ABA0306-07RE1 Prepared & Analyzed: 01/18/18					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	
Duplicate (8010414-DUP2)						Source: ABA0339-07RE1 Prepared & Analyzed: 01/18/18					
Total Dissolved Solids	ND	25	10	mg/L		10				10	
Duplicate (8010414-DUP3)						Source: ABA0339-08RE1 Prepared & Analyzed: 01/18/18					
Total Dissolved Solids	ND	25	10	mg/L		ND				10	



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General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010414 - SM 2540 C											
Duplicate (8010414-DUP4)			Source: ABA0432-01			Prepared & Analyzed: 01/18/18					
Total Dissolved Solids	12300	25	10	mg/L		12300			0.1	10	
Batch 8010459 - SM 2320 B											
Blank (8010459-BLK1)			Prepared & Analyzed: 01/19/18								
Alkalinity as CaCO3	ND	1	1	mg/L							
Alkalinity, Bicarbonate as CaCO3	ND	1	1	mg/L							
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L							
LCS (8010459-BS1)			Prepared & Analyzed: 01/19/18								
Alkalinity as CaCO3	102	1	1	mg/L	100.00		102	85-115			
Alkalinity, Bicarbonate as CaCO3	102	1	1	mg/L	100.00		102	85-115			
Alkalinity, Carbonate as CaCO3	102	1	1	mg/L	100.00		102	85-115			
Duplicate (8010459-DUP1)			Source: ABA0339-01			Prepared & Analyzed: 01/19/18					
Alkalinity as CaCO3	2	1	1	mg/L		2			0	10	
Alkalinity, Bicarbonate as CaCO3	2	1	1	mg/L		2			0	10	
Alkalinity, Carbonate as CaCO3	ND	1	1	mg/L		ND				10	



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Report No.: ABA0339

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010428 - EPA 300.0											
Blank (8010428-BLK1)						Prepared & Analyzed: 01/18/18					
Chloride	0.03	0.25	0.02	mg/L							J
Fluoride	ND	0.30	0.03	mg/L							
Sulfate	ND	1.0	0.02	mg/L							
LCS (8010428-BS1)						Prepared & Analyzed: 01/18/18					
Chloride	10.1	0.25	0.02	mg/L	10.000		101	90-110			
Fluoride	10.0	0.30	0.03	mg/L	10.000		100	90-110			
Sulfate	10.0	1.0	0.02	mg/L	10.000		100	90-110			
Matrix Spike (8010428-MS1)						Source: ABA0339-08 Prepared: 01/18/18 Analyzed: 01/19/18					
Chloride	10.1	0.25	0.02	mg/L	10.000	0.06	100	90-110			
Fluoride	10.1	0.30	0.03	mg/L	10.000	ND	101	90-110			
Sulfate	10.0	1.0	0.02	mg/L	10.000	0.04	100	90-110			
Matrix Spike (8010428-MS2)						Source: ABA0377-05 Prepared: 01/18/18 Analyzed: 01/19/18					
Chloride	15.4	0.25	0.02	mg/L	10.000	6.63	87	90-110			QM-02
Fluoride	10.9	0.30	0.03	mg/L	10.000	0.21	107	90-110			
Sulfate	408	1.0	0.02	mg/L	10.000	430	NR	90-110			QM-02
Matrix Spike Dup (8010428-MSD1)						Source: ABA0339-08 Prepared: 01/18/18 Analyzed: 01/19/18					
Chloride	10.1	0.25	0.02	mg/L	10.000	0.06	100	90-110	0.2	15	
Fluoride	10.1	0.30	0.03	mg/L	10.000	ND	101	90-110	0.4	15	
Sulfate	10.0	1.0	0.02	mg/L	10.000	0.04	100	90-110	0.1	15	



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Report No.: ABA0339

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8010319 - EPA 3005A

Blank (8010319-BLK1)

Prepared: 01/15/18 Analyzed: 01/19/18

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							
Iron	ND	0.0400	0.0043	mg/L							
Lead	ND	0.0050	0.00007	mg/L							
Magnesium	ND	0.0500	0.0063	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Potassium	ND	0.100	0.0165	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Sodium	ND	0.100	0.0135	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 (8010319-BS1)

Prepared: 01/15/18 Analyzed: 01/19/18

Antimony	0.108	0.0030	0.0006	mg/L	0.10000		108	80-120			
Arsenic	0.100	0.0050	0.0005	mg/L	0.10000		100	80-120			
Barium	0.0981	0.0100	0.0004	mg/L	0.10000		98	80-120			
Beryllium	0.102	0.0030	0.00009	mg/L	0.10000		102	80-120			
Boron	1.02	0.0400	0.0060	mg/L	1.0000		102	80-120			
Cadmium	0.102	0.0010	0.0001	mg/L	0.10000		102	80-120			
Calcium	1.00	0.500	0.0404	mg/L	1.0000		100	80-120			
Chromium	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Cobalt	0.101	0.0100	0.0003	mg/L	0.10000		101	80-120			
Copper	0.100	0.0250	0.0003	mg/L	0.10000		100	80-120			
Iron	1.03	0.0400	0.0043	mg/L	1.0000		103	80-120			
Lead	0.101	0.0050	0.00007	mg/L	0.10000		101	80-120			
Magnesium	1.01	0.0500	0.0063	mg/L	1.0000		101	80-120			
Molybdenum	0.102	0.0100	0.0010	mg/L	0.10000		102	80-120			
Nickel	0.0995	0.0100	0.0005	mg/L	0.10000		99	80-120			



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January 30, 2018

Report No.: ABA0339

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010319 - EPA 3005A											
LCS (8010319-BS1)						Prepared: 01/15/18 Analyzed: 01/19/18					
Potassium	1.02	0.100	0.0165	mg/L	1.0000		102	80-120			
Selenium	0.101	0.0100	0.0018	mg/L	0.10000		101	80-120			
Silver	0.102	0.0100	0.0002	mg/L	0.10000		102	80-120			
Sodium	0.991	0.100	0.0135	mg/L	1.0000		99	80-120			
Thallium	0.102	0.0010	0.00005	mg/L	0.10000		102	80-120			
Vanadium	0.109	0.0100	0.0012	mg/L	0.10000		109	80-120			
Zinc	0.104	0.0100	0.0012	mg/L	0.10000		104	80-120			
Lithium	0.104	0.0500	0.0015	mg/L	0.10000		104	80-120			
Matrix Spike (8010319-MS1)			Source: ABA0339-01			Prepared: 01/15/18 Analyzed: 01/19/18					
Antimony	0.109	0.0030	0.0006	mg/L	0.10000	ND	109	75-125			
Arsenic	0.101	0.0050	0.0005	mg/L	0.10000	0.0006	101	75-125			
Barium	0.167	0.0100	0.0004	mg/L	0.10000	0.0702	97	75-125			
Beryllium	0.0948	0.0030	0.00009	mg/L	0.10000	ND	95	75-125			
Boron	1.79	0.0400	0.0060	mg/L	1.0000	0.838	95	75-125			
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000	0.0002	101	75-125			
Calcium	50.8	25.0	2.02	mg/L	1.0000	47.6	323	75-125			QM-02
Chromium	0.0978	0.0100	0.0005	mg/L	0.10000	ND	98	75-125			
Cobalt	0.0919	0.0100	0.0003	mg/L	0.10000	ND	92	75-125			
Copper	0.0937	0.0250	0.0003	mg/L	0.10000	0.0004	93	75-125			
Iron	1.44	0.0400	0.0043	mg/L	1.0000	0.477	97	75-125			
Lead	0.0988	0.0050	0.00007	mg/L	0.10000	0.0009	98	75-125			
Magnesium	15.9	2.50	0.314	mg/L	1.0000	13.9	208	75-125			QM-02
Molybdenum	0.101	0.0100	0.0010	mg/L	0.10000	ND	101	75-125			
Nickel	0.0920	0.0100	0.0005	mg/L	0.10000	ND	92	75-125			
Potassium	10.9	5.00	0.824	mg/L	1.0000	9.11	176	75-125			QM-02
Selenium	0.102	0.0100	0.0018	mg/L	0.10000	ND	102	75-125			
Silver	0.0977	0.0100	0.0002	mg/L	0.10000	ND	98	75-125			
Sodium	36.2	5.00	0.674	mg/L	1.0000	32.3	389	75-125			QM-02
Thallium	0.0995	0.0010	0.00005	mg/L	0.10000	0.00006	99	75-125			
Vanadium	0.103	0.0100	0.0012	mg/L	0.10000	0.0012	102	75-125			
Zinc	0.110	0.0100	0.0012	mg/L	0.10000	0.0106	100	75-125			
Lithium	0.0978	0.0500	0.0015	mg/L	0.10000	ND	98	75-125			



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January 30, 2018

Report No.: ABA0339

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010319 - EPA 3005A											
Matrix Spike Dup (8010319-MSD1)			Source: ABA0339-01				Prepared: 01/15/18 Analyzed: 01/19/18				
Antimony	0.110	0.0030	0.0006	mg/L	0.10000	ND	110	75-125	0.9	20	
Arsenic	0.100	0.0050	0.0005	mg/L	0.10000	0.0006	100	75-125	1	20	
Barium	0.171	0.0100	0.0004	mg/L	0.10000	0.0702	100	75-125	2	20	
Beryllium	0.0929	0.0030	0.00009	mg/L	0.10000	ND	93	75-125	2	20	
Boron	1.76	0.0400	0.0060	mg/L	1.0000	0.838	92	75-125	2	20	
Cadmium	0.0981	0.0010	0.0001	mg/L	0.10000	0.0002	98	75-125	3	20	
Calcium	49.5	25.0	2.02	mg/L	1.0000	47.6	187	75-125	3	20	QM-02
Chromium	0.0972	0.0100	0.0005	mg/L	0.10000	ND	97	75-125	0.6	20	
Cobalt	0.0943	0.0100	0.0003	mg/L	0.10000	ND	94	75-125	3	20	
Copper	0.0966	0.0250	0.0003	mg/L	0.10000	0.0004	96	75-125	3	20	
Iron	1.44	0.0400	0.0043	mg/L	1.0000	0.477	96	75-125	0.5	20	
Lead	0.0966	0.0050	0.00007	mg/L	0.10000	0.0009	96	75-125	2	20	
Magnesium	15.2	2.50	0.314	mg/L	1.0000	13.9	137	75-125	5	20	QM-02
Molybdenum	0.105	0.0100	0.0010	mg/L	0.10000	ND	105	75-125	4	20	
Nickel	0.0950	0.0100	0.0005	mg/L	0.10000	ND	95	75-125	3	20	
Potassium	10.4	5.00	0.824	mg/L	1.0000	9.11	133	75-125	4	20	QM-02
Selenium	0.0973	0.0100	0.0018	mg/L	0.10000	ND	97	75-125	5	20	
Silver	0.101	0.0100	0.0002	mg/L	0.10000	ND	101	75-125	4	20	
Sodium	34.0	5.00	0.674	mg/L	1.0000	32.3	162	75-125	6	20	QM-02
Thallium	0.0971	0.0010	0.00005	mg/L	0.10000	0.00006	97	75-125	2	20	
Vanadium	0.103	0.0100	0.0012	mg/L	0.10000	0.0012	102	75-125	0.2	20	
Zinc	0.112	0.0100	0.0012	mg/L	0.10000	0.0106	101	75-125	1	20	
Lithium	0.0970	0.0500	0.0015	mg/L	0.10000	ND	97	75-125	0.8	20	
Post Spike (8010319-PS1)			Source: ABA0339-01				Prepared: 01/15/18 Analyzed: 01/19/18				
Antimony	111			ug/L	100.00	0.201	111	80-120			
Arsenic	99.8			ug/L	100.00	0.606	99	80-120			
Barium	168			ug/L	100.00	70.2	98	80-120			
Beryllium	93.4			ug/L	100.00	0.0559	93	80-120			
Boron	1740			ug/L	1000.0	838	90	80-120			
Cadmium	99.0			ug/L	100.00	0.172	99	80-120			
Calcium	52500			ug/L	1000.0	47600	493	80-120			QM-02
Chromium	96.6			ug/L	100.00	0.439	96	80-120			
Cobalt	94.6			ug/L	100.00	0.212	94	80-120			
Copper	94.7			ug/L	100.00	0.435	94	80-120			
Iron	1460			ug/L	1000.0	477	98	80-120			
Lead	100			ug/L	100.00	0.874	99	80-120			
Magnesium	15900			ug/L	1000.0	13900	203	80-120			QM-02
Molybdenum	105			ug/L	100.00	0.137	105	80-120			
Nickel	94.3			ug/L	100.00	0.463	94	80-120			



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Report No.: ABA0339

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010319 - EPA 3005A											
Post Spike (8010319-PS1)			Source: ABA0339-01			Prepared: 01/15/18 Analyzed: 01/19/18					
Potassium	10300			ug/L	1000.0	9110	115	80-120			
Selenium	100			ug/L	100.00	0.493	100	80-120			
Silver	101			ug/L	100.00	0.0085	101	80-120			
Sodium	36000			ug/L	1000.0	32300	365	80-120			QM-02
Thallium	100			ug/L	100.00	0.0613	100	80-120			
Vanadium	102			ug/L	100.00	1.21	101	80-120			
Zinc	111			ug/L	100.00	10.6	101	80-120			
Lithium	98.2			ug/L	100.00	0.387	98	80-120			
Batch 8010325 - EPA 7470A											
Blank (8010325-BLK1)						Prepared: 01/24/18 Analyzed: 01/25/18					
Mercury	ND	0.00050	0.000036	mg/L							
LCS (8010325-BS1)						Prepared: 01/24/18 Analyzed: 01/25/18					
Mercury	0.00212	0.00050	0.000036	mg/L	2.5000E-3		85	80-120			
Matrix Spike (8010325-MS1)			Source: ABA0336-01			Prepared: 01/24/18 Analyzed: 01/25/18					
Mercury	0.00237	0.00050	0.000036	mg/L	2.5000E-3	ND	95	75-125			
Matrix Spike Dup (8010325-MSD1)			Source: ABA0336-01			Prepared: 01/24/18 Analyzed: 01/25/18					
Mercury	0.00210	0.00050	0.000036	mg/L	2.5000E-3	ND	84	75-125	12	20	
Post Spike (8010325-PS1)			Source: ABA0336-01			Prepared: 01/24/18 Analyzed: 01/25/18					
Mercury	1.62			ug/L	1.6667	-0.00296	97	80-120			



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Legend

Definition of Laboratory Terms

- ND** - Not Detected at levels equal to or greater than the MDL
- BRL** - Not Detected at levels equal to or greater than the RL
- RL** - Reporting Limit **MDL** - Method Detection Limit
- SOP** - Method run per Pace Standard Operating Procedure
- CFU** - Colony Forming Units
- DF** - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrosodiphenylamine. Pace is not NELAC certified for N-Nitrosodiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

- R-01** Elevated reporting limit due to matrix interference.
- 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

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@southernmco.com		PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase 2 CCR & State D&O	
CONTAINER TYPE: PRESERVATION # of	ANALYSIS REQUESTED P P P P P P P P P P 3 3 3 7 3 3 3 3 3 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 ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/2nAc, ≤6°C 6 - Na ₂ S ₂ O 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 SAMPLE TIME: 1450
CONTAINER TYPE PRESERVATION # of	ANALYSIS REQUESTED P P P P P P P P P P 3 3 3 7 3 3 3 3 3 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 ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/2nAc, ≤6°C 6 - Na ₂ S ₂ O 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 SAMPLE TIME: 1450
CONTAINER TYPE: PRESERVATION # of	ANALYSIS REQUESTED P P P P P P P P P P 3 3 3 7 3 3 3 3 3 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 ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/2nAc, ≤6°C 6 - Na ₂ S ₂ O 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 SAMPLE TIME: 1450
Collection DATE 1-11-18 1-11-18 1-11-18 1-11-18 1-11-18 1-11-18 1-11-18	Collection TIME 0455 0855 1313 1770 1350 1315 1430	MATRIX CODE GW GW GW GW GW W W	SAMPLE IDENTIFICATION GWC-22 GWC-9 GWC-11 GWC-17 GWC-12 GWC-4 FB-1-1-11-18 FB-2-1-11-18	CONTAINERS 5 5 5 5 5 5 5	ANALYSIS REQUESTED Metals App. III & IV (EPA 6020/470) Metals (See attached) (EPA 6020) Cl ⁻ , SO ₄ & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SW-846 9315/9320) Bicarbonate Alk, Carbonate Alk, Total Alk Fe, Mg, Na, K TSS TOC Dissolved CH ₄
SAMPLED BY AND TITLE: J. BELESFORD	DATE/TIME: 1-11-18 1450	RELINQUISHED BY: [Signature]	DATE/TIME: 1-11-18 0800	LAB #: AB A0339	FOR LAB USE ONLY Entered into LIMS: Tracking #
RECEIVED BY: J. Belesford	DATE/TIME: 1-11-18 1450	RECEIVED BY: [Signature]	DATE/TIME: 1-11-18 0800	RELINQUISHED BY: [Signature]	DATE/TIME: 1-11-18 0800
RECEIVED BY LAB: J. Belesford	DATE/TIME: 1-11-18 0800	RECEIVED BY: [Signature]	DATE/TIME: 1-11-18 0800	RELINQUISHED BY: [Signature]	DATE/TIME: 1-11-18 0800
Checked: No NA Yes No NA	Temp: Min. Max.	Seal: Intact Broken Not Present	SHIPMENT: UPS FED-EX LISPS # of Coolers	CLIENT: COURIER OTHER FS	TRACKING #: FS

Plant Kraft - Grumman Road State constituents: As, Ba, Cr, Pb, Sp, Se, V, Zn

Plant Kraft - Grumman Rd CCR Phase 2 CCR & State



Sample Condition Upon Receipt

Client Name: GIA Power Project # ABA0339

Courier: Fed Ex UPS USPS Client Commercial Pace Other
Tracking #: _____



Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used IR-4 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 0.1 Biological Tissue is Frozen: Yes No
Temp should be above freezing to 6°C

Date and Initials of person examining contents: 1/12/18 MR

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.	
-Includes date/time/ID/Analysis Matrix:	<u>GCA</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
exceptions: VOA, calform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.	
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.	
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution: _____ Date/Time: _____ Field Data Required? Y / N

Person Contacted: _____
Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp incorrect containers)



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: 1/15/2018 9:26:59AM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 01/12/18 08:00

Work Order: ABA0339

Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 8

#Containers: 40

Minimum Temp(C): 0.1

Maximum Temp(C): 0.1

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:

February 06, 2018

Mr. Joju Abraham
Georgia Power
2480 Maner Road
Atlanta, GA 30339

RE: Project: ABA0339 Plant Kraft
Pace Project No.: 30240902

Dear Mr. Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on January 16, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: ABA0339 Plant Kraft
Pace Project No.: 30240902

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235

Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: ABA0339 Plant Kraft

Pace Project No.: 30240902

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30240902001	GWC-22	Water	01/11/18 09:55	01/16/18 11:10
30240902002	GWC-9	Water	01/11/18 08:55	01/16/18 11:10
30240902003	GWC-11	Water	01/11/18 13:13	01/16/18 11:10
30240902004	GWC-17	Water	01/11/18 12:20	01/16/18 11:10
30240902005	GWC-12	Water	01/11/18 13:50	01/16/18 11:10
30240902006	GWC-4	Water	01/11/18 14:50	01/16/18 11:10
30240902007	FB-1-1-11-18	Water	01/11/18 13:15	01/16/18 11:10
30240902008	EB-2-1-11-18	Water	01/11/18 14:30	01/16/18 11:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: ABA0339 Plant Kraft
Pace Project No.: 30240902

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30240902001	GWC-22	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240902002	GWC-9	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240902003	GWC-11	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240902004	GWC-17	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240902005	GWC-12	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240902006	GWC-4	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240902007	FB-1-1-11-18	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30240902008	EB-2-1-11-18	EPA 9315	JC2	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: ABA0339 Plant Kraft
Pace Project No.: 30240902

Sample: GWC-22		Lab ID: 30240902001	Collected: 01/11/18 09:55	Received: 01/16/18 11:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	2.24 ± 0.528 (0.231)		pCi/L	01/22/18 08:48	13982-63-3	
		C:86% T:NA					
Radium-228	EPA 9320	1.33 ± 0.479 (0.712)		pCi/L	01/30/18 15:27	15262-20-1	
		C:85% T:85%					
Total Radium	Total Radium Calculation	3.57 ± 1.01 (0.943)		pCi/L	02/01/18 11:49	7440-14-4	

Sample: GWC-9		Lab ID: 30240902002	Collected: 01/11/18 08:55	Received: 01/16/18 11:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.71 ± 0.446 (0.251)		pCi/L	01/22/18 08:48	13982-63-3	
		C:85% T:NA					
Radium-228	EPA 9320	0.595 ± 0.392 (0.747)		pCi/L	01/30/18 15:27	15262-20-1	
		C:83% T:84%					
Total Radium	Total Radium Calculation	2.31 ± 0.838 (0.998)		pCi/L	02/01/18 11:49	7440-14-4	

Sample: GWC-11		Lab ID: 30240902003	Collected: 01/11/18 13:13	Received: 01/16/18 11:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	4.86 ± 0.934 (0.230)		pCi/L	01/22/18 08:48	13982-63-3	
		C:88% T:NA					
Radium-228	EPA 9320	2.63 ± 0.689 (0.702)		pCi/L	01/30/18 15:28	15262-20-1	
		C:83% T:82%					
Total Radium	Total Radium Calculation	7.49 ± 1.62 (0.932)		pCi/L	02/01/18 11:49	7440-14-4	

Sample: GWC-17		Lab ID: 30240902004	Collected: 01/11/18 12:20	Received: 01/16/18 11:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	2.43 ± 0.555 (0.218)		pCi/L	01/22/18 08:48	13982-63-3	
		C:89% T:NA					
Radium-228	EPA 9320	1.10 ± 0.529 (0.941)		pCi/L	01/30/18 15:28	15262-20-1	
		C:82% T:78%					
Total Radium	Total Radium Calculation	3.53 ± 1.08 (1.16)		pCi/L	02/01/18 11:49	7440-14-4	

Sample: GWC-12		Lab ID: 30240902005	Collected: 01/11/18 13:50	Received: 01/16/18 11:10	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.21 ± 0.361 (0.241)		pCi/L	01/22/18 08:48	13982-63-3	
		C:80% T:NA					
Radium-228	EPA 9320	1.73 ± 0.568 (0.770)		pCi/L	01/30/18 15:28	15262-20-1	
		C:80% T:84%					

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: ABA0339 Plant Kraft
Pace Project No.: 30240902

Sample: GWC-12		Lab ID: 30240902005	Collected: 01/11/18 13:50	Received: 01/16/18 11:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	2.94 ± 0.929 (1.01)	pCi/L	02/01/18 11:49	7440-14-4	

Sample: GWC-4		Lab ID: 30240902006	Collected: 01/11/18 14:50	Received: 01/16/18 11:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	3.57 ± 0.786 (0.400) C:69% T:NA	pCi/L	01/22/18 08:48	13982-63-3	
Radium-228	EPA 9320	0.912 ± 0.461 (0.807) C:82% T:73%	pCi/L	01/30/18 15:28	15262-20-1	
Total Radium	Total Radium Calculation	4.48 ± 1.25 (1.21)	pCi/L	02/01/18 11:49	7440-14-4	

Sample: FB-1-1-11-18		Lab ID: 30240902007	Collected: 01/11/18 13:15	Received: 01/16/18 11:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.174 ± 0.157 (0.291) C:85% T:NA	pCi/L	01/22/18 08:48	13982-63-3	
Radium-228	EPA 9320	0.311 ± 0.326 (0.676) C:80% T:86%	pCi/L	01/30/18 15:28	15262-20-1	
Total Radium	Total Radium Calculation	0.485 ± 0.483 (0.967)	pCi/L	02/01/18 11:49	7440-14-4	

Sample: EB-2-1-11-18		Lab ID: 30240902008	Collected: 01/11/18 14:30	Received: 01/16/18 11:10	Matrix: Water	
PWS:		Site ID:	Sample Type:			
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.212 ± 0.149 (0.231) C:89% T:NA	pCi/L	01/22/18 08:48	13982-63-3	
Radium-228	EPA 9320	0.371 ± 0.338 (0.683) C:80% T:79%	pCi/L	01/30/18 15:28	15262-20-1	
Total Radium	Total Radium Calculation	0.583 ± 0.487 (0.914)	pCi/L	02/01/18 11:49	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: ABA0339 Plant Kraft

Pace Project No.: 30240902

QC Batch:	285231	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	30240902001, 30240902002, 30240902003, 30240902004, 30240902005, 30240902006, 30240902007, 30240902008		

METHOD BLANK:	1399115	Matrix:	Water
Associated Lab Samples:	30240902001, 30240902002, 30240902003, 30240902004, 30240902005, 30240902006, 30240902007, 30240902008		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.237 ± 0.301 (0.640) C:83% T:87%	pCi/L	01/30/18 15:27	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: ABA0339 Plant Kraft

Pace Project No.: 30240902

QC Batch:	285233	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	30240902001, 30240902002, 30240902003, 30240902004, 30240902005, 30240902006, 30240902007, 30240902008		

METHOD BLANK:	1399117	Matrix:	Water
Associated Lab Samples:	30240902001, 30240902002, 30240902003, 30240902004, 30240902005, 30240902006, 30240902007, 30240902008		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.375 ± 0.191 (0.230) C:89% T:NA	pCi/L	01/22/18 08:48	

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

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QUALIFIERS

Project: ABA0339 Plant Kraft

Pace Project No.: 30240902

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

Chain of Custody



Workorder: ABA0339 Workorder Name: Plant Kraft Owner Received Date: Results Requested By: 2/7/2018

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	LAB USE ONLY	Comments
1	GWC-22	G	1/11/2018 9:55	ABA0339-01	GW	2	X	
2	GWC-9	G	1/11/2018 8:55	ABA0339-02	GW	2	X	
3	GWC-11	G	1/11/2018 13:13	ABA0339-03	GW	2	X	
4	GWC-17	G	1/11/2018 12:20	ABA0339-04	GW	2	X	
5	GWC-12	G	1/11/2018 13:50	ABA0339-05	GW	2	X	
6	GWC-4	G	1/11/2018 14:50	ABA0339-06	GW	2	X	
7	FB-1-1-11-18	G	1/11/2018 13:15	ABA0339-07	W	2	X	
8	EB-2-1-11-18	G	1/11/2018 14:30	ABA0339-08	W	2	X	
9								
10								
Transfers Released By							Date/Time	Comments
1							1/15/18 11:50	
2								
3								

Report To:
Betsy McDaniel
Pace Analytical Atlanta
110 Technology Parkway
Peachtree Corners, GA 30092
Phone (770)-734-4200

Subcontract To:
Pace - Pittsburgh
1638 Roseytown Road
Stes. 2,3,4
Greensburg, PA 15601
Phone (724) 850-5600

WO#: 30240902
30240902

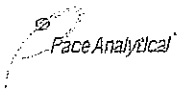
Workorder Name: Plant Kraft Owner Received Date: Results Requested By: 2/7/2018

COOLER TEMPERATURE ON RECEIPT: NA °C CUSTODY SEAL Y OF N RECEIVED ON ICE Y OF N SAMPLE INTACT Y OF N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC

This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pittsburgh Lab Sample Condition Upon Receipt



Client Name: Pace Atlanta Project # 30240902

30240902

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 741366610720

Label	<u>ZH</u>
LIMS Login	<u>ANU</u>

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Thermometer Used LIA Type of Ice: Wet Blue None

Cooler Temperature Observed Temp _____ °C Correction Factor: _____ °C Final Temp: _____ °C

Temp should be above freezing to 6°C

Date and initials of person examining contents: ZH 1/16/18

Comments:	Yes	No	N/A	
Chain of Custody Present:	/			1.
Chain of Custody Filled Out:	/			2.
Chain of Custody Relinquished:		/		3.
Sampler Name & Signature on COC:		/		4.
Sample Labels match COC:	/			5.
-Includes date/time/ID Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	/			6.
Short Hold Time Analysis (<72hr remaining):		/		7.
Rush Turn Around Time Requested:		/		8.
Sufficient Volume:	/			9.
Correct Containers Used:	/			10.
-Pace Containers Used:	/			
Containers Intact:	/			11.
Orthophosphate field filtered			/	12.
Hex Cr Aqueous Compliance/NPDES sample field filtered			/	13.
Organic Samples checked for dechlorination:			/	14.
Filtered volume received for Dissolved tests			/	15.
All containers have been checked for preservation.	/			16. <u>PHCZ</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	/			
exceptions: VOA, coliform, TOC, O&G, Phenolics				
				Initial when completed <u>ZH</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			/	17.
Trip Blank Present:			/	18.
Trip Blank Custody Seals Present			/	
Rad Aqueous Samples Screened > 0.5 mrem/hr		/		Initial when completed: <u>ZH</u> Date: <u>1/16/18</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: JC2
Date: 1/19/2018
Worklist: 39544
Matrix: DW

Method Blank Assessment

MB Sample ID: 1399117
MB concentration: 0.375
M/F Counting Uncertainty: 0.183
MB MDC: 0.230
MB Numerical Performance Indicator: 4.02
MB Status vs Numerical Indicator: N/A
MB Status vs. MDC: See Comment*

Laboratory Control Sample Assessment

Count Date:	LCSD (Y or N)?
1/22/2018	LCSD39544
17-030	17-030
80.180	80.180
0.10	0.10
0.501	0.504
16.012	15.900
1.475	1.465
14.276	13.111
-1.90	0.940
89.16%	-3.14
N/A	82.46%
Pass	N/A
Pass	Pass

Duplicate Sample Assessment

Sample I.D.:	LCSD (Y or N)?
LCSD39544	LCSD39544
14.276	14.276
1.019	1.019
13.111	13.111
0.940	0.940
NO	NO
1.646	1.646
8.51%	8.51%
N/A	N/A
Pass	Pass

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.

Sample Matrix Spike Control Assessment

Sample Collection Date:
Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Spike I.D.:
MS/MSD Decay Corrected Spike Concentration (pCi/mL):
Spike Volume Used in MS (mL):
Spike Volume Used in MSD (mL):
MS Aliquot (L, g, F):
MS Target Conc. (pCi/L, g, F):
MSD Aliquot (L, g, F):
MSD Target Conc. (pCi/L, g, F):
Spike uncertainty (calculated):
Sample Result:
Sample Matrix Spike Result:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
MS Numerical Performance Indicator:
MS Percent Recovery:
MSD Percent Recovery:
MS Status vs Numerical Indicator:
MSD Status vs Numerical Indicator:
MS Status vs Recovery:
MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Sample Matrix Spike Result:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Duplicate Numerical Performance Indicator:
MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:

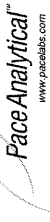
Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*The method blank result is below the reporting limit for this analysis and is acceptable.

M/1/23/18

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 1/22/2018
Worklist: 39542
Matrix: DW

Method Blank Assessment	
MB Sample ID	1399115
MB concentration:	0.237
M/B Counting Uncertainty:	0.298
MB MDC:	0.640
MB Numerical Performance Indicator:	1.55
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?
Count Date:	1/30/2018	LCSD39542
Spike I.D.:	17-033	1/30/2018
Spike Concentration (pCi/mL):	22.458	17-033
Volume Used (mL):	0.20	22.458
Aliquot Volume (L, g, F):	0.803	0.20
Target Conc. (pCi/L, g, F):	5.592	0.804
Uncertainty (Calculated):	0.403	5.584
Result (pCi/L, g, F):	4.016	0.402
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.584	5.234
Numerical Performance Indicator:	-4.35	0.635
Percent Recovery:	71.83%	-0.91
Status vs Numerical Indicator:	N/A	93.73%
Status vs Recovery:	Pass	N/A
		Pass

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS39542	
Duplicate Sample I.D.:	LCS39542	
Sample Result (pCi/L, g, F):	4.016	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.584	
Sample Duplicate Result (pCi/L, g, F):	5.234	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.635	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	-2.768	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	26.46%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Handwritten notes:
DW
1/22/18
JLW

Sample Matrix Spike Control Assessment	
Sample Collection Date:	Sample I.D.
Sample MS I.D.:	Sample MSD I.D.
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike I.D.:
Spike Volume Used in MS (mL):	MS Target Conc. (pCi/L, g, F):
MS Aliquot (L, g, F):	MSD Aliquot (L, g, F):
MSD Target Conc. (pCi/L, g, F):	Spike uncertainty (calculated):
Sample Result:	Sample Result Counting Uncertainty (pCi/L, g, F):
Matrix Spike Result:	Sample Matrix Spike Result:
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):
MS Numerical Performance Indicator:	MS Numerical Performance Indicator:
MSD Numerical Performance Indicator:	MSD Numerical Performance Indicator:
MS Percent Recovery:	MS Percent Recovery:
MSD Percent Recovery:	MSD Percent Recovery:
MS Status vs Numerical Indicator:	MS Status vs Numerical Indicator:
MS Status vs Recovery:	MS Status vs Recovery:
MSD Status vs Recovery:	MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample I.D.
Sample MS I.D.:	Sample MS I.D.
Sample MSD I.D.:	Sample MSD I.D.
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Result:
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Duplicate Numerical Performance Indicator:
Duplicate Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:
MS/MSD Duplicate Status vs Recovery:	MS/MSD Duplicate Status vs Recovery:



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: ABA0340

January 30, 2018

Project: CCR Event

Project #:Plant Kraft

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

A handwritten signature in black ink that reads "Betsy McDaniel" over a horizontal line.

Project Manager

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All test results relate only to the samples analyzed.



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 30, 2018

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-4 (Field Filtered)	ABA0340-01	Ground Water	01/11/18 14:50	01/12/18 08:00



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 110 Technology Parkway, Peachtree Corners, GA 30092
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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

January 30, 2018

Attention: Mr. Joju Abraham

Report No.: ABA0340
Client ID: GWC-4 (Field Filtered)
Date/Time Sampled: 1/11/2018 2:50:00PM
Matrix: Ground Water

Project: CCR Event
Lab Number ID: ABA0340-01
Date/Time Received: 1/12/2018 8:00:00AM

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Metals, Dissolved											
Antimony	ND	0.0030	0.0006	mg/L	EPA 6020B		1	01/18/18 10:45	01/18/18 22:44	8010386	CSW
Arsenic	ND	0.0050	0.0005	mg/L	EPA 6020B		1	01/18/18 10:45	01/18/18 22:44	8010386	CSW
Barium	0.0546	0.0100	0.0004	mg/L	EPA 6020B		1	01/18/18 10:45	01/18/18 22:44	8010386	CSW
Beryllium	ND	0.0150	0.0005	mg/L	EPA 6020B	R-01	5	01/18/18 10:45	01/18/18 23:07	8010386	CSW
Boron	8.85	2.00	0.298	mg/L	EPA 6020B		50	01/18/18 10:45	01/18/18 22:50	8010386	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	01/18/18 10:45	01/18/18 22:44	8010386	CSW
Calcium	9.64	5.00	2.02	mg/L	EPA 6020B		50	01/18/18 10:45	01/18/18 22:50	8010386	CSW
Chromium	0.0050	0.0100	0.0005	mg/L	EPA 6020B	J	1	01/18/18 10:45	01/18/18 22:44	8010386	CSW
Cobalt	0.0004	0.0100	0.0003	mg/L	EPA 6020B	J	1	01/18/18 10:45	01/18/18 22:44	8010386	CSW
Iron	0.198	0.0400	0.0043	mg/L	EPA 6020B		1	01/18/18 10:45	01/18/18 22:44	8010386	CSW
Lead	0.0001	0.0050	0.00007	mg/L	EPA 6020B	J	1	01/18/18 10:45	01/18/18 22:44	8010386	CSW
Magnesium	9.95	2.50	0.314	mg/L	EPA 6020B		50	01/18/18 10:45	01/18/18 22:50	8010386	CSW
Molybdenum	0.0075	0.0100	0.0010	mg/L	EPA 6020B	J	1	01/18/18 10:45	01/18/18 22:44	8010386	CSW
Potassium	16.3	2.50	0.0824	mg/L	EPA 6020B		5	01/18/18 10:45	01/18/18 23:07	8010386	CSW
Selenium	ND	0.0100	0.0018	mg/L	EPA 6020B		1	01/18/18 10:45	01/18/18 22:44	8010386	CSW
Sodium	222	5.00	0.674	mg/L	EPA 6020B		50	01/18/18 10:45	01/18/18 22:50	8010386	CSW
Thallium	ND	0.0010	0.00005	mg/L	EPA 6020B		1	01/18/18 10:45	01/18/18 22:44	8010386	CSW
Vanadium	0.0239	0.0100	0.0012	mg/L	EPA 6020B		1	01/18/18 10:45	01/18/18 22:44	8010386	CSW
Zinc	0.0024	0.0100	0.0012	mg/L	EPA 6020B	J	1	01/18/18 10:45	01/18/18 22:44	8010386	CSW
Lithium	ND	0.250	0.0075	mg/L	EPA 6020B	R-01	5	01/18/18 10:45	01/18/18 23:07	8010386	CSW
Mercury	ND	0.0005	0.00004	mg/L	EPA 7470A		1	01/24/18 10:55	01/24/18 16:02	8010384	MTC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 30, 2018

Report No.: ABA0340

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010384 - EPA 7470A											
Blank (8010384-BLK1)						Prepared & Analyzed: 01/24/18					
Mercury	ND	0.0005	0.00004	mg/L							
LCS (8010384-BS1)						Prepared & Analyzed: 01/24/18					
Mercury	0.0024	0.0005	0.00004	mg/L	2.5000E-3		98	80-120			
Matrix Spike (8010384-MS1)						Source: ABA0304-01 Prepared & Analyzed: 01/24/18					
Mercury	0.0022	0.0005	0.00004	mg/L	2.5000E-3	ND	90	75-125			
Matrix Spike Dup (8010384-MSD1)						Source: ABA0304-01 Prepared & Analyzed: 01/24/18					
Mercury	0.0022	0.0005	0.00004	mg/L	2.5000E-3	ND	87	75-125	4	20	
Post Spike (8010384-PS1)						Source: ABA0304-01 Prepared & Analyzed: 01/24/18					
Mercury	1.55			ug/L	1.6667	0.0037	93	80-120			
Batch 8010386 - EPA 3005A											
Blank (8010386-BLK1)						Prepared & Analyzed: 01/18/18					
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							
Iron	ND	0.0400	0.0043	mg/L							
Lead	ND	0.0050	0.00007	mg/L							
Magnesium	ND	0.0500	0.0063	mg/L							
Molybdenum	ND	0.0100	0.0010	mg/L							
Nickel	ND	0.0100	0.0005	mg/L							
Potassium	ND	0.100	0.0165	mg/L							
Selenium	ND	0.0100	0.0018	mg/L							
Silver	ND	0.0100	0.0002	mg/L							
Sodium	ND	0.100	0.0135	mg/L							
Thallium	ND	0.0010	0.00005	mg/L							
Vanadium	ND	0.0100	0.0012	mg/L							
Zinc	ND	0.0100	0.0012	mg/L							
Lithium	ND	0.0500	0.0015	mg/L							



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 30, 2018

Report No.: ABA0340

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	----	-----	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 8010386 - EPA 3005A

LCS (8010386-BS1)

Prepared & Analyzed: 01/18/18

Antimony	0.105	0.0030	0.0006	mg/L	0.10000		105	80-120			
Arsenic	0.0996	0.0050	0.0005	mg/L	0.10000		100	80-120			
Barium	0.0945	0.0100	0.0004	mg/L	0.10000		94	80-120			
Beryllium	0.102	0.0030	0.00009	mg/L	0.10000		102	80-120			
Boron	1.08	0.0400	0.0060	mg/L	1.0000		108	80-120			
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000		101	80-120			
Calcium	1.01	0.500	0.0404	mg/L	1.0000		101	80-120			
Chromium	0.103	0.0100	0.0005	mg/L	0.10000		103	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			
Iron	1.05	0.0400	0.0043	mg/L	1.0000		105	80-120			
Lead	0.0975	0.0050	0.00007	mg/L	0.10000		98	80-120			
Magnesium	1.05	0.0500	0.0063	mg/L	1.0000		105	80-120			
Molybdenum	0.101	0.0100	0.0010	mg/L	0.10000		101	80-120			
Nickel	0.103	0.0100	0.0005	mg/L	0.10000		103	80-120			
Potassium	1.04	0.100	0.0165	mg/L	1.0000		104	80-120			
Selenium	0.101	0.0100	0.0018	mg/L	0.10000		101	80-120			
Silver	0.0982	0.0100	0.0002	mg/L	0.10000		98	80-120			
Sodium	1.05	0.100	0.0135	mg/L	1.0000		105	80-120			
Thallium	0.0980	0.0010	0.00005	mg/L	0.10000		98	80-120			
Vanadium	0.105	0.0100	0.0012	mg/L	0.10000		105	80-120			
Zinc	0.103	0.0100	0.0012	mg/L	0.10000		103	80-120			
Lithium	0.104	0.0500	0.0015	mg/L	0.10000		104	80-120			

Matrix Spike (8010386-MS1)

Source: ABA0340-01

Prepared & Analyzed: 01/18/18

Antimony	0.107	0.0030	0.0006	mg/L	0.10000	ND	107	75-125			
Arsenic	0.104	0.0050	0.0005	mg/L	0.10000	ND	104	75-125			
Barium	0.148	0.0100	0.0004	mg/L	0.10000	0.0546	94	75-125			
Beryllium	0.0972	0.0030	0.00009	mg/L	0.10000	ND	97	75-125			
Boron	8.73	0.0400	0.0060	mg/L	1.0000	8.85	NR	75-125			QM-02
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000	ND	101	75-125			
Calcium	11.2	25.0	2.02	mg/L	1.0000	9.64	155	75-125			QM-02, J
Chromium	0.109	0.0100	0.0005	mg/L	0.10000	0.0050	104	75-125			
Cobalt	0.102	0.0100	0.0003	mg/L	0.10000	0.0004	101	75-125			
Copper	0.0976	0.0250	0.0003	mg/L	0.10000	0.0009	97	75-125			
Iron	1.23	0.0400	0.0043	mg/L	1.0000	0.198	103	75-125			
Lead	0.0944	0.0050	0.00007	mg/L	0.10000	0.0001	94	75-125			
Magnesium	10.9	2.50	0.314	mg/L	1.0000	9.95	98	75-125			
Molybdenum	0.110	0.0100	0.0010	mg/L	0.10000	0.0075	103	75-125			
Nickel	0.104	0.0100	0.0005	mg/L	0.10000	0.0030	101	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

January 30, 2018

Report No.: ABA0340

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010386 - EPA 3005A											
Matrix Spike (8010386-MS1)			Source: ABA0340-01			Prepared & Analyzed: 01/18/18					
Potassium	15.6	5.00	0.824	mg/L	1.0000	16.3	NR	75-125			QM-02
Selenium	0.0940	0.0100	0.0018	mg/L	0.10000	ND	94	75-125			
Silver	0.0947	0.0100	0.0002	mg/L	0.10000	ND	95	75-125			
Sodium	218	5.00	0.674	mg/L	1.0000	222	NR	75-125			QM-02
Thallium	0.0961	0.0010	0.00005	mg/L	0.10000	ND	96	75-125			
Vanadium	0.131	0.0100	0.0012	mg/L	0.10000	0.0239	107	75-125			
Zinc	0.103	0.0100	0.0012	mg/L	0.10000	0.0024	100	75-125			
Lithium	0.103	0.0500	0.0015	mg/L	0.10000	0.0020	101	75-125			
Matrix Spike Dup (8010386-MSD1)			Source: ABA0340-01			Prepared & Analyzed: 01/18/18					
Antimony	0.107	0.0030	0.0006	mg/L	0.10000	ND	107	75-125	0.5	20	
Arsenic	0.102	0.0050	0.0005	mg/L	0.10000	ND	102	75-125	1	20	
Barium	0.149	0.0100	0.0004	mg/L	0.10000	0.0546	95	75-125	0.9	20	
Beryllium	0.0941	0.0030	0.00009	mg/L	0.10000	ND	94	75-125	3	20	
Boron	8.67	0.0400	0.0060	mg/L	1.0000	8.85	NR	75-125	0.7	20	QM-02
Cadmium	0.102	0.0010	0.0001	mg/L	0.10000	ND	102	75-125	1	20	
Calcium	11.1	25.0	2.02	mg/L	1.0000	9.64	149	75-125	0.6	20	QM-02, J
Chromium	0.104	0.0100	0.0005	mg/L	0.10000	0.0050	99	75-125	4	20	
Cobalt	0.102	0.0100	0.0003	mg/L	0.10000	0.0004	102	75-125	0.8	20	
Copper	0.0960	0.0250	0.0003	mg/L	0.10000	0.0009	95	75-125	2	20	
Iron	1.23	0.0400	0.0043	mg/L	1.0000	0.198	103	75-125	0.4	20	
Lead	0.0933	0.0050	0.00007	mg/L	0.10000	0.0001	93	75-125	1	20	
Magnesium	11.2	2.50	0.314	mg/L	1.0000	9.95	124	75-125	2	20	
Molybdenum	0.110	0.0100	0.0010	mg/L	0.10000	0.0075	103	75-125	0.03	20	
Nickel	0.102	0.0100	0.0005	mg/L	0.10000	0.0030	99	75-125	2	20	
Potassium	16.0	5.00	0.824	mg/L	1.0000	16.3	NR	75-125	2	20	QM-02
Selenium	0.0884	0.0100	0.0018	mg/L	0.10000	ND	88	75-125	6	20	
Silver	0.0940	0.0100	0.0002	mg/L	0.10000	ND	94	75-125	0.8	20	
Sodium	221	5.00	0.674	mg/L	1.0000	222	NR	75-125	1	20	QM-02
Thallium	0.0953	0.0010	0.00005	mg/L	0.10000	ND	95	75-125	0.9	20	
Vanadium	0.129	0.0100	0.0012	mg/L	0.10000	0.0239	105	75-125	1	20	
Zinc	0.104	0.0100	0.0012	mg/L	0.10000	0.0024	102	75-125	1	20	
Lithium	0.0981	0.0500	0.0015	mg/L	0.10000	0.0020	96	75-125	5	20	



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Environmental Monitoring & Laboratory Analysis
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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 30, 2018

Report No.: ABA0340

Metals, Dissolved - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8010386 - EPA 3005A											
Post Spike (8010386-PS1)		Source: ABA0340-01				Prepared & Analyzed: 01/18/18					
Antimony	105			ug/L	100.00	0.378	104	80-120			
Arsenic	104			ug/L	100.00	0.329	104	80-120			
Barium	150			ug/L	100.00	54.6	95	80-120			
Beryllium	95.0			ug/L	100.00	0.0800	95	80-120			
Boron	8860			ug/L	1000.0	8850	2	80-120			QM-02
Cadmium	102			ug/L	100.00	-0.0027	102	80-120			
Calcium	11100			ug/L	1000.0	9640	151	80-120			QM-02
Chromium	108			ug/L	100.00	4.96	103	80-120			
Cobalt	100			ug/L	100.00	0.413	100	80-120			
Copper	98.2			ug/L	100.00	0.866	97	80-120			
Iron	1210			ug/L	1000.0	198	102	80-120			
Lead	95.4			ug/L	100.00	0.130	95	80-120			
Magnesium	11200			ug/L	1000.0	9950	130	80-120			QM-02
Molybdenum	111			ug/L	100.00	7.47	104	80-120			
Nickel	103			ug/L	100.00	3.05	100	80-120			
Potassium	16700			ug/L	1000.0	16300	41	80-120			QM-02
Selenium	103			ug/L	100.00	1.07	102	80-120			
Silver	95.8			ug/L	100.00	0.0155	96	80-120			
Sodium	228000			ug/L	1000.0	222000	647	80-120			QM-02
Thallium	95.8			ug/L	100.00	0.0228	96	80-120			
Vanadium	131			ug/L	100.00	23.9	107	80-120			
Zinc	102			ug/L	100.00	2.36	100	80-120			
Lithium	102			ug/L	100.00	1.98	100	80-120			



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Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 30, 2018

Legend

Definition of Laboratory Terms

- ND** - Not Detected at levels equal to or greater than the MDL
BRL - Not Detected at levels equal to or greater than the RL
RL - Reporting Limit **MDL** - Method Detection Limit
SOP - Method run per Pace Standard Operating Procedure
CFU - Colony Forming Units
DF - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrosodiphenylamine. Pace is not NELAC certified for N-Nitrosodiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

- R-01** Elevated reporting limit due to matrix interference.
- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

Note: Unless otherwise noted, all results are reported on an as received basis.



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Atlanta GA, 30339

Attention: Mr. Joju Abraham

January 30, 2018

Report Notes

The sample was field filtered and preserved. CFH



CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

PAGE: 1 OF 1

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239 REPORT TO: Lauren Petty REQUESTED COMPLETION DATE: PO #: laburch@southernco.com PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase 2 CCR & State D&O		CONTAINER TYPE PRESERVATION # of C O N T A I N E R S		ANALYSIS REQUESTED P P P P P P P P 3 3 7 3 Metals App. III & IV (EPA 6020/7470) *Field Filtered Metals (See attached) EPA 6020 Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SW-846 9315/9320) Bicarbonate Alk, Carbonate Alk, Total Alk Fe, Mg, Na, K Tritium TOC Dissolved CH ₄							CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen
Collection DATE 1-11-18 Collection TIME 1450 MATRIX CODE* GW SAMPLE IDENTIFICATION GWC-4	RELINQUISHED BY: DATE/TIME: 1-11-18 1450		RELINQUISHED BY: DATE/TIME: 1-12-18 0800		SAMPLE SHIPPED VIA UPS Temperature: Min: 0.1 Max: Custody Seal: Intact Broken Not Present		RELINQUISHED BY: DATE/TIME: 1-12-18 0800		RELINQUISHED BY: DATE/TIME: 1-12-18 0800		
SAMPLED BY AND TITLE: RECEIVED BY: RECEIVED BY LAB: O. FUGOYA (ACC) La Grumman		LAB #: ABH0340		ENTERED INTO LIMS: Tracking #:		FOR LAB USE ONLY		PH #: Yes No NA Ice Yes No NA			

Plant Kraft -Grumman Rd COC Phase 2 CCR & State

Sample Condition Upon Receipt

Face Analytical

Client Name: GA Power Project # ABA0340

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used _____ Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature _____ Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Optional Proj. Due Date: Proj. Name:
--

Date and Initials of person examining contents: _____

		Comments:
Chain of Custody Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

LOG-IN CHECKLIST

Printed: 1/15/2018 9:37:42AM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 01/12/18 08:00

Work Order: ABA0340

Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 1

#Containers: 1

Minimum Temp(C): 0.1

Maximum Temp(C): 0.1

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:

The sample was field filtered and preserved. CFH

Product Name: Low-Flow System

Date: 2018-07-11 18:46:02

Project Information:

Operator Name J Berisford
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 573204
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter
Tubing Length
Peri. Pump poly
.17 in
21 ft

Pump placement from TOC 19 ft

Well Information:

Well ID GWA-3
Well diameter 2 in
Well Total Depth 21.1 ft
Screen Length 5 ft
Depth to Water 6.93 ft

Pumping Information:

Final Pumping Rate 225 mL/min
Total System Volume 0.1837319 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5.6 in
Total Volume Pumped 6.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	18:25:02	600.05	24.59	6.11	2625.58	77.00	7.40	-0.01	40.39
Last 5	18:30:02	900.02	24.48	6.11	2658.21	129.00	7.40	-0.01	38.65
Last 5	18:35:02	1200.04	24.48	6.10	2641.91	143.00	7.40	-0.01	36.60
Last 5	18:40:02	1500.04	24.29	6.10	2611.33	159.00	7.40	-0.01	34.94
Last 5	18:45:02	1800.03	24.32	6.10	2630.07	174.00	7.40	-0.01	33.28
Variance 0			-0.00	-0.01	-16.30			-0.00	-2.04
Variance 1			-0.19	-0.01	-30.58			-0.00	-1.67
Variance 2			0.03	0.00	18.74			-0.00	-1.65

Notes

Sunny, sample time-1845

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-09 14:44:33

Project Information:

Operator Name J Berisford
Company Name Atlantic Coast Consulting
Project Name Background 8 & State Semi-annual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 573204
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 20.9 ft

Pump placement from TOC 15 ft

Well Information:

Well ID GWA-8
Well diameter 2 in
Well Total Depth 20.9 ft
Screen Length 10 ft
Depth to Water 8.94 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.1832855 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12.7 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	14:20:09	1200.02	27.61	4.62	267.33	3.81	10.00	0.19	127.18
Last 5	14:25:09	1500.01	27.42	4.45	316.21	3.95	10.00	0.14	128.33
Last 5	14:30:09	1800.02	27.23	4.43	326.43	3.11	10.00	0.10	127.35
Last 5	14:35:09	2099.99	26.96	4.41	333.04	3.06	10.00	0.10	127.18
Last 5	14:40:10	2401.00	27.42	4.40	337.61	3.81	10.00	0.08	125.87
Variance 0			-0.18	-0.02	10.23			-0.04	-0.98
Variance 1			-0.27	-0.02	6.60			0.00	-0.17
Variance 2			0.46	-0.01	4.58			-0.01	-1.32

Notes

Sunny, sample time-1440

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 13:50:03

Project Information:

Operator Name J Berisford
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 573204
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter
Tubing Length
Peri. Pump poly
.17 in
28 ft

Pump placement from TOC 25 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.1 ft
Screen Length 5 ft
Depth to Water 19.28 ft

Pumping Information:

Final Pumping Rate 500 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.6 in
Total Volume Pumped 15 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	13:25:43	600.04	23.31	5.72	436.29	1.99	19.50	0.09	52.73
Last 5	13:30:43	900.03	22.99	5.72	437.13	2.71	19.50	0.08	58.32
Last 5	13:35:43	1200.03	23.44	5.71	437.30	1.89	19.50	0.05	66.06
Last 5	13:40:43	1500.03	23.41	5.71	436.03	1.11	19.50	0.04	71.04
Last 5	13:45:43	1800.02	23.42	5.71	434.59	0.70	19.50	0.04	74.96
Variance 0			0.45	-0.00	0.17			-0.04	7.74
Variance 1			-0.03	-0.00	-1.26			-0.01	4.98
Variance 2			0.00	-0.00	-1.45			0.00	3.91

Notes

Sunny, sample time -1345, Dup-2 here

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 16:42:21

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type Poly
Tubing Diameter .17 in
Tubing Length 33

Pump placement from TOC

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 31.40
Screen Length 5 ft
Depth to Water 16.72

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.2194393 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2
Total Volume Pumped 6.125 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	16:20:04	600.03	23.38	4.33	60.97	7.22	16.90	0.37	91.53
Last 5	16:25:04	900.02	23.74	4.42	59.73	8.00	16.90	0.17	86.41
Last 5	16:30:04	1200.02	23.43	4.52	60.85	5.81	16.90	0.15	79.48
Last 5	16:35:05	1501.01	23.46	4.59	61.14	2.87	16.90	0.14	75.51
Last 5	16:40:09	1805.01	23.43	4.58	61.83	3.22	16.90	0.14	74.56
Variance 0			-0.31	0.10	1.12			-0.02	-6.93
Variance 1			0.02	0.08	0.29			-0.01	-3.97
Variance 2			-0.03	-0.01	0.70			-0.01	-0.94

Notes

Sampled at 1640. 92F partly cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 15:29:00

Project Information:

Operator Name J Berisford
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 573204
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter
Tubing Length
Peri. Pump poly
.17 in
23 ft

Pump placement from TOC 21 ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 22.8 ft
Screen Length 5 ft
Depth to Water 20.52 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.1 in
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	15:05:12	1800.02	25.67	6.35	451.25	1.17	20.70	0.21	63.51
Last 5	15:10:12	2100.01	25.47	6.37	453.45	1.04	20.70	0.21	63.39
Last 5	15:15:12	2400.01	25.26	6.39	464.64	0.51	20.70	0.20	61.84
Last 5	15:20:12	2699.99	25.36	6.40	474.35	0.77	20.70	0.21	59.58
Last 5	15:25:13	3001.00	24.82	6.40	474.99	0.69	20.70	0.20	58.79
Variance 0			-0.21	0.01	11.19			-0.01	-1.56
Variance 1			0.10	0.01	9.70			0.00	-2.26
Variance 2			-0.54	0.00	0.65			-0.00	-0.79

Notes

Sunny, sample time-1525

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 17:51:43

Project Information:

Operator Name J Berisford
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 573204
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter
Tubing Length
Peri. Pump poly
.17 in
26 ft
Pump placement from TOC 24 ft

Well Information:

Well ID GWC-4
Well diameter 2 in
Well Total Depth 26.50 ft
Screen Length 5 ft
Depth to Water 14.95 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.206049 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12.6 in
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	17:31:00	600.05	24.23	6.03	1145.74	32.00	15.90	0.19	60.38
Last 5	17:36:00	900.05	24.93	6.03	1193.26	140.00	16.00	0.22	48.42
Last 5	17:41:00	1200.04	25.08	6.02	1192.12	168.00	16.00	0.21	40.45
Last 5	17:46:00	1500.03	25.11	6.01	1196.80	171.00	16.00	0.18	34.73
Last 5	17:51:00	1800.03	24.45	6.01	1202.45	185.00	16.00	0.18	31.85
Variance 0			0.15	-0.01	-1.13			-0.01	-7.96
Variance 1			0.03	-0.01	4.68			-0.03	-5.72
Variance 2			-0.66	0.00	5.65			-0.00	-2.89

Notes

Sunny, sample time-1750,

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 11:58:13

Project Information:

Operator Name J Berisford
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 573204
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter
Tubing Length
Peri. Pump poly
.17 in
25 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 5 ft
Depth to Water 11.15 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7.8 in
Total Volume Pumped 27 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	11:36:01	6900.93	22.56	6.43	2528.92	5.22	11.80	0.04	-35.77
Last 5	11:41:01	7200.92	22.49	6.42	2495.65	5.08	11.80	0.04	-35.74
Last 5	11:46:01	7500.92	22.52	6.43	2514.88	5.14	11.80	0.04	-35.39
Last 5	11:51:01	7800.91	22.74	6.42	2479.66	4.73	11.80	0.04	-35.79
Last 5	11:56:01	8100.89	23.01	6.42	2465.73	4.33	11.80	0.04	-36.73
Variance 0			0.03	0.00	19.23			-0.01	0.36
Variance 1			0.22	-0.01	-35.21			0.00	-0.41
Variance 2			0.27	-0.00	-13.93			-0.00	-0.93

Notes

Sunny, sample time-1156

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 09:07:06

Project Information:

Operator Name J Berisford
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 573204
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter
Tubing Length
Peri. Pump
poly
.17 in
22 ft

Pump placement from TOC 20 ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 22.8 ft
Screen Length 5 ft
Depth to Water 8.92 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.1881953 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5.7 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	08:40:09	600.03	22.55	5.29	648.37	2.58	9.30	0.22	77.11
Last 5	08:45:09	900.02	22.48	5.29	647.49	1.42	9.30	0.15	73.37
Last 5	08:50:09	1200.02	22.53	5.30	645.19	1.29	9.40	0.14	70.30
Last 5	08:55:09	1500.02	22.57	5.31	647.10	1.32	9.40	0.12	67.34
Last 5	09:05:09	2099.99	22.25	5.31	643.38	1.85	9.40	0.10	63.98
Variance 0			0.05	0.01	-2.30			-0.02	-3.08
Variance 1			0.03	0.01	1.90			-0.02	-2.96
Variance 2			-0.31	0.00	-3.72			-0.02	-3.36

Notes

Sunny, sample time-0905

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 17:39:50

Project Information:

Operator Name Jberisford
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 573204
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri. Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25.7 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 25.7 ft
Screen Length 5 ft
Depth to Water 9.69 ft

Pumping Information:

Final Pumping Rate 75 mL/min
Total System Volume 0.20471 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	17:18:54	2404.01	24.44	4.98	254.33	9.10	21.80	0.16	47.38
Last 5	17:23:54	2704.01	24.37	4.97	254.28	11.00	22.60	0.16	48.99
Last 5	17:28:54	3003.98	24.58	4.97	253.21	8.40	23.70	0.15	49.89
Last 5	17:33:54	3304.00	24.37	4.97	253.44	7.20	24.50	0.16	50.97
Last 5	17:38:56	3605.98	23.46	4.94	249.65	12.00	25.30	0.15	53.50
Variance 0			0.21	-0.00	-1.07			-0.00	0.90
Variance 1			-0.21	-0.00	0.24			0.00	1.08
Variance 2			-0.91	-0.03	-3.80			-0.01	2.52

Notes

No sample taken, well purged dry

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 09:14:06

Project Information:

Operator Name Jberisford
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 573204
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter
Tubing Length
Peri. Pump poly
.17 in
25 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 25.7 ft
Screen Length 5 ft
Depth to Water 10.04 ft

Pumping Information:

Final Pumping Rate 75 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 68 in
Total Volume Pumped 2.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	08:50:02	600.04	24.86	4.63	244.71	12.00	12.20	0.40	102.46
Last 5	08:55:02	900.04	25.04	4.68	240.57	8.40	13.30	2.42	114.31
Last 5	09:00:02	1200.04	24.34	4.68	241.78	6.49	14.00	0.33	95.98
Last 5	09:05:02	1500.03	24.09	4.68	242.05	6.07	14.80	0.25	90.88
Last 5	09:10:02	1800.02	24.13	4.68	242.13	4.89	15.40	0.22	88.41
Variance 0			-0.70	-0.01	1.22			-2.08	-18.33
Variance 1			-0.25	0.00	0.27			-0.09	-5.09
Variance 2			0.04	-0.00	0.07			-0.03	-2.48

Notes

Sunny, sample time- 0910, we'll purged dry 7/9/18, allowed for recharge.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 12:48:54

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type Poly
Tubing Diameter .17 in
Tubing Length 26 ft

Pump placement from TOC 20.00 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 22.5 ft
Screen Length 5 ft
Depth to Water 13.18 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.206049 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 30 in
Total Volume Pumped 14.95 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	12:25:11	5408.97	29.11	4.74	555.19	6.59	16.00	0.22	140.28
Last 5	12:30:17	5714.96	28.54	4.70	567.77	5.32	16.00	0.20	143.71
Last 5	12:35:18	6015.96	27.80	4.72	587.06	5.14	16.00	0.19	142.64
Last 5	12:40:18	6315.95	27.96	4.77	600.38	4.68	16.00	0.20	140.52
Last 5	12:45:18	6615.95	27.94	4.82	605.59	4.45	16.00	0.20	138.64
Variance 0			-0.75	0.02	19.29			-0.00	-1.07
Variance 1			0.16	0.05	13.32			0.01	-2.12
Variance 2			-0.02	0.05	5.21			-0.00	-1.88

Notes

Sampled at 1250. Partly cloudy 93F.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 09:42:25

Project Information:

Operator Name O. FUQUEA
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type Poly
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 24.2 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 26.70 ft
Screen Length 5 ft
Depth to Water 13.01 ft

Pumping Information:

Final Pumping Rate 0 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	09:20:00	300.03	22.98	3.77	1200.90	4.92	13.40	0.15	145.47
Last 5	09:25:00	600.04	22.85	3.82	1198.13	7.36	13.40	0.12	138.41
Last 5	09:30:00	900.03	22.95	3.89	1194.68	5.13	13.40	0.11	133.38
Last 5	09:35:00	1200.02	22.76	3.92	1191.41	3.33	13.40	0.10	131.44
Last 5	09:40:02	1502.02	22.94	3.95	1192.38	3.93	13.40	0.10	129.48
Variance 0			0.10	0.07	-3.45			-0.01	-5.03
Variance 1			-0.19	0.03	-3.27			-0.01	-1.94
Variance 2			0.17	0.03	0.97			-0.00	-1.96

Notes

Sampled at 0940. 85F partly cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 15:01:21

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type Poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 21.6 ft

Well Information:

Well ID GWC-13
Well diameter 2 in
Well Total Depth 24.10 ft
Screen Length 5 ft
Depth to Water 14.31 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7 in
Total Volume Pumped 79 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	14:40:02	3601.00	27.14	5.12	24.61	20.50	15.00	7.15	64.30
Last 5	14:45:03	3902.00	24.06	4.40	60.26	17.40	15.00	1.46	128.05
Last 5	14:50:05	4203.99	23.97	4.50	66.10	13.60	15.00	1.08	122.95
Last 5	14:55:05	4503.99	23.48	4.52	67.08	9.30	15.00	0.81	122.01
Last 5	15:00:06	4804.99	23.39	4.49	67.98	9.33	15.00	0.65	123.13
Variance 0			-0.09	0.10	5.84			-0.38	-5.10
Variance 1			-0.48	0.02	0.98			-0.27	-0.94
Variance 2			-0.10	-0.03	0.90			-0.15	1.13

Notes

Sampled at 1500. 94F partly cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-09 15:42:10

Project Information:

Operator Name O. Duquesne
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type Poly
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 24.5 ft

Well Information:

Well ID GWC-14
Well diameter 2 in
Well Total Depth 27.00 ft
Screen Length 5 ft
Depth to Water 19.56 ft

Pumping Information:

Final Pumping Rate 190 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 7.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	15:20:02	900.02	22.57	5.06	878.86	2.86	19.80	1.01	99.84
Last 5	15:25:02	1200.01	21.41	5.05	882.05	4.52	19.80	0.12	102.91
Last 5	15:30:02	1500.01	21.31	5.06	886.05	4.46	19.80	0.11	100.02
Last 5	15:35:06	1804.00	21.38	5.07	888.27	4.52	19.80	0.11	94.77
Last 5	15:40:06	2103.99	21.42	5.11	875.00	4.28	19.80	0.10	95.17
Variance 0			-0.11	0.01	4.00			-0.01	-2.88
Variance 1			0.08	0.01	2.22			-0.00	-5.25
Variance 2			0.04	0.04	-13.27			-0.00	0.40

Notes

Sampled at 1540. Partly cloudy
93F.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 09:19:33

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type Poly
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 24.3 ft

Well Information:

Well ID GWC-15
Well diameter 2 in
Well Total Depth 26.80 ft
Screen Length 5 ft
Depth to Water 19.29 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 13 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	08:55:00	600.02	22.99	6.50	781.57	3.47	19.50	0.16	103.28
Last 5	09:00:00	900.02	23.01	6.48	781.91	4.19	19.50	0.14	101.99
Last 5	09:05:00	1200.02	23.04	6.47	780.90	4.39	19.50	0.15	101.42
Last 5	09:10:05	1505.00	23.03	6.46	778.32	4.67	19.50	0.13	101.11
Last 5	09:15:05	1805.00	23.03	6.42	778.41	4.25	19.50	0.21	102.95
Variance 0			0.04	-0.01	-1.01			0.01	-0.57
Variance 1			-0.02	-0.01	-2.58			-0.03	-0.31
Variance 2			-0.00	-0.04	0.09			0.08	1.84

Notes

Sampled at 0915. Partly cloudy 83F.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 15:06:50

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type Poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 25.8 ft

Well Information:

Well ID GWC-16
Well diameter 2 in
Well Total Depth 28.20 ft
Screen Length 5 ft
Depth to Water 25.05 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 8 in
Total Volume Pumped 31 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	14:45:03	600.02	23.88	5.48	1670.15	6.05	20.80	0.61	114.52
Last 5	14:50:03	900.02	23.92	5.50	1671.13	5.25	20.80	0.60	112.87
Last 5	14:55:06	1203.02	24.24	5.50	1683.40	3.51	20.80	0.60	111.64
Last 5	15:00:07	1504.01	24.56	5.51	1677.66	3.95	20.80	0.59	110.61
Last 5	15:05:11	1808.01	24.46	5.50	1676.93	4.71	20.80	0.59	110.33
Variance 0			0.32	0.00	12.28			-0.00	-1.23
Variance 1			0.32	0.01	-5.74			-0.01	-1.03
Variance 2			-0.10	-0.01	-0.74			-0.00	-0.28

Notes

Began purge at 1505. Sampled at 1505. 93F partly cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 14:45:29

Project Information:

Operator Name J Berisford
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 573204
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter
Tubing Length
Peri. Pump
poly
.17 in
23 ft

Pump placement from TOC 21 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 23.0 ft
Screen Length 5 ft
Depth to Water 7.29 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 19.3 in
Total Volume Pumped 39.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	14:20:35	14724.80	24.41	4.09	3560.02	23.00	8.90	0.03	181.17
Last 5	14:25:37	15026.80	23.96	4.09	3580.65	17.00	8.90	0.03	176.34
Last 5	14:30:43	15332.80	23.81	4.09	3600.08	15.00	8.90	0.03	172.46
Last 5	14:35:43	15632.79	24.09	4.07	3609.22	12.00	8.90	0.03	175.46
Last 5	14:40:43	15932.79	24.92	4.07	3585.48	9.27	8.90	0.02	182.42
Variance 0			-0.14	-0.00	19.43			0.00	-3.88
Variance 1			0.28	-0.01	9.14			-0.01	2.99
Variance 2			0.83	-0.01	-23.74			-0.01	6.96

Notes

Sunny, sample time-1440,FB-2-7-11-18 here

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-09 16:28:02

Project Information:

Operator Name Jberisford
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 573204
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter
Tubing Length
Peri. Pump
poly
.17 in
24 ft

Pump placement from TOC 22 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 24.90 ft
Screen Length 5 ft
Depth to Water 21.12 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.1971222 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 7.15 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	16:05:06	2100.03	26.64	6.23	692.77	1.04	21.40	0.14	83.42
Last 5	16:10:06	2400.01	26.36	6.23	687.90	1.55	21.40	0.13	82.91
Last 5	16:15:06	2700.00	25.68	6.25	708.15	1.09	21.40	0.13	81.72
Last 5	16:20:06	2999.99	25.50	6.24	704.34	1.17	21.40	0.14	79.82
Last 5	16:25:06	3299.98	25.77	6.24	694.78	0.89	21.40	0.09	78.99
Variance 0			-0.68	0.01	20.25			0.00	-1.20
Variance 1			-0.18	-0.01	-3.81			0.01	-1.90
Variance 2			0.28	-0.00	-9.56			-0.05	-0.83

Notes

Sunny, sample time-1625

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 11:43:05

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 466086
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type Poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 21.3 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 23.80 ft
Screen Length 5 ft
Depth to Water 20.54 ft

Pumping Information:

Final Pumping Rate 160 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 18.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	11:20:11	4809.95	23.82	5.64	228.55	5.07	20.70	2.32	107.65
Last 5	11:25:11	5109.96	23.62	5.58	242.51	4.83	20.70	2.51	111.64
Last 5	11:30:11	5409.95	23.49	5.66	246.79	4.84	20.70	2.40	108.20
Last 5	11:35:11	5709.94	23.53	5.70	258.72	4.29	20.70	2.32	106.61
Last 5	11:40:11	6009.94	23.56	5.70	257.36	4.29	20.70	2.30	106.16
Variance 0			-0.13	0.08	4.28			-0.11	-3.44
Variance 1			0.04	0.03	11.93			-0.08	-1.59
Variance 2			0.03	0.00	-1.36			-0.02	-0.45

Notes

Sampled at 1140. 90F partly cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 16:48:06

Project Information:

Operator Name J Berisford
Company Name ACC
Project Name Background #8 & State Semiannual
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 573204
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter
Tubing Length
Peri. Pump poly
.17 in
17 ft

Pump placement from TOC 15 ft

Well Information:

Well ID GWC-22
Well diameter 2 in
Well Total Depth 17.70 ft
Screen Length 5 ft
Depth to Water 9.01 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.1658782 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.8 in
Total Volume Pumped 15.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	16:25:01	4199.99	26.00	4.71	1130.08	0.94	9.40	0.05	175.26
Last 5	16:30:01	4499.98	26.45	4.70	1176.90	0.93	9.40	0.05	177.46
Last 5	16:35:01	4799.98	26.68	4.68	1214.83	0.77	9.40	0.05	180.21
Last 5	16:40:01	5099.97	26.55	4.68	1249.69	0.81	9.40	0.06	180.95
Last 5	16:45:01	5399.96	26.96	4.68	1223.23	0.50	9.40	0.07	180.41
Variance 0			0.23	-0.02	37.93			0.00	2.74
Variance 1			-0.13	-0.00	34.86			0.01	0.74
Variance 2			0.41	-0.00	-26.46			0.01	-0.54

Notes

Sunny, sample time -1645

Grab Samples

August 08, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 267011

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 11, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Maria Padilla, Georgia Power
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267011

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267011001	GWC-14	Water	07/09/18 15:40	07/11/18 15:10
267011002	FB-1-7-9-18	Water	07/09/18 16:20	07/11/18 15:10
267011003	GWC-15	Water	07/10/18 09:15	07/11/18 15:10
267011004	GWC-21	Water	07/10/18 11:40	07/11/18 15:10
267011005	GWC-16	Water	07/10/18 15:05	07/11/18 15:10
267011006	GWC-2	Water	07/10/18 16:40	07/11/18 15:10
267011007	EB-1-7-10-18	Water	07/10/18 17:35	07/11/18 15:10
267011008	GWA-8	Water	07/09/18 14:40	07/11/18 15:10
267011009	GWC-20	Water	07/09/18 16:25	07/11/18 15:10
267011010	GWC-6	Water	07/10/18 09:05	07/11/18 15:10
267011011	GWC-5	Water	07/10/18 11:56	07/11/18 15:10
267011012	GWC-1	Water	07/10/18 13:45	07/11/18 15:10
267011013	GWC-3	Water	07/10/18 15:25	07/11/18 15:10
267011014	Dup-2	Water	07/10/18 00:00	07/11/18 15:10

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road
Pace Project No.: 267011

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
267011001	GWC-14	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267011002	FB-1-7-9-18	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267011003	GWC-15	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267011004	GWC-21	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267011005	GWC-16	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267011006	GWC-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267011007	EB-1-7-10-18	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267011008	GWA-8	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267011009	GWC-20	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267011010	GWC-6	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267011011	GWC-5	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267011012	GWC-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267011013	GWC-3	EPA 9315	LAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
267011014	Dup-2	EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

Sample: GWC-14 **Lab ID: 267011001** Collected: 07/09/18 15:40 Received: 07/11/18 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.293 ± 0.190 (0.331) C:77% T:NA	pCi/L	07/24/18 08:52	13982-63-3	
Radium-228	EPA 9320	0.400 ± 0.386 (0.790) C:75% T:80%	pCi/L	08/01/18 11:38	15262-20-1	
Total Radium	Total Radium Calculation	0.693 ± 0.576 (1.12)	pCi/L	08/02/18 15:33	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

Sample: FB-1-7-9-18 **Lab ID: 267011002** Collected: 07/09/18 16:20 Received: 07/11/18 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.299 ± 0.160 (0.206) C:76% T:NA	pCi/L	07/24/18 08:52	13982-63-3	
Radium-228	EPA 9320	0.873 ± 0.441 (0.761) C:75% T:77%	pCi/L	08/01/18 11:40	15262-20-1	
Total Radium	Total Radium Calculation	1.17 ± 0.601 (0.967)	pCi/L	08/02/18 15:33	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

Sample: GWC-15 **Lab ID: 267011003** Collected: 07/10/18 09:15 Received: 07/11/18 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.457 ± 0.193 (0.221) C:80% T:NA	pCi/L	07/24/18 08:52	13982-63-3	
Radium-228	EPA 9320	0.798 ± 0.408 (0.700) C:71% T:84%	pCi/L	08/01/18 11:40	15262-20-1	
Total Radium	Total Radium Calculation	1.26 ± 0.601 (0.921)	pCi/L	08/02/18 15:33	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

Sample: GWC-21 **Lab ID: 267011004** Collected: 07/10/18 11:40 Received: 07/11/18 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.539 ± 0.214 (0.261) C:87% T:NA	pCi/L	07/24/18 08:52	13982-63-3	
Radium-228	EPA 9320	1.09 ± 0.517 (0.879) C:74% T:73%	pCi/L	08/01/18 11:40	15262-20-1	
Total Radium	Total Radium Calculation	1.63 ± 0.731 (1.14)	pCi/L	08/02/18 15:33	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

Sample: GWC-16 **Lab ID: 267011005** Collected: 07/10/18 15:05 Received: 07/11/18 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • Upon receipt at the laboratory, 2.5 mls of nitric acid were added to the samples to meet the sample preservation requirement of pH <2 for radiological analyses.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.975 ± 0.282 (0.192) C:86% T:NA	pCi/L	07/24/18 08:52	13982-63-3	
Radium-228	EPA 9320	0.992 ± 0.454 (0.739) C:71% T:78%	pCi/L	08/01/18 11:40	15262-20-1	
Total Radium	Total Radium Calculation	1.97 ± 0.736 (0.931)	pCi/L	08/02/18 15:33	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

Sample: GWC-2 **Lab ID: 267011006** Collected: 07/10/18 16:40 Received: 07/11/18 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.198 ± 0.145 (0.258) C:86% T:NA	pCi/L	07/24/18 08:52	13982-63-3	
Radium-228	EPA 9320	0.816 ± 0.429 (0.721) C:71% T:71%	pCi/L	08/01/18 11:40	15262-20-1	
Total Radium	Total Radium Calculation	1.01 ± 0.574 (0.979)	pCi/L	08/02/18 15:33	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

Sample: EB-1-7-10-18 **Lab ID: 267011007** Collected: 07/10/18 17:35 Received: 07/11/18 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.394 ± 0.173 (0.203) C:83% T:NA	pCi/L	07/24/18 08:52	13982-63-3	
Radium-228	EPA 9320	0.280 ± 0.377 (0.804) C:69% T:79%	pCi/L	08/01/18 15:01	15262-20-1	
Total Radium	Total Radium Calculation	0.674 ± 0.550 (1.01)	pCi/L	08/02/18 15:33	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

Sample: GWA-8 **Lab ID: 267011008** Collected: 07/09/18 14:40 Received: 07/11/18 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.914 ± 0.299 (0.255) C:68% T:NA	pCi/L	07/24/18 08:52	13982-63-3	
Radium-228	EPA 9320	0.578 ± 0.434 (0.851) C:72% T:76%	pCi/L	08/01/18 15:01	15262-20-1	
Total Radium	Total Radium Calculation	1.49 ± 0.733 (1.11)	pCi/L	08/02/18 15:43	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

Sample: GWC-20 **Lab ID: 267011009** Collected: 07/09/18 16:25 Received: 07/11/18 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.696 ± 0.246 (0.207) C:75% T:NA	pCi/L	07/24/18 08:52	13982-63-3	
Radium-228	EPA 9320	0.411 ± 0.412 (0.846) C:68% T:74%	pCi/L	08/01/18 15:01	15262-20-1	
Total Radium	Total Radium Calculation	1.11 ± 0.658 (1.05)	pCi/L	08/02/18 15:43	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

Sample: GWC-6 **Lab ID: 267011010** Collected: 07/10/18 09:05 Received: 07/11/18 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.18 ± 0.351 (0.293) C:73% T:NA	pCi/L	07/24/18 08:52	13982-63-3	
Radium-228	EPA 9320	0.452 ± 0.430 (0.880) C:73% T:71%	pCi/L	08/01/18 15:01	15262-20-1	
Total Radium	Total Radium Calculation	1.63 ± 0.781 (1.17)	pCi/L	08/02/18 15:43	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

Sample: GWC-5 **Lab ID: 267011011** Collected: 07/10/18 11:56 Received: 07/11/18 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.95 ± 0.469 (0.210) C:75% T:NA	pCi/L	07/24/18 08:53	13982-63-3	
Radium-228	EPA 9320	1.19 ± 0.490 (0.772) C:70% T:84%	pCi/L	08/01/18 15:01	15262-20-1	
Total Radium	Total Radium Calculation	3.14 ± 0.959 (0.982)	pCi/L	08/02/18 15:43	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

Sample: GWC-1 **Lab ID: 267011012** Collected: 07/10/18 13:45 Received: 07/11/18 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.872 ± 0.264 (0.190) C:82% T:NA	pCi/L	07/24/18 08:53	13982-63-3	
Radium-228	EPA 9320	0.421 ± 0.430 (0.891) C:70% T:76%	pCi/L	08/01/18 15:01	15262-20-1	
Total Radium	Total Radium Calculation	1.29 ± 0.694 (1.08)	pCi/L	08/02/18 15:43	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

Sample: GWC-3 **Lab ID: 267011013** Collected: 07/10/18 15:25 Received: 07/11/18 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.398 ± 0.181 (0.226) C:79% T:NA	pCi/L	07/24/18 08:53	13982-63-3	
Radium-228	EPA 9320	0.645 ± 0.418 (0.793) C:68% T:86%	pCi/L	08/01/18 15:02	15262-20-1	
Total Radium	Total Radium Calculation	1.04 ± 0.599 (1.02)	pCi/L	08/02/18 15:43	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

Sample: Dup-2 **Lab ID: 267011014** Collected: 07/10/18 00:00 Received: 07/11/18 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.883 ± 0.300 (0.290) C:69% T:NA	pCi/L	07/24/18 08:53	13982-63-3	
Radium-228	EPA 9320	0.489 ± 0.402 (0.800) C:68% T:81%	pCi/L	08/01/18 15:02	15262-20-1	
Total Radium	Total Radium Calculation	1.37 ± 0.702 (1.09)	pCi/L	08/02/18 15:43	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

QC Batch:	305904	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
Associated Lab Samples:	267011001, 267011002, 267011003, 267011004, 267011005, 267011006, 267011007, 267011008, 267011009, 267011010, 267011011, 267011012, 267011013, 267011014		

METHOD BLANK:	1496088	Matrix:	Water
Associated Lab Samples:	267011001, 267011002, 267011003, 267011004, 267011005, 267011006, 267011007, 267011008, 267011009, 267011010, 267011011, 267011012, 267011013, 267011014		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.386 ± 0.158 (0.146) C:96% T:NA	pCi/L	07/24/18 08:51	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

QC Batch:	305905	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
Associated Lab Samples:	267011001, 267011002, 267011003, 267011004, 267011005, 267011006, 267011007, 267011008, 267011009, 267011010, 267011011, 267011012, 267011013, 267011014		

METHOD BLANK:	1496089	Matrix:	Water
Associated Lab Samples:	267011001, 267011002, 267011003, 267011004, 267011005, 267011006, 267011007, 267011008, 267011009, 267011010, 267011011, 267011012, 267011013, 267011014		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.424 ± 0.505 (1.06) C:69% T:64%	pCi/L	08/01/18 11:40	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267011

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road
Pace Project No.: 267011

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267011001	GWC-14	EPA 9315	305904		
267011002	FB-1-7-9-18	EPA 9315	305904		
267011003	GWC-15	EPA 9315	305904		
267011004	GWC-21	EPA 9315	305904		
267011005	GWC-16	EPA 9315	305904		
267011006	GWC-2	EPA 9315	305904		
267011007	EB-1-7-10-18	EPA 9315	305904		
267011008	GWA-8	EPA 9315	305904		
267011009	GWC-20	EPA 9315	305904		
267011010	GWC-6	EPA 9315	305904		
267011011	GWC-5	EPA 9315	305904		
267011012	GWC-1	EPA 9315	305904		
267011013	GWC-3	EPA 9315	305904		
267011014	Dup-2	EPA 9315	305904		
267011001	GWC-14	EPA 9320	305905		
267011002	FB-1-7-9-18	EPA 9320	305905		
267011003	GWC-15	EPA 9320	305905		
267011004	GWC-21	EPA 9320	305905		
267011005	GWC-16	EPA 9320	305905		
267011006	GWC-2	EPA 9320	305905		
267011007	EB-1-7-10-18	EPA 9320	305905		
267011008	GWA-8	EPA 9320	305905		
267011009	GWC-20	EPA 9320	305905		
267011010	GWC-6	EPA 9320	305905		
267011011	GWC-5	EPA 9320	305905		
267011012	GWC-1	EPA 9320	305905		
267011013	GWC-3	EPA 9320	305905		
267011014	Dup-2	EPA 9320	305905		
267011001	GWC-14	Total Radium Calculation	308256		
267011002	FB-1-7-9-18	Total Radium Calculation	308256		
267011003	GWC-15	Total Radium Calculation	308256		
267011004	GWC-21	Total Radium Calculation	308256		
267011005	GWC-16	Total Radium Calculation	308256		
267011006	GWC-2	Total Radium Calculation	308256		
267011007	EB-1-7-10-18	Total Radium Calculation	308256		
267011008	GWA-8	Total Radium Calculation	308261		
267011009	GWC-20	Total Radium Calculation	308261		
267011010	GWC-6	Total Radium Calculation	308261		
267011011	GWC-5	Total Radium Calculation	308261		
267011012	GWC-1	Total Radium Calculation	308261		
267011013	GWC-3	Total Radium Calculation	308261		
267011014	Dup-2	Total Radium Calculation	308261		

REPORT OF LABORATORY ANALYSIS

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CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
130 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 · FAX (770) 734-4201 · www.pas-lab.com

PAGE: 1 OF

CLIENT NAME: Georgia Power
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185, Atlanta, GA 30308, 404-506-7239
REPORT TO: Lauren Petty, Health McCortie
REQUESTED COMPLETION DATE: laburch@southernco.com
PROJECT NAME/STATE: Plant Kraft, Grumman Road, Phase 2 CCR & State D&O
PROJECT #: Phase 2 CCR & State D&O

CONTAINER TYPE	PRESERVATION	ANALYSIS REQUESTED										REMARKS/ADDITIONAL INFORMATION				
		P	P	P	P	P	P	P	P	P	P					
P - PLASTIC	1 - HCl, 56°C															
A - AMBER GLASS	2 - H ₂ SO ₄ , 56°C															
G - CLEAR GLASS	3 - HNO ₃															
V - VOA VIAL	4 - NaOH, 56°C															
S - STERILE	5 - NaOH/NaAc, 56°C															
O - OTHER	6 - Na ₂ S ₂ O ₈ , 56°C															
	7 - 56°C not frozen															

NO#: 267011



267011

Collection DATE	Collection TIME	MATRIX CODE	C O R M A B	SAMPLE IDENTIFICATION	RELINQUISHED BY	DATE/TIME
7-9-18	1540	GW	X	GWC-14		7-10-18
7-9-18	1620	W	X	FB-1-7-9-18		7-10-18
7-10-18	0915	GW	X	GWC-15		7-10-18
7-10-18	1140	GW	X	GWC-21		7-10-18
7-10-18	1505	GW	X	GWC-16		7-10-18
7-10-18	1640	GW	X	GWC-2		7-10-18
7-10-18	1735	W	X	EB-1-7-10-18		7-10-18

SAMPLED BY AND TITLE: Q. FUQUEA
RECEIVED BY: [Signature]
DATE/TIME: 7-10-18 0800
DATE/TIME: 7-10-18 0800

Plant Kraft - Grumman Road State constituents as Batch P-267011
Plant Kraft - Grumman Rd CCR Phase 2 CCR & State

CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

PAGE: 2 OF

CLIENT NAME: Georgia Power
CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
 241 Ralph McGill Blvd SE B10185
 Atlanta, GA 30308
 404-506-7239

REPORT TO: Lauren Petty
 Health McCorkle
 PO #: laburch@southernco.com

PROJECT NAME/STATE: Plant Kraft Grumman Road
 Phase 2 CCR & State D&O

CONTAINER TYPE PRESERVATION	ANALYSIS REQUESTED							CONTAINER TYPE PRESERVATION
	P	P	P	P	P	P	P	
P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	3	3	7	3				1 - HCl, 56°C 2 - H ₂ SO ₄ , 56°C 3 - HNO ₃ 4 - NaOH, 56°C 5 - NaOH/ZnAc, 56°C 6 - Na ₂ S ₂ O ₃ , 56°C 7 - 56°C not frozen
# of CONTAINERS	METALS (see below) (EPA 6020/7470) METALS APP. III & IV CL, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SM 46 9315/9320) Bicarbonate Alk, Carbonate Alk, Total Alk							*MATRIX CODES: DW - DRINKING WATER S - SOIL WW - WASTEWATER SL - SLUDGE GW - GROUNDWATER SD - SOLID SW - SURFACE WATER A - AIR ST - STORM WATER L - LIQUID W - WATER P - PRODUCT
REMARKS/ADDITIONAL INFORMATION								

WO#: 267011

PM: BM Due Date: 08/08/18
 CLIENT: GAPower-CCR

Collection DATE	Collection TIME	MATRIX CODE*	C O M P	G R A B	SAMPLE IDENTIFICATION
7-9-18	1440	GW	X		6WA-3
7-9-18	1625	GW	X		6WC-20
7-10-18	0905	GW	X		6WC-6
7-10-18	1156	GW	X		6WC-5
7-10-18	1315	GW	X		6WC-1
7-16-18	1525	GW	X		6WC-3
7-10-18		GW	X		Dep-2

SAMPLED BY AND TITLE: J. BORDEN
DATE/TIME: 7-11-18 0800

RECEIVED BY: [Signature]
DATE/TIME: 7-11-18 0800

RECEIVED BY LAB: [Signature]
DATE/TIME: 7-11-18 1510

TEMPERATURE: [Signature]
DATE/TIME: 7-11-18 1510

RELINQUISHED BY: [Signature]
DATE/TIME: 7-11-18 0800

RELINQUISHED BY: [Signature]
DATE/TIME: 7-11-18 0800

SAMPLE SHIPPED VIA: COURIER
 UPS FEDEX USPS
 Intact Broken Not Present

COOLING: 0.5 Max

CLIENT: OTHER FS
Tracker ID:

LAB #: FOR LAB USE ONLY

Entered into LIMS:

Tracking #:

Plant Kraft Grumman Road/State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR & State

Sample Condition Upon Receipt

Face Analytical

Client Name: GA Power

Project # _____

WO#: 267011

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____

PM: BM

Due Date: 08/08/18

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

CLIENT: GAPower-CCR

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used 83

Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Cooler Temperature 0.5

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 7/11/18 MR

Temp should be above freezing to 6°C

Comments: _____

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.		
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.		
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.		
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.		
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.		
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.		
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.		
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.		
Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.		
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.		
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.		
Includes date/time/ID/Analysis Matrix:	<u>GW</u>			
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.		
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed	Lot # of added preservative	
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.		
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.		
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Pace Trip Blank Lot # (if purchased):	_____			

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Field Data Required? Y N

Comments/ Resolution: _____

Project Manager Review: _____

Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHP Certification Office i.e. out of hold, incorrect preservative, but of hold, incorrect containers

February 11, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 267013

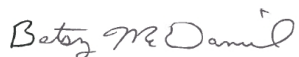
Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 11, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This revised report replaces the report issued on July 18, 2018. The report has been revised to correct the Anions MS/MSD spike concentration. No other changes have been made to this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Maria Padilla, Georgia Power
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267013001	GWC-14	Water	07/09/18 15:40	07/11/18 15:10
267013002	FB-1-7-9-18	Water	07/09/18 16:20	07/11/18 15:10
267013003	GWC-15	Water	07/10/18 09:15	07/11/18 15:10
267013004	GWC-21	Water	07/10/18 11:40	07/11/18 15:10
267013005	GWC-16	Water	07/10/18 15:05	07/11/18 15:10
267013006	GWC-2	Water	07/10/18 16:40	07/11/18 15:10
267013007	EB-1-7-10-18	Water	07/10/18 17:35	07/11/18 15:10
267013008	GWA-8	Water	07/09/18 14:40	07/11/18 15:10
267013009	GWC-20	Water	07/09/18 16:25	07/11/18 15:10
267013010	GWC-6	Water	07/10/18 09:05	07/11/18 15:10
267013011	GWC-5	Water	07/10/18 11:56	07/11/18 15:10
267013012	GWC-1	Water	07/10/18 13:45	07/11/18 15:10
267013013	GWC-3	Water	07/10/18 15:25	07/11/18 15:10
267013014	Dup-2	Water	07/10/18 00:00	07/11/18 15:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

Lab ID	Sample ID	Method	Analysts	Analytes Reported
267013001	GWC-14	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	JAD	3
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267013002	FB-1-7-9-18	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	KN	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267013003	GWC-15	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	JAD	3
		SM 2540C	JPT	1
		EPA 300.0	RLC	3
267013004	GWC-21	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	JAD	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267013005	GWC-16	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	JAD	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267013006	GWC-2	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	KN	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267013007	EB-1-7-10-18	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	KN	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267013008	GWA-8	EPA 6020B	CSW	16
		EPA 7470A	DRB	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

Lab ID	Sample ID	Method	Analysts	Analytes Reported
267013009	GWC-20	SM 2320B	KN	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	JAD	3
267013010	GWC-6	SM 2540C	JPT	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	JAD	3
		SM 2540C	JPT	1
267013011	GWC-5	EPA 300.0	MWB	3
		EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	JAD	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267013012	GWC-1	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	JAD	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	16
267013013	GWC-3	EPA 7470A	DRB	1
		SM 2320B	JAD	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	16
		EPA 7470A	DRB	1
267013014	Dup-2	SM 2320B	JAD	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
		EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	JAD	3

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267013

Sample: GWC-14		Lab ID: 267013001		Collected: 07/09/18 15:40		Received: 07/11/18 15:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 18:07	7440-36-0	
Arsenic	0.0019J	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 18:07	7440-38-2	
Barium	0.026	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 18:07	7440-39-3	
Beryllium	0.000062J	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 18:07	7440-41-7	
Boron	0.061	mg/L	0.040	0.0039	1	07/13/18 10:44	07/17/18 14:56	7440-42-8	
Cadmium	0.00017J	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 18:07	7440-43-9	
Calcium	123	mg/L	25.0	0.69	50	07/13/18 10:44	07/16/18 18:13	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 18:07	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 18:07	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 18:07	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 18:07	7439-93-2	
Molybdenum	0.010	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 18:07	7439-98-7	
Selenium	0.0029J	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 18:07	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 18:07	7440-28-0	
Vanadium	0.0078J	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 18:07	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	07/13/18 10:44	07/16/18 18:07	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 10:30	7439-97-6	
2320B Alkalinity		Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	74.0	mg/L	20.0	20.0	1		07/12/18 16:32		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		07/12/18 16:32		
Alkalinity, Total as CaCO3	74.0	mg/L	20.0	20.0	1		07/12/18 16:32		
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	659	mg/L	25.0	10.0	1		07/14/18 09:58		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	25.9	mg/L	0.25	0.024	1		07/18/18 11:24	16887-00-6	M1
Fluoride	ND	mg/L	0.30	0.029	1		07/18/18 11:24	16984-48-8	M1
Sulfate	369	mg/L	50.0	0.85	50		07/18/18 12:47	14808-79-8	M1

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

Sample: FB-1-7-9-18		Lab ID: 267013002		Collected: 07/09/18 16:20		Received: 07/11/18 15:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 18:19	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 18:19	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 18:19	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 18:19	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	07/13/18 10:44	07/16/18 18:19	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 18:19	7440-43-9	
Calcium	0.027J	mg/L	0.50	0.014	1	07/13/18 10:44	07/16/18 18:19	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 18:19	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 18:19	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 18:19	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 18:19	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 18:19	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 18:19	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 18:19	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 18:19	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	07/13/18 10:44	07/16/18 18:19	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 10:39	7439-97-6	
2320B Alkalinity Low Level		Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/13/18 16:56		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/13/18 16:56		
Alkalinity, Total as CaCO3	ND	mg/L	1.0	1.0	1		07/13/18 16:56		
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	17.0J	mg/L	25.0	10.0	1		07/14/18 09:58		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	0.30	mg/L	0.25	0.024	1		07/13/18 21:37	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/13/18 21:37	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		07/13/18 21:37	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267013

Sample: GWC-15 **Lab ID: 267013003** Collected: 07/10/18 09:15 Received: 07/11/18 15:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				

6020B MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A

Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 18:36	7440-36-0	
Arsenic	0.090	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 18:36	7440-38-2	
Barium	0.047	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 18:36	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 18:36	7440-41-7	
Boron	1.2	mg/L	0.40	0.039	10	07/13/18 10:44	07/17/18 15:02	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 18:36	7440-43-9	
Calcium	129	mg/L	25.0	0.69	50	07/13/18 10:44	07/16/18 18:42	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 18:36	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 18:36	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 18:36	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 18:36	7439-93-2	
Molybdenum	0.088	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 18:36	7439-98-7	
Selenium	0.0086J	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 18:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 18:36	7440-28-0	
Vanadium	0.0025J	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 18:36	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	07/13/18 10:44	07/16/18 18:36	7440-66-6	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A

Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 10:41	7439-97-6	
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2320B Alkalinity

Analytical Method: SM 2320B

Alkalinity, Bicarbonate (CaCO ₃)	385	mg/L	20.0	20.0	1		07/12/18 16:41		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	20.0	20.0	1		07/12/18 16:41		
Alkalinity, Total as CaCO ₃	385	mg/L	20.0	20.0	1		07/12/18 16:41		

2540C Total Dissolved Solids

Analytical Method: SM 2540C

Total Dissolved Solids	524	mg/L	25.0	10.0	1		07/14/18 09:59		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0

Chloride	3.1	mg/L	0.25	0.024	1		07/18/18 09:20	16887-00-6	B
Fluoride	0.15J	mg/L	0.30	0.029	1		07/18/18 09:20	16984-48-8	
Sulfate	43.0	mg/L	1.0	0.017	1		07/18/18 09:20	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267013

Sample: GWC-21		Lab ID: 267013004		Collected: 07/10/18 11:40		Received: 07/11/18 15:10		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 18:47	7440-36-0		
Arsenic	0.0027J	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 18:47	7440-38-2		
Barium	0.061	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 18:47	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 18:47	7440-41-7		
Boron	0.50	mg/L	0.20	0.020	5	07/13/18 10:44	07/17/18 15:07	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 18:47	7440-43-9		
Calcium	29.8	mg/L	25.0	0.69	50	07/13/18 10:44	07/16/18 18:53	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 18:47	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 18:47	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 18:47	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 18:47	7439-93-2		
Molybdenum	0.047	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 18:47	7439-98-7		
Selenium	0.016	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 18:47	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 18:47	7440-28-0		
Vanadium	0.0031J	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 18:47	7440-62-2		
Zinc	ND	mg/L	0.010	0.0021	1	07/13/18 10:44	07/16/18 18:47	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 10:44	7439-97-6		
2320B Alkalinity		Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	86.0	mg/L	20.0	20.0	1		07/12/18 16:45			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		07/12/18 16:45			
Alkalinity, Total as CaCO3	86.0	mg/L	20.0	20.0	1		07/12/18 16:45			
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	180	mg/L	25.0	10.0	1		07/14/18 09:59			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	6.3	mg/L	0.25	0.024	1		07/13/18 23:00	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		07/13/18 23:00	16984-48-8		
Sulfate	33.2	mg/L	1.0	0.017	1		07/13/18 23:00	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

Sample: GWC-16		Lab ID: 267013005		Collected: 07/10/18 15:05		Received: 07/11/18 15:10		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 18:59	7440-36-0		
Arsenic	0.067	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 18:59	7440-38-2		
Barium	0.16	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 18:59	7440-39-3		
Beryllium	0.000060J	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 18:59	7440-41-7		
Boron	5.2	mg/L	0.40	0.039	10	07/13/18 10:44	07/17/18 15:13	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 18:59	7440-43-9		
Calcium	205	mg/L	25.0	0.69	50	07/13/18 10:44	07/16/18 19:04	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 18:59	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 18:59	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 18:59	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 18:59	7439-93-2		
Molybdenum	0.14	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 18:59	7439-98-7		
Selenium	0.0045J	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 18:59	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 18:59	7440-28-0		
Vanadium	0.0025J	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 18:59	7440-62-2		
Zinc	0.0031J	mg/L	0.010	0.0021	1	07/13/18 10:44	07/16/18 18:59	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 10:51	7439-97-6		
2320B Alkalinity		Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	71.0	mg/L	20.0	20.0	1		07/12/18 16:49			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		07/12/18 16:49			
Alkalinity, Total as CaCO3	71.0	mg/L	20.0	20.0	1		07/12/18 16:49			
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	1040	mg/L	25.0	10.0	1		07/14/18 09:59			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	57.0	mg/L	12.5	1.2	50		07/16/18 17:21	16887-00-6	B	
Fluoride	ND	mg/L	0.30	0.029	1		07/13/18 23:21	16984-48-8		
Sulfate	787	mg/L	50.0	0.85	50		07/16/18 17:21	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

Sample: GWC-2		Lab ID: 267013006		Collected: 07/10/18 16:40		Received: 07/11/18 15:10		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 19:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 19:10	7440-38-2	
Barium	0.054	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 19:10	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 19:10	7440-41-7	
Boron	0.026J	mg/L	0.040	0.0039	1	07/13/18 10:44	07/16/18 19:10	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 19:10	7440-43-9	
Calcium	0.17J	mg/L	0.50	0.014	1	07/13/18 10:44	07/16/18 19:10	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 19:10	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 19:10	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 19:10	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 19:10	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 19:10	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 19:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 19:10	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 19:10	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	07/13/18 10:44	07/16/18 19:10	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 10:53	7439-97-6	
2320B Alkalinity Low Level		Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	2.0	mg/L	1.0	1.0	1		07/13/18 17:07		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/13/18 17:07		
Alkalinity, Total as CaCO3	2.0	mg/L	1.0	1.0	1		07/13/18 17:07		
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	49.0	mg/L	25.0	10.0	1		07/14/18 09:59		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	7.3	mg/L	0.25	0.024	1		07/13/18 23:41	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		07/13/18 23:41	16984-48-8	
Sulfate	8.5	mg/L	1.0	0.017	1		07/13/18 23:41	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

Sample: EB-1-7-10-18 **Lab ID: 267013007** Collected: 07/10/18 17:35 Received: 07/11/18 15:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 19:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 19:22	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 19:22	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 19:22	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	07/13/18 10:44	07/16/18 19:22	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 19:22	7440-43-9	
Calcium	0.018J	mg/L	0.50	0.014	1	07/13/18 10:44	07/16/18 19:22	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 19:22	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 19:22	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 19:22	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 19:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 19:22	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 19:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 19:22	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 19:22	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	07/13/18 10:44	07/16/18 19:22	7440-66-6	
7470 Mercury Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 10:56	7439-97-6	
2320B Alkalinity Low Level Analytical Method: SM 2320B									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/13/18 17:16		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/13/18 17:16		
Alkalinity, Total as CaCO3	ND	mg/L	1.0	1.0	1		07/13/18 17:16		
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		07/14/18 10:02		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	0.32	mg/L	0.25	0.024	1		07/16/18 17:42	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/16/18 17:42	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		07/16/18 17:42	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267013

Sample: GWA-8		Lab ID: 267013008		Collected: 07/09/18 14:40		Received: 07/11/18 15:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 19:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 19:39	7440-38-2	
Barium	0.056	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 19:39	7440-39-3	
Beryllium	0.00020J	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 19:39	7440-41-7	
Boron	0.11	mg/L	0.040	0.0039	1	07/13/18 10:44	07/16/18 19:39	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 19:39	7440-43-9	
Calcium	24.6J	mg/L	25.0	0.69	50	07/13/18 10:44	07/16/18 19:44	7440-70-2	D3
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 19:39	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 19:39	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 19:39	7439-92-1	
Lithium	0.0010J	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 19:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 19:39	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 19:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 19:39	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 19:39	7440-62-2	
Zinc	0.0022J	mg/L	0.010	0.0021	1	07/13/18 10:44	07/16/18 19:39	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 10:58	7439-97-6	
2320B Alkalinity Low Level		Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/13/18 17:23		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/13/18 17:23		
Alkalinity, Total as CaCO3	ND	mg/L	1.0	1.0	1		07/13/18 17:23		
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	235	mg/L	25.0	10.0	1		07/14/18 09:58		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	15.4	mg/L	0.25	0.024	1		07/14/18 00:23	16887-00-6	
Fluoride	0.040J	mg/L	0.30	0.029	1		07/14/18 00:23	16984-48-8	
Sulfate	123	mg/L	10.0	0.17	10		07/16/18 18:02	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267013

Sample: GWC-20		Lab ID: 267013009		Collected: 07/09/18 16:25		Received: 07/11/18 15:10		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/16/18 19:50	7440-36-0		
Arsenic	0.37	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/16/18 19:50	7440-38-2		
Barium	0.087	mg/L	0.010	0.00078	1	07/13/18 10:44	07/16/18 19:50	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/16/18 19:50	7440-41-7		
Boron	1.7	mg/L	0.040	0.0039	1	07/13/18 10:44	07/16/18 19:50	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/16/18 19:50	7440-43-9		
Calcium	75.9	mg/L	25.0	0.69	50	07/13/18 10:44	07/16/18 19:56	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	07/13/18 10:44	07/16/18 19:50	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/16/18 19:50	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/16/18 19:50	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/16/18 19:50	7439-93-2		
Molybdenum	0.13	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 19:50	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/16/18 19:50	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/16/18 19:50	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/16/18 19:50	7440-62-2		
Zinc	ND	mg/L	0.010	0.0021	1	07/13/18 10:44	07/16/18 19:50	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 11:01	7439-97-6		
2320B Alkalinity		Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	268	mg/L	20.0	20.0	1		07/12/18 17:01			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		07/12/18 17:01			
Alkalinity, Total as CaCO3	268	mg/L	20.0	20.0	1		07/12/18 17:01			
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	461	mg/L	25.0	10.0	1		07/14/18 09:58			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	10.8	mg/L	0.25	0.024	1		07/14/18 02:06	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 02:06	16984-48-8		
Sulfate	99.2	mg/L	10.0	0.17	10		07/16/18 18:23	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267013

Sample: GWC-6		Lab ID: 267013010		Collected: 07/10/18 09:05		Received: 07/11/18 15:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/17/18 16:37	7440-36-0	
Arsenic	0.00063J	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/17/18 16:37	7440-38-2	
Barium	0.087	mg/L	0.010	0.00078	1	07/13/18 10:44	07/17/18 16:37	7440-39-3	M1
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/17/18 16:37	7440-41-7	
Boron	2.9	mg/L	0.040	0.0039	1	07/13/18 10:44	07/17/18 16:37	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/17/18 16:37	7440-43-9	
Calcium	4.5	mg/L	0.50	0.014	1	07/13/18 10:44	07/17/18 16:37	7440-70-2	
Chromium	0.0023J	mg/L	0.010	0.0016	1	07/13/18 10:44	07/17/18 16:37	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/17/18 16:37	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/17/18 16:37	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/17/18 16:37	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 16:37	7439-98-7	
Selenium	0.0016J	mg/L	0.010	0.0014	1	07/13/18 10:44	07/17/18 16:37	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/17/18 16:37	7440-28-0	
Vanadium	0.0098J	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 16:37	7440-62-2	
Zinc	0.0055J	mg/L	0.010	0.0021	1	07/13/18 10:44	07/17/18 16:37	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 11:03	7439-97-6	
2320B Alkalinity		Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	62.0	mg/L	20.0	20.0	1		07/12/18 17:05		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		07/12/18 17:05		
Alkalinity, Total as CaCO3	62.0	mg/L	20.0	20.0	1		07/12/18 17:05		
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	453	mg/L	25.0	10.0	1		07/14/18 10:02		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	60.2	mg/L	2.5	0.24	10		07/16/18 18:44	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 02:27	16984-48-8	
Sulfate	128	mg/L	10.0	0.17	10		07/16/18 18:44	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267013

Sample: GWC-5 **Lab ID: 267013011** Collected: 07/10/18 11:56 Received: 07/11/18 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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6020B MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A

Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/17/18 17:32	7440-36-0	
Arsenic	0.0016J	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/17/18 17:32	7440-38-2	
Barium	0.31	mg/L	0.010	0.00078	1	07/13/18 10:44	07/17/18 17:32	7440-39-3	
Beryllium	0.00028J	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/17/18 17:32	7440-41-7	
Boron	7.0	mg/L	2.0	0.20	50	07/13/18 10:44	07/18/18 12:15	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/17/18 17:32	7440-43-9	
Calcium	30.6	mg/L	25.0	0.69	50	07/13/18 10:44	07/17/18 17:38	7440-70-2	
Chromium	0.0055J	mg/L	0.010	0.0016	1	07/13/18 10:44	07/17/18 17:32	7440-47-3	
Cobalt	0.0020J	mg/L	0.010	0.00052	1	07/13/18 10:44	07/17/18 17:32	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/17/18 17:32	7439-92-1	
Lithium	0.0050J	mg/L	0.050	0.00097	1	07/13/18 10:44	07/17/18 17:32	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 17:32	7439-98-7	
Selenium	0.0018J	mg/L	0.010	0.0014	1	07/13/18 10:44	07/17/18 17:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/17/18 17:32	7440-28-0	
Vanadium	0.016	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 17:32	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	07/13/18 10:44	07/17/18 17:32	7440-66-6	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A

Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 11:05	7439-97-6	
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2320B Alkalinity

Analytical Method: SM 2320B

Alkalinity, Bicarbonate (CaCO ₃)	1450	mg/L	20.0	20.0	1		07/12/18 17:10		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	20.0	20.0	1		07/12/18 17:10		
Alkalinity, Total as CaCO ₃	1450	mg/L	20.0	20.0	1		07/12/18 17:10		

2540C Total Dissolved Solids

Analytical Method: SM 2540C

Total Dissolved Solids	1730	mg/L	25.0	10.0	1		07/14/18 10:02		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0

Chloride	172	mg/L	2.5	0.24	10		07/16/18 19:04	16887-00-6	
Fluoride	0.20J	mg/L	0.30	0.029	1		07/14/18 03:08	16984-48-8	
Sulfate	48.1	mg/L	10.0	0.17	10		07/16/18 19:04	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267013

Sample: GWC-1		Lab ID: 267013012		Collected: 07/10/18 13:45		Received: 07/11/18 15:10		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/17/18 17:44	7440-36-0		
Arsenic	0.0031J	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/17/18 17:44	7440-38-2		
Barium	0.059	mg/L	0.010	0.00078	1	07/13/18 10:44	07/17/18 17:44	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/17/18 17:44	7440-41-7		
Boron	0.94	mg/L	0.20	0.020	5	07/13/18 10:44	07/18/18 12:21	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/17/18 17:44	7440-43-9		
Calcium	45.5	mg/L	2.5	0.069	5	07/13/18 10:44	07/18/18 12:21	7440-70-2		
Chromium	0.0021J	mg/L	0.010	0.0016	1	07/13/18 10:44	07/17/18 17:44	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/17/18 17:44	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/17/18 17:44	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/17/18 17:44	7439-93-2		
Molybdenum	0.11	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 17:44	7439-98-7		
Selenium	0.0026J	mg/L	0.010	0.0014	1	07/13/18 10:44	07/17/18 17:44	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/17/18 17:44	7440-28-0		
Vanadium	0.0056J	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 17:44	7440-62-2		
Zinc	0.0021J	mg/L	0.010	0.0021	1	07/13/18 10:44	07/17/18 17:44	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 11:08	7439-97-6		
2320B Alkalinity		Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	137	mg/L	20.0	20.0	1		07/12/18 17:17			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		07/12/18 17:17			
Alkalinity, Total as CaCO3	137	mg/L	20.0	20.0	1		07/12/18 17:17			
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	349	mg/L	25.0	10.0	1		07/14/18 10:02			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	6.2	mg/L	0.25	0.024	1		07/14/18 03:29	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 03:29	16984-48-8		
Sulfate	77.7	mg/L	5.0	0.085	5		07/16/18 19:25	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267013

Sample: GWC-3 **Lab ID: 267013013** Collected: 07/10/18 15:25 Received: 07/11/18 15:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/17/18 17:55	7440-36-0	
Arsenic	0.31	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/17/18 17:55	7440-38-2	
Barium	0.046	mg/L	0.010	0.00078	1	07/13/18 10:44	07/17/18 17:55	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/17/18 17:55	7440-41-7	
Boron	0.69	mg/L	0.20	0.020	5	07/13/18 10:44	07/18/18 12:27	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/17/18 17:55	7440-43-9	
Calcium	84.6	mg/L	25.0	0.69	50	07/13/18 10:44	07/17/18 18:01	7440-70-2	
Chromium	0.0018J	mg/L	0.010	0.0016	1	07/13/18 10:44	07/17/18 17:55	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/17/18 17:55	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/17/18 17:55	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/17/18 17:55	7439-93-2	
Molybdenum	0.065	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 17:55	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/13/18 10:44	07/17/18 17:55	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/17/18 17:55	7440-28-0	
Vanadium	0.0022J	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 17:55	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	07/13/18 10:44	07/17/18 17:55	7440-66-6	
7470 Mercury Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 11:10	7439-97-6	
2320B Alkalinity Analytical Method: SM 2320B									
Alkalinity,Bicarbonate (CaCO3)	250	mg/L	20.0	20.0	1		07/12/18 17:21		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		07/12/18 17:21		
Alkalinity, Total as CaCO3	250	mg/L	20.0	20.0	1		07/12/18 17:21		
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	331	mg/L	25.0	10.0	1		07/14/18 10:02		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	2.5	mg/L	0.25	0.024	1		07/14/18 03:49	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/14/18 03:49	16984-48-8	
Sulfate	11.1	mg/L	1.0	0.017	1		07/14/18 03:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267013

Sample: Dup-2		Lab ID: 267013014		Collected: 07/10/18 00:00		Received: 07/11/18 15:10		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/13/18 10:44	07/17/18 18:06	7440-36-0		
Arsenic	0.0028J	mg/L	0.0050	0.00057	1	07/13/18 10:44	07/17/18 18:06	7440-38-2		
Barium	0.057	mg/L	0.010	0.00078	1	07/13/18 10:44	07/17/18 18:06	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	07/13/18 10:44	07/17/18 18:06	7440-41-7		
Boron	0.85	mg/L	0.20	0.020	5	07/13/18 10:44	07/18/18 12:32	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/13/18 10:44	07/17/18 18:06	7440-43-9		
Calcium	43.1	mg/L	2.5	0.069	5	07/13/18 10:44	07/18/18 12:32	7440-70-2		
Chromium	0.0019J	mg/L	0.010	0.0016	1	07/13/18 10:44	07/17/18 18:06	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	07/13/18 10:44	07/17/18 18:06	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/13/18 10:44	07/17/18 18:06	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	07/13/18 10:44	07/17/18 18:06	7439-93-2		
Molybdenum	0.11	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 18:06	7439-98-7		
Selenium	0.0022J	mg/L	0.010	0.0014	1	07/13/18 10:44	07/17/18 18:06	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/13/18 10:44	07/17/18 18:06	7440-28-0		
Vanadium	0.0052J	mg/L	0.010	0.0019	1	07/13/18 10:44	07/17/18 18:06	7440-62-2		
Zinc	ND	mg/L	0.010	0.0021	1	07/13/18 10:44	07/17/18 18:06	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/16/18 14:52	07/17/18 11:12	7439-97-6		
2320B Alkalinity		Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	135	mg/L	20.0	20.0	1		07/12/18 17:25			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		07/12/18 17:25			
Alkalinity, Total as CaCO3	135	mg/L	20.0	20.0	1		07/12/18 17:25			
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	342	mg/L	25.0	10.0	1		07/14/18 10:02			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	6.2	mg/L	0.25	0.024	1		07/14/18 04:10	16887-00-6		
Fluoride	0.035J	mg/L	0.30	0.029	1		07/14/18 04:10	16984-48-8		
Sulfate	77.0	mg/L	5.0	0.085	5		07/16/18 19:46	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 267013

QC Batch: 9878 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 267013001, 267013002, 267013003, 267013004, 267013005, 267013006, 267013007, 267013008, 267013009, 267013010, 267013011, 267013012, 267013013, 267013014

METHOD BLANK: 44808 Matrix: Water
Associated Lab Samples: 267013001, 267013002, 267013003, 267013004, 267013005, 267013006, 267013007, 267013008, 267013009, 267013010, 267013011, 267013012, 267013013, 267013014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	07/17/18 10:25	

LABORATORY CONTROL SAMPLE: 44809

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44810 44811

Parameter	Units	267013001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0023	0.0022	91	90	75-125	2	20	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

QC Batch: 9743 Analysis Method: EPA 6020B
 QC Batch Method: EPA 3005A Analysis Description: 6020B MET
 Associated Lab Samples: 267013001, 267013002, 267013003, 267013004, 267013005, 267013006, 267013007, 267013008, 267013009

METHOD BLANK: 44231 Matrix: Water
 Associated Lab Samples: 267013001, 267013002, 267013003, 267013004, 267013005, 267013006, 267013007, 267013008, 267013009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	07/16/18 14:51	
Arsenic	mg/L	ND	0.0050	0.00057	07/16/18 14:51	
Barium	mg/L	ND	0.010	0.00078	07/16/18 14:51	
Beryllium	mg/L	ND	0.0030	0.000050	07/16/18 14:51	
Boron	mg/L	ND	0.040	0.0039	07/16/18 14:51	
Cadmium	mg/L	ND	0.0010	0.000093	07/16/18 14:51	
Calcium	mg/L	ND	0.50	0.014	07/16/18 14:51	
Chromium	mg/L	ND	0.010	0.0016	07/16/18 14:51	
Cobalt	mg/L	ND	0.010	0.00052	07/16/18 14:51	
Lead	mg/L	ND	0.0050	0.00027	07/16/18 14:51	
Lithium	mg/L	ND	0.050	0.00097	07/16/18 14:51	
Molybdenum	mg/L	ND	0.010	0.0019	07/16/18 14:51	
Selenium	mg/L	ND	0.010	0.0014	07/16/18 14:51	
Thallium	mg/L	ND	0.0010	0.00014	07/16/18 14:51	
Vanadium	mg/L	ND	0.010	0.0019	07/16/18 14:51	
Zinc	mg/L	ND	0.010	0.0021	07/16/18 14:51	

LABORATORY CONTROL SAMPLE: 44232

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.10	105	80-120	
Barium	mg/L	0.1	0.098	98	80-120	
Beryllium	mg/L	0.1	0.10	104	80-120	
Boron	mg/L	1	1.0	103	80-120	
Cadmium	mg/L	0.1	0.10	104	80-120	
Calcium	mg/L	1	1.0	100	80-120	
Chromium	mg/L	0.1	0.10	101	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.10	103	80-120	
Lithium	mg/L	0.1	0.10	103	80-120	
Molybdenum	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.11	106	80-120	
Thallium	mg/L	0.1	0.10	102	80-120	
Vanadium	mg/L	0.1	0.10	100	80-120	
Zinc	mg/L	0.1	0.11	107	80-120	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44233												44234	
Parameter	Units	266979010 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual	
			Spike Conc.	MS Conc.	Spike Conc.	MSD Conc.							
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	110	112	75-125	2	20		
Arsenic	mg/L	ND	0.1	0.1	0.11	0.11	107	108	75-125	1	20		
Barium	mg/L	0.073	0.1	0.1	0.19	0.20	119	124	75-125	3	20		
Beryllium	mg/L	0.000076J	0.1	0.1	0.10	0.11	102	105	75-125	3	20		
Boron	mg/L	1.1	1	1	2.1	2.1	95	96	75-125	0	20		
Cadmium	mg/L	ND	0.1	0.1	0.11	0.11	108	106	75-125	2	20		
Calcium	mg/L	56.2	1	1	62.7	62.4	658	621	75-125	1	20	M6	
Chromium	mg/L	ND	0.1	0.1	0.11	0.11	108	107	75-125	1	20		
Cobalt	mg/L	ND	0.1	0.1	0.11	0.11	106	106	75-125	0	20		
Lead	mg/L	ND	0.1	0.1	0.11	0.10	105	104	75-125	1	20		
Lithium	mg/L	0.0019J	0.1	0.1	0.11	0.11	107	105	75-125	2	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.11	105	107	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.11	0.11	108	108	75-125	0	20		
Thallium	mg/L	ND	0.1	0.1	0.11	0.11	107	107	75-125	0	20		
Vanadium	mg/L	ND	0.1	0.1	0.11	0.11	110	110	75-125	1	20		
Zinc	mg/L	0.0024J	0.1	0.1	0.11	0.12	111	115	75-125	4	20		

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 267013

QC Batch: 9744 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 267013010, 267013011, 267013012, 267013013, 267013014

METHOD BLANK: 44235 Matrix: Water
Associated Lab Samples: 267013010, 267013011, 267013012, 267013013, 267013014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	07/17/18 16:25	
Arsenic	mg/L	ND	0.0050	0.00057	07/17/18 16:25	
Barium	mg/L	ND	0.010	0.00078	07/17/18 16:25	
Beryllium	mg/L	ND	0.0030	0.000050	07/17/18 16:25	
Boron	mg/L	ND	0.040	0.0039	07/17/18 16:25	
Cadmium	mg/L	ND	0.0010	0.000093	07/17/18 16:25	
Calcium	mg/L	ND	0.50	0.014	07/17/18 16:25	
Chromium	mg/L	ND	0.010	0.0016	07/17/18 16:25	
Cobalt	mg/L	ND	0.010	0.00052	07/17/18 16:25	
Lead	mg/L	ND	0.0050	0.00027	07/17/18 16:25	
Lithium	mg/L	ND	0.050	0.00097	07/17/18 16:25	
Molybdenum	mg/L	ND	0.010	0.0019	07/17/18 16:25	
Selenium	mg/L	ND	0.010	0.0014	07/17/18 16:25	
Thallium	mg/L	ND	0.0010	0.00014	07/17/18 16:25	
Vanadium	mg/L	ND	0.010	0.0019	07/17/18 16:25	
Zinc	mg/L	ND	0.010	0.0021	07/17/18 16:25	

LABORATORY CONTROL SAMPLE: 44236

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.10	101	80-120	
Barium	mg/L	0.1	0.10	103	80-120	
Beryllium	mg/L	0.1	0.11	106	80-120	
Boron	mg/L	1	1.1	105	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Calcium	mg/L	1	1.0	103	80-120	
Chromium	mg/L	0.1	0.10	102	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.11	108	80-120	
Molybdenum	mg/L	0.1	0.10	104	80-120	
Selenium	mg/L	0.1	0.10	102	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	
Vanadium	mg/L	0.1	0.10	103	80-120	
Zinc	mg/L	0.1	0.11	105	80-120	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44237												44238	
Parameter	Units	267013010 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual	
			Spike Conc.	MS Conc.	Spike Conc.	MSD Conc.							
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	111	108	75-125	2	20		
Arsenic	mg/L	0.00063J	0.1	0.1	0.11	0.10	105	104	75-125	1	20		
Barium	mg/L	0.087	0.1	0.1	0.22	0.21	129	123	75-125	3	20	M1	
Beryllium	mg/L	ND	0.1	0.1	0.11	0.10	107	104	75-125	2	20		
Boron	mg/L	2.9	1	1	3.9	3.9	108	101	75-125	2	20		
Cadmium	mg/L	ND	0.1	0.1	0.11	0.10	106	102	75-125	4	20		
Calcium	mg/L	4.5	1	1	5.6	5.6	104	105	75-125	0	20		
Chromium	mg/L	0.0023J	0.1	0.1	0.11	0.10	109	102	75-125	6	20		
Cobalt	mg/L	ND	0.1	0.1	0.11	0.10	107	101	75-125	6	20		
Lead	mg/L	ND	0.1	0.1	0.10	0.098	101	98	75-125	4	20		
Lithium	mg/L	ND	0.1	0.1	0.11	0.11	108	108	75-125	1	20		
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.11	108	105	75-125	2	20		
Selenium	mg/L	0.0016J	0.1	0.1	0.097	0.098	96	96	75-125	0	20		
Thallium	mg/L	ND	0.1	0.1	0.10	0.098	102	98	75-125	4	20		
Vanadium	mg/L	0.0098J	0.1	0.1	0.12	0.12	111	106	75-125	4	20		
Zinc	mg/L	0.0055J	0.1	0.1	0.11	0.11	109	105	75-125	4	20		

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 267013

QC Batch: 9712 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 267013001, 267013003, 267013004, 267013005, 267013009, 267013010, 267013011, 267013012, 267013013, 267013014

METHOD BLANK: 44128 Matrix: Water
Associated Lab Samples: 267013001, 267013003, 267013004, 267013005, 267013009, 267013010, 267013011, 267013012, 267013013, 267013014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	20.0	20.0	07/12/18 16:07	

LABORATORY CONTROL SAMPLE: 44129

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	103	103	85-115	

SAMPLE DUPLICATE: 44130

Parameter	Units	266898001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	186	184	1	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

QC Batch: 9785

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity, Low Level

Associated Lab Samples: 267013002, 267013006, 267013007, 267013008

METHOD BLANK: 44453

Matrix: Water

Associated Lab Samples: 267013002, 267013006, 267013007, 267013008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	1.0	1.0	07/13/18 16:08	

LABORATORY CONTROL SAMPLE: 44454

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.0	98	85-115	

SAMPLE DUPLICATE: 44455

Parameter	Units	267013002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	ND		10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

QC Batch: 9832 Analysis Method: SM 2540C
 QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
 Associated Lab Samples: 267013001, 267013002, 267013003, 267013004, 267013005, 267013006, 267013008, 267013009

LABORATORY CONTROL SAMPLE: 44632

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	401	100	84-108	

SAMPLE DUPLICATE: 44633

Parameter	Units	267013001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	659	646	2	10	

SAMPLE DUPLICATE: 44888

Parameter	Units	266979008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 267013

QC Batch: 9833 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 267013007, 267013010, 267013011, 267013012, 267013013, 267013014

LABORATORY CONTROL SAMPLE: 44635

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	406	102	84-108	

SAMPLE DUPLICATE: 44636

Parameter	Units	267013007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	14.0J		10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

QC Batch:	9751	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
Associated Lab Samples:	267013001, 267013002, 267013003, 267013004, 267013005, 267013006, 267013007, 267013008, 267013009, 267013010, 267013011, 267013012, 267013013, 267013014		

METHOD BLANK:	44261	Matrix:	Water
Associated Lab Samples:	267013001, 267013002, 267013003, 267013004, 267013005, 267013006, 267013007, 267013008, 267013009, 267013010, 267013011, 267013012, 267013013, 267013014		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.36	0.25	0.024	07/13/18 20:35	
Fluoride	mg/L	ND	0.30	0.029	07/13/18 20:35	
Sulfate	mg/L	ND	1.0	0.017	07/13/18 20:35	

LABORATORY CONTROL SAMPLE: 44262

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.1	101	90-110	
Fluoride	mg/L	10	10.1	101	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44263 44264

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		267013001 Result	Spike Conc.	Spike Conc.	MS Result						
Chloride	mg/L	25.9	10	10	33.2	33.2	73	73	90-110	0	15
Fluoride	mg/L	ND	10	10	10.3	10.3	103	103	90-110	0	15
Sulfate	mg/L	369	10	10	227	227	-1420	-1420	90-110	0	15 E

MATRIX SPIKE SAMPLE: 44265

Parameter	Units	267013002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.30	10	9.8	95	90-110	
Fluoride	mg/L	ND	10	10.0	100	90-110	
Sulfate	mg/L	ND	10	9.7	97	90-110	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267013001	GWC-14	EPA 3005A	9743	EPA 6020B	9880
267013002	FB-1-7-9-18	EPA 3005A	9743	EPA 6020B	9880
267013003	GWC-15	EPA 3005A	9743	EPA 6020B	9880
267013004	GWC-21	EPA 3005A	9743	EPA 6020B	9880
267013005	GWC-16	EPA 3005A	9743	EPA 6020B	9880
267013006	GWC-2	EPA 3005A	9743	EPA 6020B	9880
267013007	EB-1-7-10-18	EPA 3005A	9743	EPA 6020B	9880
267013008	GWA-8	EPA 3005A	9743	EPA 6020B	9880
267013009	GWC-20	EPA 3005A	9743	EPA 6020B	9880
267013010	GWC-6	EPA 3005A	9744	EPA 6020B	9946
267013011	GWC-5	EPA 3005A	9744	EPA 6020B	9946
267013012	GWC-1	EPA 3005A	9744	EPA 6020B	9946
267013013	GWC-3	EPA 3005A	9744	EPA 6020B	9946
267013014	Dup-2	EPA 3005A	9744	EPA 6020B	9946
267013001	GWC-14	EPA 7470A	9878	EPA 7470A	9912
267013002	FB-1-7-9-18	EPA 7470A	9878	EPA 7470A	9912
267013003	GWC-15	EPA 7470A	9878	EPA 7470A	9912
267013004	GWC-21	EPA 7470A	9878	EPA 7470A	9912
267013005	GWC-16	EPA 7470A	9878	EPA 7470A	9912
267013006	GWC-2	EPA 7470A	9878	EPA 7470A	9912
267013007	EB-1-7-10-18	EPA 7470A	9878	EPA 7470A	9912
267013008	GWA-8	EPA 7470A	9878	EPA 7470A	9912
267013009	GWC-20	EPA 7470A	9878	EPA 7470A	9912
267013010	GWC-6	EPA 7470A	9878	EPA 7470A	9912
267013011	GWC-5	EPA 7470A	9878	EPA 7470A	9912
267013012	GWC-1	EPA 7470A	9878	EPA 7470A	9912
267013013	GWC-3	EPA 7470A	9878	EPA 7470A	9912
267013014	Dup-2	EPA 7470A	9878	EPA 7470A	9912
267013001	GWC-14	SM 2320B	9712		
267013003	GWC-15	SM 2320B	9712		
267013004	GWC-21	SM 2320B	9712		
267013005	GWC-16	SM 2320B	9712		
267013009	GWC-20	SM 2320B	9712		
267013010	GWC-6	SM 2320B	9712		
267013011	GWC-5	SM 2320B	9712		
267013012	GWC-1	SM 2320B	9712		
267013013	GWC-3	SM 2320B	9712		
267013014	Dup-2	SM 2320B	9712		
267013002	FB-1-7-9-18	SM 2320B	9785		
267013006	GWC-2	SM 2320B	9785		
267013007	EB-1-7-10-18	SM 2320B	9785		
267013008	GWA-8	SM 2320B	9785		
267013001	GWC-14	SM 2540C	9832		
267013002	FB-1-7-9-18	SM 2540C	9832		
267013003	GWC-15	SM 2540C	9832		
267013004	GWC-21	SM 2540C	9832		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road

Pace Project No.: 267013

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267013005	GWC-16	SM 2540C	9832		
267013006	GWC-2	SM 2540C	9832		
267013007	EB-1-7-10-18	SM 2540C	9833		
267013008	GWA-8	SM 2540C	9832		
267013009	GWC-20	SM 2540C	9832		
267013010	GWC-6	SM 2540C	9833		
267013011	GWC-5	SM 2540C	9833		
267013012	GWC-1	SM 2540C	9833		
267013013	GWC-3	SM 2540C	9833		
267013014	Dup-2	SM 2540C	9833		
267013001	GWC-14	EPA 300.0	9751		
267013002	FB-1-7-9-18	EPA 300.0	9751		
267013003	GWC-15	EPA 300.0	9751		
267013004	GWC-21	EPA 300.0	9751		
267013005	GWC-16	EPA 300.0	9751		
267013006	GWC-2	EPA 300.0	9751		
267013007	EB-1-7-10-18	EPA 300.0	9751		
267013008	GWA-8	EPA 300.0	9751		
267013009	GWC-20	EPA 300.0	9751		
267013010	GWC-6	EPA 300.0	9751		
267013011	GWC-5	EPA 300.0	9751		
267013012	GWC-1	EPA 300.0	9751		
267013013	GWC-3	EPA 300.0	9751		
267013014	Dup-2	EPA 300.0	9751		

REPORT OF LABORATORY ANALYSIS

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CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.ash-lab.com

PAGE: | OF

CLIENT NAME
Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
2411 Ralph McGill Blvd SE 810185
Atlanta, GA 30308
404-506-7239

REPORT TO:
Lauren Petty
Heath McCorkle

CC: Maria Padilla
Heath McCorkle

REQUESTED COMPLETION DATE:
laburch@southernco.com

PROJECT NAME/STATE:
Plant Kraft Grumman Road

PROJECT #:
Phase 2 CCR & State D&O

CONTAINER TYPE		ANALYSIS REQUESTED:		PRESERVATION	
# of	P	P	P	P	P
	3	3	7	3	3
CONTAINERS					
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X

Collection DATE	Collection TIME	MATRIX CODE	SAMPLE IDENTIFICATION	ANALYSIS REQUESTED:						
				C	G	K	A	B	P	
7-9-18	1540	GW	GWC-14	X	X	X	X	X	X	X
7-9-18	1670	W	FB-1-7-9-18	X	X	X	X	X	X	X
7-10-18	0915	GW	GWC-15	X	X	X	X	X	X	X
7-10-18	1140	GW	GWC-21	X	X	X	X	X	X	X
7-10-18	1505	GW	GWC-16	X	X	X	X	X	X	X
7-10-18	1640	GW	GWC-17 GWC-2	X	X	X	X	X	X	X
7-10-18	1735	W	FB-1-7-10-18	X	X	X	X	X	X	X

SAMPLED BY AND TITLE:
O. FUQUICA

DATE/TIME: 7-10-18

RECEIVED BY: [Signature]

DATE/TIME: 7-10-18

RECEIVED BY LAB: [Signature]

DATE/TIME: 7-10-18

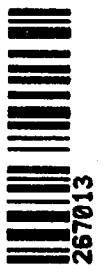
RECEIVED BY: [Signature]

DATE/TIME: 7-10-18

RECEIVED BY: [Signature]

DATE/TIME: 7-10-18

NO#: 267013



RELINQUISHED BY: [Signature]

RELINQUISHED BY: [Signature]

DATE/TIME: 0800

DATE/TIME:

FOR LAB USE ONLY

LAB: [Signature]

ENTERED INTO LIMS:

Tracking:

Plant Kraft Grumman Road/State constituents AS-B-C-F-D-S-S-V-411

Plant Kraft - Grumman Rd CCR Phase 2 CCR & State

CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

PAGE: **2**

OF

CLIENT NAME: Georgia Power		CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239		REPORT TO: Lauren Petty		CC: Maria Padilla Heath McCorkle	
REQUESTED COMPLETION DATE:		PROJECT NAME/STATE: Plant Kraft Grumman Road		PO #: laburch@southernmco.com		PROJECT #: Phase 2 CCR & State D&O	
Collection DATE	Collection TIME	MATRIX CODE	C O R A B	SAMPLE IDENTIFICATION			
7-9-18	1440	GW	X	6WA-8			
7-9-18	1625	GW	X	6WC-20			
7-10-18	0905	GW	X	6WC-6			
7-10-18	1156	GW	X	6WC-5			
7-10-18	1345	GW	X	6WC-1			
7-10-18	1525	GW	X	6WC-3			
7-10-18		GW	X	Dup-2			
SAMPLED BY AND TITLE: J. B. Ford		DATE/TIME: 7-11-18 0800		RELINQUISHED BY: <i>[Signature]</i>		DATE/TIME: 7-11-18 0800	
RECEIVED BY LAB: <i>[Signature]</i>		DATE/TIME: 7-11-18 0800		RELINQUISHED BY: <i>[Signature]</i>		DATE/TIME: 7-11-18 0800	
RECEIVED BY LAB: <i>[Signature]</i>		DATE/TIME: 7-11-18 1510		SAMPLE SHIPPED VIA: USPS		CLIENT: COLIER	
Checked: Yes		NA		Custody Seal: Intact		Other: FS	
No		NA		Broken		Other: FS	
No		NA		Miser: 0.5		Other: FS	
No		NA		Miser: 0.5		Other: FS	

NO# : 267013

PM: BM Due Date: 07/18/18
 CLIENT: GAPower-CCR

FOR LAB USE ONLY
 LAB #:
 Entered into LIMS:
 Tracking #:

CONTAINER TYPE: P - PLASTIC, A - AMBER GLASS, G - CLEAR GLASS, V - VOA VIAL, S - STERILE, O - OTHER
 PRESERVATION: 1 - HCl, 56°C, 2 - H2SO4, 56°C, 3 - HNO3, 4 - NaOH, 56°C, 5 - NaOH/ZnAc, 56°C, 6 - Na2S2O3, 56°C, 7 - 56°C not frozen

MATRIX CODES:
 DW - DRINKING WATER, S - SOIL, MW - WASTEWATER, SL - SLUDGE, GW - GROUNDWATER, SD - SOLID, SW - SURFACE WATER, A - AIR, ST - STORM WATER, L - LIQUID, W - WATER, P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

ANALYSIS REQUESTED: Metals App, III & IV (EPA 6020/7470), Metals (see below) EPA 6020, Cl, SO, & TDS (EPA 300.0 & SM 2540C), Radium 226 & 228 (SM-846 9315/9320), Bicarbonate Alk, Carbonate Alk, Total Alk

CONTAINERS: 5, 5, 5, 6, 5, 5

RECEIVED BY LAB: J. B. Ford

RECEIVED BY LAB: *[Signature]*

RECEIVED BY LAB: *[Signature]*

Checked: Yes

Checked: Yes

Checked: Yes

Sample Condition Upon Receipt

Face Analytical

Client Name: GIA Power

Project # _____

WO#: 267013

Courier: Fed Ex UPS USPS Client Commercial Pace Other
Tracking #: _____

PM: **BM** Due Date: **07/18/18**
CLIENT: **GAPower-CCR**

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used 83 Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Cooler Temperature 0.5 Biological Tissue is Frozen: Yes No
Temp should be above freezing to 6°C

Date and Initials of person examining contents: 7/11/18 MR

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.		
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.		
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.		
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.		
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.		
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.		
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.		
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.		
Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.		
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.		
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.		
Includes date/time/ID/Analysis Matrix:	<u>GCW</u>			
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.		
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed	Lot # of added preservative	
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.		
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.		
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Pace Trip Blank Lot # (if purchased):	_____			

Client Notification/ Resolution:
 Person Contacted: _____ Date/Time: _____
 Comments/ Resolution: _____
 Field Data Required? Y N

Project Manager Review: _____ **Date:** _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office i.e. out of hold, incorrect preservative, out of temp, incorrect containers.

August 09, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 267059

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 12, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Maria Padilla, Georgia Power
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267059

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267059

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267059001	Dup-1	Water	07/11/18 00:00	07/12/18 11:10
267059002	GWC-12	Water	07/11/18 09:40	07/12/18 11:10
267059003	GWC-11	Water	07/11/18 12:50	07/12/18 11:10
267059004	GWC-13	Water	07/11/18 15:00	07/12/18 11:10
267059005	GWC-9	Water	07/11/18 09:10	07/12/18 11:10
267059006	GWC-17	Water	07/11/18 14:40	07/12/18 11:10
267059007	FB-2-7-11-18	Water	07/11/18 14:00	07/12/18 11:10
267059008	EB-2-7-11-18	Water	07/11/18 15:50	07/12/18 11:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road
Pace Project No.: 267059

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
267059001	Dup-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267059002	GWC-12	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267059003	GWC-11	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267059004	GWC-13	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267059005	GWC-9	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267059006	GWC-17	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267059007	FB-2-7-11-18	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267059008	EB-2-7-11-18	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267059

Sample: Dup-1 **Lab ID: 267059001** Collected: 07/11/18 00:00 Received: 07/12/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.922 ± 0.368 (0.437) C:97% T:NA	pCi/L	07/25/18 09:46	13982-63-3	
Radium-228	EPA 9320	1.36 ± 0.550 (0.882) C:75% T:79%	pCi/L	08/01/18 16:08	15262-20-1	
Total Radium	Total Radium Calculation	2.28 ± 0.918 (1.32)	pCi/L	08/03/18 14:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267059

Sample: GWC-12 **Lab ID: 267059002** Collected: 07/11/18 09:40 Received: 07/12/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.281 ± 0.194 (0.300) C:103% T:NA	pCi/L	07/25/18 09:46	13982-63-3	
Radium-228	EPA 9320	1.75 ± 0.620 (0.906) C:71% T:81%	pCi/L	08/01/18 16:08	15262-20-1	
Total Radium	Total Radium Calculation	2.03 ± 0.814 (1.21)	pCi/L	08/03/18 14:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267059

Sample: GWC-11 **Lab ID: 267059003** Collected: 07/11/18 12:50 Received: 07/12/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	3.08 ± 0.704 (0.343) C:100% T:NA	pCi/L	07/25/18 09:46	13982-63-3	
Radium-228	EPA 9320	2.80 ± 0.791 (0.933) C:74% T:76%	pCi/L	08/01/18 16:09	15262-20-1	
Total Radium	Total Radium Calculation	5.88 ± 1.50 (1.28)	pCi/L	08/03/18 14:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267059

Sample: GWC-13 **Lab ID: 267059004** Collected: 07/11/18 15:00 Received: 07/12/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.443 ± 0.267 (0.442) C:117% T:NA	pCi/L	07/25/18 09:46	13982-63-3	
Radium-228	EPA 9320	0.960 ± 0.601 (1.13) C:68% T:63%	pCi/L	08/01/18 16:09	15262-20-1	
Total Radium	Total Radium Calculation	1.40 ± 0.868 (1.57)	pCi/L	08/03/18 14:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267059

Sample: GWC-9 **Lab ID: 267059005** Collected: 07/11/18 09:10 Received: 07/12/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	1.54 ± 0.485 (0.478) C:98% T:NA	pCi/L	07/25/18 09:47	13982-63-3	
Radium-228	EPA 9320	1.77 ± 0.620 (0.893) C:74% T:76%	pCi/L	08/01/18 16:09	15262-20-1	
Total Radium	Total Radium Calculation	3.31 ± 1.11 (1.37)	pCi/L	08/03/18 14:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267059

Sample: GWC-17 **Lab ID: 267059006** Collected: 07/11/18 14:40 Received: 07/12/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	2.01 ± 0.505 (0.231) C:91% T:NA	pCi/L	07/26/18 08:28	13982-63-3	
Radium-228	EPA 9320	1.12 ± 0.497 (0.838) C:75% T:87%	pCi/L	08/01/18 16:09	15262-20-1	
Total Radium	Total Radium Calculation	3.13 ± 1.00 (1.07)	pCi/L	08/03/18 14:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267059

Sample: FB-2-7-11-18 **Lab ID: 267059007** Collected: 07/11/18 14:00 Received: 07/12/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.151 ± 0.198 (0.428) C:95% T:NA	pCi/L	07/26/18 08:28	13982-63-3	
Radium-228	EPA 9320	0.835 ± 0.505 (0.941) C:73% T:72%	pCi/L	08/01/18 16:09	15262-20-1	
Total Radium	Total Radium Calculation	0.986 ± 0.703 (1.37)	pCi/L	08/03/18 14:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267059

Sample: EB-2-7-11-18 **Lab ID: 267059008** Collected: 07/11/18 15:50 Received: 07/12/18 11:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.182 ± 0.158 (0.274) C:86% T:NA	pCi/L	07/26/18 08:28	13982-63-3	
Radium-228	EPA 9320	0.143 ± 0.322 (0.715) C:73% T:90%	pCi/L	08/01/18 16:09	15262-20-1	
Total Radium	Total Radium Calculation	0.325 ± 0.480 (0.989)	pCi/L	08/03/18 14:15	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267059

QC Batch: 306536

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 267059001, 267059002, 267059003, 267059004, 267059005, 267059006, 267059007, 267059008

METHOD BLANK: 1498638

Matrix: Water

Associated Lab Samples: 267059001, 267059002, 267059003, 267059004, 267059005, 267059006, 267059007, 267059008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.142 ± 0.222 (0.491) C:92% T:NA	pCi/L	07/25/18 07:09	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267059

QC Batch: 306535

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 267059001, 267059002, 267059003, 267059004, 267059005, 267059006, 267059007, 267059008

METHOD BLANK: 1498635

Matrix: Water

Associated Lab Samples: 267059001, 267059002, 267059003, 267059004, 267059005, 267059006, 267059007, 267059008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.647 ± 0.329 (0.551) C:74% T:89%	pCi/L	08/01/18 12:54	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267059

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road

Pace Project No.: 267059

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267059001	Dup-1	EPA 9315	306536		
267059002	GWC-12	EPA 9315	306536		
267059003	GWC-11	EPA 9315	306536		
267059004	GWC-13	EPA 9315	306536		
267059005	GWC-9	EPA 9315	306536		
267059006	GWC-17	EPA 9315	306536		
267059007	FB-2-7-11-18	EPA 9315	306536		
267059008	EB-2-7-11-18	EPA 9315	306536		
267059001	Dup-1	EPA 9320	306535		
267059002	GWC-12	EPA 9320	306535		
267059003	GWC-11	EPA 9320	306535		
267059004	GWC-13	EPA 9320	306535		
267059005	GWC-9	EPA 9320	306535		
267059006	GWC-17	EPA 9320	306535		
267059007	FB-2-7-11-18	EPA 9320	306535		
267059008	EB-2-7-11-18	EPA 9320	306535		
267059001	Dup-1	Total Radium Calculation	308363		
267059002	GWC-12	Total Radium Calculation	308363		
267059003	GWC-11	Total Radium Calculation	308363		
267059004	GWC-13	Total Radium Calculation	308363		
267059005	GWC-9	Total Radium Calculation	308363		
267059006	GWC-17	Total Radium Calculation	308363		
267059007	FB-2-7-11-18	Total Radium Calculation	308363		
267059008	EB-2-7-11-18	Total Radium Calculation	308363		

REPORT OF LABORATORY ANALYSIS

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CHAIN OF CUSTODY RECORD



Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

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 Kraft Grumman Road Phase 2 CCR & State D&O				
PROJECT #:					
Collection DATE	Collection TIME	MATRIX CODE	C O M P	G R A B	SAMPLE IDENTIFICATION
7-11-18	~	GW	X	X	DUP-1
7-11-18	0940	GW	X	X	GWC-12
7-11-18	1250	GW	X	X	GWC-11
7-11-18	1500	GW	X	X	GWC-13

CONTAINER TYPE	ANALYSIS REQUESTED			DATE/TIME	RELINQUISHED BY:	DATE/TIME
	P	P	P			
Metals App. III & IV (EPA 6020/7470)	X	X	X	EPA 6020 Metals (see below) Cl, F, SO ₄ & TDS (FPA 300.0 & SM 2540C) Radium 226 & 228 (SW-846 9315/9320)	<i>[Signature]</i>	7-11-18 1500
Metals App. III & IV (EPA 6020/7470)	X	X	X			
Metals App. III & IV (EPA 6020/7470)	X	X	X			
Metals App. III & IV (EPA 6020/7470)	X	X	X			
Bicarbonate Alk, Carbonate Alk, Total Alk	X	X	X			

CONTAINER TYPE	ANALYSIS REQUESTED	DATE/TIME	RELINQUISHED BY:	DATE/TIME
P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	3 3 7 3			
PRESERVATION				
# of				
C O N T A I N E R S				

CONTAINER TYPE	ANALYSIS REQUESTED	DATE/TIME	RELINQUISHED BY:	DATE/TIME
L A B				
I D N U M B E R				
1				
2				
3				
4				

CONTAINER TYPE	ANALYSIS REQUESTED	DATE/TIME	RELINQUISHED BY:	DATE/TIME
P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	3 3 7 3			
PRESERVATION				
# of				
C O N T A I N E R S				

WO#: 267059

 267059

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR & State



Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

4 PAGE: OF 6

CHAIN OF CUSTODY RECORD

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 Kraft Grumman Road Phase 2 CCR & State D&O

CONTAINER TYPE PRESERVATION	ANALYSIS REQUESTED									
	P	P	P	P	P	P	P	P	P	P
# of CONTAINERS →	3	3	3	7	3	3	3	3	3	3
	Metals App. III & IV (EPA 6020/7470)	Metals (see below) EPA 6020	Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-846 9315/9320)	Bicarbonate Alk, Carbonate Alk, Total Alk					
RELINQUISHED BY:	[Signature]									
RELINQUISHED BY DATE/TIME:	7-12-18 11:12									

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H ₂ SO 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 ₂ S ₂ O ₃ , ≤6°C
	7 - ≤6°C not frozen

MATRIX CODES:	REMARKS/ADDITIONAL INFORMATION
DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

SAMPLED BY AND TITLE: O. FUGUETA DATE/TIME: 7-11-18 15:50
 RECEIVED BY: [Signature] DATE/TIME: 7-12-18 11:10
 RECEIVED BY LAB: [Signature] DATE/TIME: 7-12-18 11:10
 pH Checked: Yes [] No []
 Temperature: Min 5.4°C Max: []
 Intact [] Broken []
 NNL Present []
 # of Coolers: []
 COURIER: []
 OTHER: FS []
 COOLER ID: []

WO#: 267059
 PM: BM Due Date: 08/09/18
 CLIENT: GAPower-CCR

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR & State



Sample Condition Upon Receipt

Client Name: Georgia Power

WO#: 267059

PM: BM Due Date: 08/09/18 CLIENT: GAPower-CCR

Courier: Fed Ex UPS USPS Client Commercial Pace Other Tracking #:

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 514°C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 7/12/18 CCH

Table with 16 rows of checklist items including Chain of Custody Present, Chain of Custody Filled Out, Chain of Custody Relinquished, Sampler Name & Signature on COC, Samples Arrived within Hold Time, Short Hold Time Analysis (<72hr), Rush Turn Around Time Requested, Sufficient Volume, Correct Containers Used, Containers Intact, Filtered volume received for Dissolved tests, Sample Labels match COC, All containers needing preservation have been checked, All containers needing preservation are found to be in compliance with EPA recommendation, exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Samples checked for dechlorination, Headspace in VOA Vials (>6mm), Trip Blank Present, Trip Blank Custody Seals Present, Pace Trip Blank Lot # (if purchased).

Client Notification/ Resolution: Field Data Required? Y / N Person Contacted: Date/Time: Comments/ Resolution:

Project Manager Review: Date:

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

July 20, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 267060

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 12, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Maria Padilla, Georgia Power
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267060

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267060

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267060001	Dup-1	Water	07/11/18 00:00	07/12/18 11:10
267060002	GWC-12	Water	07/11/18 09:40	07/12/18 11:10
267060003	GWC-11	Water	07/11/18 12:50	07/12/18 11:10
267060004	GWC-13	Water	07/11/18 15:00	07/12/18 11:10
267060005	GWC-9	Water	07/11/18 09:10	07/12/18 11:10
267060006	GWC-17	Water	07/11/18 14:40	07/12/18 11:10
267060007	FB-2-7-11-18	Water	07/11/18 14:00	07/12/18 11:10
267060008	EB-2-7-11-18	Water	07/11/18 15:50	07/12/18 11:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road

Pace Project No.: 267060

Lab ID	Sample ID	Method	Analysts	Analytes Reported
267060001	Dup-1	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	KN	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267060002	GWC-12	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	KN	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267060003	GWC-11	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	KN	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267060004	GWC-13	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	KN	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267060005	GWC-9	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	KN	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267060006	GWC-17	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	KN	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267060007	FB-2-7-11-18	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	KN	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267060008	EB-2-7-11-18	EPA 6020B	CSW	16
		EPA 7470A	DRB	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road
Pace Project No.: 267060

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM 2320B	KN	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267060

Sample: Dup-1 **Lab ID: 267060001** Collected: 07/11/18 00:00 Received: 07/12/18 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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6020B MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A

Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 18:32	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 18:32	7440-38-2	
Barium	0.014	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 18:32	7440-39-3	
Beryllium	0.00060J	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 18:32	7440-41-7	
Boron	8.0	mg/L	2.0	0.20	50	07/16/18 12:41	07/18/18 18:38	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 18:32	7440-43-9	
Calcium	70.9	mg/L	25.0	0.69	50	07/16/18 12:41	07/18/18 18:38	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 18:32	7440-47-3	
Cobalt	0.00095J	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 18:32	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 18:32	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 18:32	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 18:32	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 18:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 18:32	7440-28-0	
Vanadium	0.0057J	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 18:32	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	07/16/18 12:41	07/18/18 18:32	7440-66-6	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A

Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 13:13	7439-97-6	
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2320B Alkalinity Low Level

Analytical Method: SM 2320B

Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:20		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:20		
Alkalinity, Total as CaCO3	ND	mg/L	1.0	1.0	1		07/18/18 15:20		

2540C Total Dissolved Solids

Analytical Method: SM 2540C

Total Dissolved Solids	893	mg/L	25.0	10.0	1		07/16/18 13:01		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0

Chloride	72.6	mg/L	12.5	1.2	50		07/19/18 13:36	16887-00-6	
Fluoride	0.35	mg/L	0.30	0.029	1		07/17/18 14:01	16984-48-8	
Sulfate	579	mg/L	50.0	0.85	50		07/19/18 13:36	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267060

Sample: GWC-12		Lab ID: 267060002		Collected: 07/11/18 09:40		Received: 07/12/18 11:10		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 18:43	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 18:43	7440-38-2		
Barium	0.014	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 18:43	7440-39-3		
Beryllium	0.00061J	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 18:43	7440-41-7		
Boron	8.5	mg/L	2.0	0.20	50	07/16/18 12:41	07/18/18 18:49	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 18:43	7440-43-9		
Calcium	72.2	mg/L	25.0	0.69	50	07/16/18 12:41	07/18/18 18:49	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 18:43	7440-47-3		
Cobalt	0.00096J	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 18:43	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 18:43	7439-92-1		
Lithium	0.00098J	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 18:43	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 18:43	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 18:43	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 18:43	7440-28-0		
Vanadium	0.0059J	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 18:43	7440-62-2		
Zinc	0.0036J	mg/L	0.010	0.0021	1	07/16/18 12:41	07/18/18 18:43	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 13:04	7439-97-6		
2320B Alkalinity Low Level		Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:22			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:22			
Alkalinity, Total as CaCO3	ND	mg/L	1.0	1.0	1		07/18/18 15:22			
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	888	mg/L	25.0	10.0	1		07/16/18 13:01			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	66.9	mg/L	12.5	1.2	50		07/19/18 13:56	16887-00-6		
Fluoride	0.62	mg/L	0.30	0.029	1		07/17/18 15:03	16984-48-8		
Sulfate	598	mg/L	50.0	0.85	50		07/19/18 13:56	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267060

Sample: GWC-11		Lab ID: 267060003		Collected: 07/11/18 12:50		Received: 07/12/18 11:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 18:55	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 18:55	7440-38-2	
Barium	0.12	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 18:55	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 18:55	7440-41-7	
Boron	0.30	mg/L	0.040	0.0039	1	07/16/18 12:41	07/18/18 18:55	7440-42-8	
Cadmium	0.00040J	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 18:55	7440-43-9	
Calcium	53.0	mg/L	25.0	0.69	50	07/16/18 12:41	07/18/18 19:00	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 18:55	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 18:55	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 18:55	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 18:55	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 18:55	7439-98-7	
Selenium	0.0022J	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 18:55	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 18:55	7440-28-0	
Vanadium	0.0021J	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 18:55	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	07/16/18 12:41	07/18/18 18:55	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 13:16	7439-97-6	
2320B Alkalinity Low Level		Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:25		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:25		
Alkalinity, Total as CaCO3	8.0	mg/L	1.0	1.0	1		07/18/18 15:25		
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	440	mg/L	25.0	10.0	1		07/16/18 13:01		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	53.7	mg/L	5.0	0.48	20		07/19/18 14:18	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		07/17/18 15:24	16984-48-8	
Sulfate	211	mg/L	20.0	0.34	20		07/19/18 14:18	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267060

Sample: GWC-13		Lab ID: 267060004		Collected: 07/11/18 15:00		Received: 07/12/18 11:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 19:06	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 19:06	7440-38-2	
Barium	0.019	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 19:06	7440-39-3	
Beryllium	0.000058J	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 19:06	7440-41-7	
Boron	0.098	mg/L	0.040	0.0039	1	07/16/18 12:41	07/18/18 19:06	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 19:06	7440-43-9	
Calcium	2.3	mg/L	0.50	0.014	1	07/16/18 12:41	07/18/18 19:06	7440-70-2	
Chromium	0.0019J	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 19:06	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 19:06	7440-48-4	
Lead	0.0015J	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 19:06	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 19:06	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 19:06	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 19:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 19:06	7440-28-0	
Vanadium	0.0097J	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 19:06	7440-62-2	
Zinc	0.0039J	mg/L	0.010	0.0021	1	07/16/18 12:41	07/18/18 19:06	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 13:25	7439-97-6	
2320B Alkalinity Low Level		Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:36		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:36		
Alkalinity, Total as CaCO3	ND	mg/L	1.0	1.0	1		07/18/18 15:36		
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	63.0	mg/L	25.0	10.0	1		07/16/18 13:01		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	3.2	mg/L	0.25	0.024	1		07/17/18 15:44	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		07/17/18 15:44	16984-48-8	
Sulfate	17.8	mg/L	1.0	0.017	1		07/17/18 15:44	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267060

Sample: GWC-9 **Lab ID: 267060005** Collected: 07/11/18 09:10 Received: 07/12/18 11:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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6020B MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A

Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 19:29	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 19:29	7440-38-2	
Barium	0.29	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 19:29	7440-39-3	
Beryllium	0.00030J	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 19:29	7440-41-7	
Boron	0.020J	mg/L	0.040	0.0039	1	07/16/18 12:41	07/18/18 19:29	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 19:29	7440-43-9	
Calcium	9.2	mg/L	5.0	0.14	10	07/16/18 12:41	07/19/18 14:20	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 19:29	7440-47-3	
Cobalt	0.0017J	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 19:29	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 19:29	7439-92-1	
Lithium	0.0019J	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 19:29	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 19:29	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 19:29	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 19:29	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 19:29	7440-62-2	
Zinc	0.0033J	mg/L	0.010	0.0021	1	07/16/18 12:41	07/18/18 19:29	7440-66-6	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A

Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 13:28	7439-97-6	
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2320B Alkalinity Low Level

Analytical Method: SM 2320B

Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:40		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:40		
Alkalinity, Total as CaCO3	ND	mg/L	1.0	1.0	1		07/18/18 15:40		

2540C Total Dissolved Solids

Analytical Method: SM 2540C

Total Dissolved Solids	165	mg/L	25.0	10.0	1		07/16/18 13:01		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0

Chloride	16.2	mg/L	0.25	0.024	1		07/17/18 16:05	16887-00-6	
Fluoride	0.14J	mg/L	0.30	0.029	1		07/17/18 16:05	16984-48-8	
Sulfate	87.4	mg/L	5.0	0.085	5		07/19/18 14:39	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267060

Sample: GWC-17		Lab ID: 267060006		Collected: 07/11/18 14:40		Received: 07/12/18 11:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 19:40	7440-36-0	
Arsenic	0.00082J	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 19:40	7440-38-2	
Barium	0.049	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 19:40	7440-39-3	
Beryllium	0.0038	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 19:40	7440-41-7	
Boron	1.6	mg/L	0.040	0.0039	1	07/16/18 12:41	07/18/18 19:40	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 19:40	7440-43-9	
Calcium	122	mg/L	25.0	0.69	50	07/16/18 12:41	07/18/18 19:46	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 19:40	7440-47-3	
Cobalt	0.0064J	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 19:40	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 19:40	7439-92-1	
Lithium	0.0075J	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 19:40	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 19:40	7439-98-7	
Selenium	0.0016J	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 19:40	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 19:40	7440-28-0	
Vanadium	0.0032J	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 19:40	7440-62-2	
Zinc	0.011	mg/L	0.010	0.0021	1	07/16/18 12:41	07/18/18 19:40	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 13:30	7439-97-6	
2320B Alkalinity Low Level		Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:41		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:41		
Alkalinity, Total as CaCO3	ND	mg/L	1.0	1.0	1		07/18/18 15:41		
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	2260	mg/L	25.0	10.0	1		07/16/18 13:02		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	864	mg/L	25.0	2.4	100		07/19/18 15:00	16887-00-6	
Fluoride	1.8	mg/L	0.30	0.029	1		07/17/18 16:26	16984-48-8	
Sulfate	902	mg/L	100	1.7	100		07/19/18 15:00	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267060

Sample: FB-2-7-11-18 **Lab ID: 267060007** Collected: 07/11/18 14:00 Received: 07/12/18 11:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS			Analytical Method: EPA 6020B Preparation Method: EPA 3005A						
Antimony	ND	mg/L	0.0030	0.00078	1	07/16/18 12:41	07/18/18 19:58	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	07/16/18 12:41	07/18/18 19:58	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	07/16/18 12:41	07/18/18 19:58	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/16/18 12:41	07/18/18 19:58	7440-41-7	
Boron	0.0046J	mg/L	0.040	0.0039	1	07/16/18 12:41	07/18/18 19:58	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/16/18 12:41	07/18/18 19:58	7440-43-9	
Calcium	0.032J	mg/L	0.50	0.014	1	07/16/18 12:41	07/18/18 19:58	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	07/16/18 12:41	07/18/18 19:58	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/16/18 12:41	07/18/18 19:58	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	07/16/18 12:41	07/18/18 19:58	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	07/16/18 12:41	07/18/18 19:58	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 19:58	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	07/16/18 12:41	07/18/18 19:58	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/16/18 12:41	07/18/18 19:58	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	07/16/18 12:41	07/18/18 19:58	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	07/16/18 12:41	07/18/18 19:58	7440-66-6	
7470 Mercury			Analytical Method: EPA 7470A Preparation Method: EPA 7470A						
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 13:32	7439-97-6	
2320B Alkalinity Low Level			Analytical Method: SM 2320B						
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:43		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:43		
Alkalinity, Total as CaCO3	ND	mg/L	1.0	1.0	1		07/18/18 15:43		
2540C Total Dissolved Solids			Analytical Method: SM 2540C						
Total Dissolved Solids	12.0J	mg/L	25.0	10.0	1		07/16/18 13:02		
300.0 IC Anions 28 Days			Analytical Method: EPA 300.0						
Chloride	0.23J	mg/L	0.25	0.024	1		07/17/18 16:46	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		07/17/18 16:46	16984-48-8	
Sulfate	0.30J	mg/L	1.0	0.017	1		07/17/18 16:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267060

Sample: EB-2-7-11-18		Lab ID: 267060008		Collected: 07/11/18 15:50		Received: 07/12/18 11:10		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 17:20	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 17:20	7440-38-2		
Barium	0.0014J	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 17:20	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 17:20	7440-41-7		
Boron	ND	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 17:20	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 17:20	7440-43-9		
Calcium	0.34J	mg/L	0.50	0.014	1	07/17/18 11:31	07/19/18 17:20	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 17:20	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 17:20	7440-48-4		
Lead	ND	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 17:20	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 17:20	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 17:20	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 17:20	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 17:20	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 17:20	7440-62-2		
Zinc	ND	mg/L	0.010	0.0021	1	07/17/18 11:31	07/19/18 17:20	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 13:35	7439-97-6		
2320B Alkalinity Low Level		Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:52			
Alkalinity,Carbonate (CaCO3)	2.0	mg/L	1.0	1.0	1		07/18/18 15:52			
Alkalinity, Total as CaCO3	2.0	mg/L	1.0	1.0	1		07/18/18 15:52			
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	16.0J	mg/L	25.0	10.0	1		07/16/18 13:02			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	0.11J	mg/L	0.25	0.024	1		07/17/18 17:07	16887-00-6	B	
Fluoride	ND	mg/L	0.30	0.029	1		07/17/18 17:07	16984-48-8		
Sulfate	ND	mg/L	1.0	0.017	1		07/17/18 17:07	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 267060

QC Batch: 9896 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 267060001, 267060002, 267060003, 267060004, 267060005, 267060006, 267060007, 267060008

METHOD BLANK: 44864 Matrix: Water
Associated Lab Samples: 267060001, 267060002, 267060003, 267060004, 267060005, 267060006, 267060007, 267060008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	07/17/18 12:59	

LABORATORY CONTROL SAMPLE: 44865

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0026	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44866 44867

Parameter	Units	267060002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	.0025	.0025	0.0025	0.0028	100	111	75-125	10	20	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 267060

QC Batch: 9869 Analysis Method: EPA 6020B
 QC Batch Method: EPA 3005A Analysis Description: 6020B MET
 Associated Lab Samples: 267060001, 267060002, 267060003, 267060004, 267060005, 267060006, 267060007

METHOD BLANK: 44771 Matrix: Water
 Associated Lab Samples: 267060001, 267060002, 267060003, 267060004, 267060005, 267060006, 267060007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	07/18/18 14:36	
Arsenic	mg/L	ND	0.0050	0.00057	07/18/18 14:36	
Barium	mg/L	ND	0.010	0.00078	07/18/18 14:36	
Beryllium	mg/L	ND	0.0030	0.000050	07/18/18 14:36	
Boron	mg/L	ND	0.040	0.0039	07/18/18 14:36	
Cadmium	mg/L	ND	0.0010	0.000093	07/18/18 14:36	
Calcium	mg/L	ND	0.50	0.014	07/18/18 14:36	
Chromium	mg/L	ND	0.010	0.0016	07/18/18 14:36	
Cobalt	mg/L	ND	0.010	0.00052	07/18/18 14:36	
Lead	mg/L	ND	0.0050	0.00027	07/18/18 14:36	
Lithium	mg/L	ND	0.050	0.00097	07/18/18 14:36	
Molybdenum	mg/L	ND	0.010	0.0019	07/18/18 14:36	
Selenium	mg/L	ND	0.010	0.0014	07/18/18 14:36	
Thallium	mg/L	ND	0.0010	0.00014	07/18/18 14:36	
Vanadium	mg/L	ND	0.010	0.0019	07/18/18 14:36	
Zinc	mg/L	ND	0.010	0.0021	07/18/18 14:36	

LABORATORY CONTROL SAMPLE: 44772

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.11	106	80-120	
Arsenic	mg/L	.1	0.10	102	80-120	
Barium	mg/L	.1	0.10	104	80-120	
Beryllium	mg/L	.1	0.11	107	80-120	
Boron	mg/L	1	1.0	105	80-120	
Cadmium	mg/L	.1	0.11	108	80-120	
Calcium	mg/L	1	1.0	103	80-120	
Chromium	mg/L	.1	0.10	100	80-120	
Cobalt	mg/L	.1	0.098	98	80-120	
Lead	mg/L	.1	0.10	104	80-120	
Lithium	mg/L	.1	0.10	101	80-120	
Molybdenum	mg/L	.1	0.10	105	80-120	
Selenium	mg/L	.1	0.10	105	80-120	
Thallium	mg/L	.1	0.10	103	80-120	
Vanadium	mg/L	.1	0.10	103	80-120	
Zinc	mg/L	.1	0.10	104	80-120	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 267060

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44773												44774	
Parameter	Units	267056011	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	RPD	Qual	
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD			
Antimony	mg/L	ND	.1	.1	0.11	0.11	107	107	75-125	0	20		
Arsenic	mg/L	0.0055	.1	.1	0.11	0.11	103	100	75-125	4	20		
Barium	mg/L	0.010	.1	.1	0.12	0.11	105	104	75-125	1	20		
Beryllium	mg/L	0.0026J	.1	.1	0.10	0.097	98	95	75-125	3	20		
Boron	mg/L	5.7	1	1	8.6	9.3	125	197	75-125	8	20		
Cadmium	mg/L	0.0018	.1	.1	0.11	0.11	105	104	75-125	0	20		
Calcium	mg/L	92.4	1	1	89.8	96.8	-255	444	75-125	7	20	M6	
Chromium	mg/L	ND	.1	.1	0.098	0.094	96	92	75-125	4	20		
Cobalt	mg/L	0.47	.1	.1	0.55	0.55	81	84	75-125	1	20		
Lead	mg/L	ND	.1	.1	0.090	0.087	90	87	75-125	3	20		
Lithium	mg/L	0.0022J	.1	.1	0.099	0.095	97	92	75-125	4	20		
Molybdenum	mg/L	ND	.1	.1	0.11	0.11	109	108	75-125	1	20		
Selenium	mg/L	0.022	.1	.1	0.13	0.13	109	104	75-125	4	20		
Thallium	mg/L	ND	.1	.1	0.092	0.089	91	88	75-125	3	20		
Vanadium	mg/L	ND	.1	.1	0.097	0.096	97	96	75-125	2	20		
Zinc	mg/L	0.29	.1	.1	0.38	0.38	92	92	75-125	0	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 267060

QC Batch: 9923 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 267060008

METHOD BLANK: 44985 Matrix: Water
Associated Lab Samples: 267060008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	07/19/18 17:08	
Arsenic	mg/L	ND	0.0050	0.00057	07/19/18 17:08	
Barium	mg/L	ND	0.010	0.00078	07/19/18 17:08	
Beryllium	mg/L	ND	0.0030	0.000050	07/19/18 17:08	
Boron	mg/L	ND	0.040	0.0039	07/19/18 17:08	
Cadmium	mg/L	ND	0.0010	0.000093	07/19/18 17:08	
Calcium	mg/L	ND	0.50	0.014	07/19/18 17:08	
Chromium	mg/L	ND	0.010	0.0016	07/19/18 17:08	
Cobalt	mg/L	ND	0.010	0.00052	07/19/18 17:08	
Lead	mg/L	ND	0.0050	0.00027	07/19/18 17:08	
Lithium	mg/L	ND	0.050	0.00097	07/19/18 17:08	
Molybdenum	mg/L	ND	0.010	0.0019	07/19/18 17:08	
Selenium	mg/L	ND	0.010	0.0014	07/19/18 17:08	
Thallium	mg/L	ND	0.0010	0.00014	07/19/18 17:08	
Vanadium	mg/L	ND	0.010	0.0019	07/19/18 17:08	
Zinc	mg/L	ND	0.010	0.0021	07/19/18 17:08	

LABORATORY CONTROL SAMPLE: 44986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.11	108	80-120	
Arsenic	mg/L	.1	0.10	104	80-120	
Barium	mg/L	.1	0.10	104	80-120	
Beryllium	mg/L	.1	0.11	113	80-120	
Boron	mg/L	1	1.1	106	80-120	
Cadmium	mg/L	.1	0.11	106	80-120	
Calcium	mg/L	1	1.1	108	80-120	
Chromium	mg/L	.1	0.11	107	80-120	
Cobalt	mg/L	.1	0.11	105	80-120	
Lead	mg/L	.1	0.11	107	80-120	
Lithium	mg/L	.1	0.11	110	80-120	
Molybdenum	mg/L	.1	0.11	105	80-120	
Selenium	mg/L	.1	0.11	107	80-120	
Thallium	mg/L	.1	0.11	107	80-120	
Vanadium	mg/L	.1	0.11	107	80-120	
Zinc	mg/L	.1	0.11	113	80-120	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 267060

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44987												44988	
Parameter	Units	267107001	MS	MSD	MS	MSD	MS	MSD	% Rec	Max			
		Result	Spike	Spike	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual	
Antimony	mg/L	ND	.1	.1	0.11	0.11	109	106	75-125	2	20		
Arsenic	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	1	20		
Barium	mg/L	0.057	.1	.1	0.17	0.16	112	101	75-125	7	20		
Beryllium	mg/L	ND	.1	.1	0.094	0.096	94	96	75-125	3	20		
Boron	mg/L	0.64	1	1	1.4	1.5	79	82	75-125	2	20		
Cadmium	mg/L	ND	.1	.1	0.10	0.10	103	103	75-125	0	20		
Calcium	mg/L	140	1	1	141	138	122	-184	75-125	2	20	M6	
Chromium	mg/L	ND	.1	.1	0.10	0.10	101	100	75-125	1	20		
Cobalt	mg/L	ND	.1	.1	0.099	0.099	99	99	75-125	0	20		
Lead	mg/L	ND	.1	.1	0.10	0.099	100	99	75-125	1	20		
Lithium	mg/L	0.013J	.1	.1	0.11	0.11	95	96	75-125	1	20		
Molybdenum	mg/L	0.0022J	.1	.1	0.11	0.11	108	104	75-125	4	20		
Selenium	mg/L	ND	.1	.1	0.10	0.10	104	102	75-125	2	20		
Thallium	mg/L	0.00077J	.1	.1	0.10	0.10	102	100	75-125	2	20		
Vanadium	mg/L	ND	.1	.1	0.11	0.11	107	105	75-125	2	20		
Zinc	mg/L	ND	.1	.1	0.11	0.11	110	107	75-125	2	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 267060

QC Batch: 10031

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity, Low Level

Associated Lab Samples: 267060001, 267060002, 267060003, 267060004, 267060005, 267060006, 267060007, 267060008

METHOD BLANK: 45487

Matrix: Water

Associated Lab Samples: 267060001, 267060002, 267060003, 267060004, 267060005, 267060006, 267060007, 267060008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	1.0	1.0	07/18/18 15:04	

LABORATORY CONTROL SAMPLE: 45488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	50.5	101	85-115	

SAMPLE DUPLICATE: 45532

Parameter	Units	267060003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	8.0	7.5	6	10	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 267060

QC Batch: 9855 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 267060001, 267060002, 267060003, 267060004, 267060005, 267060006, 267060007, 267060008

LABORATORY CONTROL SAMPLE: 44724

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	404	101	84-108	

SAMPLE DUPLICATE: 44725

Parameter	Units	267056012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	485	495	2	10	

SAMPLE DUPLICATE: 44726

Parameter	Units	267101003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	447	453	1	10	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 267060

QC Batch: 9904 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 267060001, 267060002, 267060003, 267060004, 267060005, 267060006, 267060007, 267060008

METHOD BLANK: 44910 Matrix: Water
Associated Lab Samples: 267060001, 267060002, 267060003, 267060004, 267060005, 267060006, 267060007, 267060008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.064J	0.25	0.024	07/17/18 13:20	
Fluoride	mg/L	ND	0.30	0.029	07/17/18 13:20	
Sulfate	mg/L	ND	1.0	0.017	07/17/18 13:20	

LABORATORY CONTROL SAMPLE: 44911

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.6	96	90-110	
Fluoride	mg/L	10	10.3	103	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44912 44913

Parameter	Units	267060001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	72.6	10	10	67.0	67.1	-56	-55	90-110	0	15	E
Fluoride	mg/L	0.35	10	10	10.9	11.2	106	108	90-110	2	15	
Sulfate	mg/L	579	10	10	302	302	-2770	-2760	90-110	0	15	E

MATRIX SPIKE SAMPLE: 44914

Parameter	Units	267060002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	66.9	10	67.3	4	90-110	E
Fluoride	mg/L	0.62	10	10.9	102	90-110	
Sulfate	mg/L	598	10	304	-2940	90-110	E

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QUALIFIERS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267060

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road
Pace Project No.: 267060

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267060001	Dup-1	EPA 3005A	9869	EPA 6020B	10019
267060002	GWC-12	EPA 3005A	9869	EPA 6020B	10019
267060003	GWC-11	EPA 3005A	9869	EPA 6020B	10019
267060004	GWC-13	EPA 3005A	9869	EPA 6020B	10019
267060005	GWC-9	EPA 3005A	9869	EPA 6020B	10019
267060006	GWC-17	EPA 3005A	9869	EPA 6020B	10019
267060007	FB-2-7-11-18	EPA 3005A	9869	EPA 6020B	10019
267060008	EB-2-7-11-18	EPA 3005A	9923	EPA 6020B	10127
267060001	Dup-1	EPA 7470A	9896	EPA 7470A	9944
267060002	GWC-12	EPA 7470A	9896	EPA 7470A	9944
267060003	GWC-11	EPA 7470A	9896	EPA 7470A	9944
267060004	GWC-13	EPA 7470A	9896	EPA 7470A	9944
267060005	GWC-9	EPA 7470A	9896	EPA 7470A	9944
267060006	GWC-17	EPA 7470A	9896	EPA 7470A	9944
267060007	FB-2-7-11-18	EPA 7470A	9896	EPA 7470A	9944
267060008	EB-2-7-11-18	EPA 7470A	9896	EPA 7470A	9944
267060001	Dup-1	SM 2320B	10031		
267060002	GWC-12	SM 2320B	10031		
267060003	GWC-11	SM 2320B	10031		
267060004	GWC-13	SM 2320B	10031		
267060005	GWC-9	SM 2320B	10031		
267060006	GWC-17	SM 2320B	10031		
267060007	FB-2-7-11-18	SM 2320B	10031		
267060008	EB-2-7-11-18	SM 2320B	10031		
267060001	Dup-1	SM 2540C	9855		
267060002	GWC-12	SM 2540C	9855		
267060003	GWC-11	SM 2540C	9855		
267060004	GWC-13	SM 2540C	9855		
267060005	GWC-9	SM 2540C	9855		
267060006	GWC-17	SM 2540C	9855		
267060007	FB-2-7-11-18	SM 2540C	9855		
267060008	EB-2-7-11-18	SM 2540C	9855		
267060001	Dup-1	EPA 300.0	9904		
267060002	GWC-12	EPA 300.0	9904		
267060003	GWC-11	EPA 300.0	9904		
267060004	GWC-13	EPA 300.0	9904		
267060005	GWC-9	EPA 300.0	9904		
267060006	GWC-17	EPA 300.0	9904		
267060007	FB-2-7-11-18	EPA 300.0	9904		
267060008	EB-2-7-11-18	EPA 300.0	9904		

REPORT OF LABORATORY ANALYSIS

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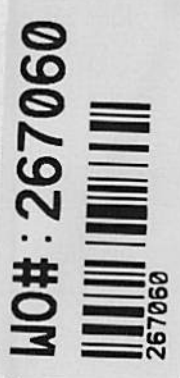


CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

PAGE: 3 OF 6

Form containing client information, project details, analysis requested, container tracking, and laboratory use instructions.





CHAIN OF CUSTODY RECORD

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 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

PAGE: 4 OF 6

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 PO #: laburch@southernco.com		PROJECT NAME/STATE: Plant Kraft Grumman Road Phase 2 CCR & State D&O	
Collection DATE 7-11-18 7-11-18 7-11-18 7-11-18	Collection TIME 0910 1440 1406 1550	MATRIX CODE* GW GW W W	GRA X X X X	SAMPLE IDENTIFICATION GWC-9 GWC-17 FB-2-7-11-18 EB-2-7-11-18	ANALYSIS REQUESTED Metals App III & IV (EPA 6020/7470) Metals (see below) EPA 6020 Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SW-846 9315/9320) Bicarbonate Alk, Carbonate Alk, Total Alk
CONTAINER TYPE: PRESERVATION # of CONTAINERS → 5 → 5 → 5 → 5		ANALYSIS REQUESTED P 3 P 3 P 7 P 3 P 3 P 3 P 7 P 3		CONTAINER TYPE: PRESERVATION L A B I D N U M B E R → 5 6 7 8	
SAMPLED BY AND TITLE: O. FUGUEA		DATE/TIME: 7-11-18 1550		RELINQUISHED BY: [Signature]	
RECEIVED BY: [Signature]		DATE/TIME: 7-12-18 1100		RELINQUISHED BY: [Signature]	
RECEIVED BY LAB: [Signature]		DATE/TIME: 7-12-18 1100		LAB #: 1100	
pH Checked: Yes No NA Yes No NA		Temperature: Min 5.4C Max		FOR LAB USE ONLY Entered into LIMS: Tracking #:	

WO# : 267060

PM: BM
 CLIENT: GAPower-CCR
 Due Date: 07/19/18

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft -Grumman Rd COC Phase 2 CCR & State



Sample Condition Upon Receipt

WO#: 267060

Client Name: Georgia Power

PM: BM Due Date: 07/19/18 CLIENT: GAPower-CCR

Courier: [] Fed Ex [] UPS [] USPS [x] Client [] Commercial [] Pace Other

Tracking #: _____

Proj. Due Date: _____ Proj. Name: _____

Custody Seal on Cooler/Box Present: [] yes [x] no Seals intact: [] yes [] no

Packing Material: [] Bubble Wrap [x] Bubble Bags [] None [] Other

Thermometer Used 711R082 Type of Ice: [x] Wet Blue None [] Samples on ice, cooling process has begun

Cooler Temperature 514°C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 7/12/18 CDH

Table with 16 rows of inspection items and checkboxes. Items include Chain of Custody Present, Chain of Custody Filled Out, Chain of Custody Relinquished, Sampler Name & Signature on COC, Samples Arrived within Hold Time, Short Hold Time Analysis (<72hr), Rush Turn Around Time Requested, Sufficient Volume, Correct Containers Used, Containers Intact, Filtered volume received for Dissolved tests, Sample Labels match COC, All containers needing preservation have been checked, All containers needing preservation are found to be in compliance with EPA recommendation, exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Samples checked for dechlorination, Headspace in VOA Vials (>6mm), Trip Blank Present, Trip Blank Custody Seals Present, Pace Trip Blank Lot # (if purchased).

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

August 09, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 267081

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 12, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Maria Padilla, Georgia Power
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267081

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

Delaware Certification

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3

Utah/TNI Certification #: PA014572017-9

USDA Soil Permit #: P330-17-00091

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 9526

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

Wyoming Certification #: 8TMS-L

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267081

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267081001	GWC-22	Water	07/11/18 16:45	07/12/18 14:07
267081002	GWC-4	Water	07/11/18 17:50	07/12/18 14:07
267081003	GWA-7	Water	07/11/18 18:45	07/12/18 14:07

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road

Pace Project No.: 267081

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
267081001	GWC-22	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267081002	GWC-4	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
267081003	GWA-7	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267081

Sample: GWC-22 **Lab ID: 267081001** Collected: 07/11/18 16:45 Received: 07/12/18 14:07 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	3.45 ± 0.788 (0.346) C:97% T:NA	pCi/L	07/25/18 07:09	13982-63-3	
Radium-228	EPA 9320	4.12 ± 0.955 (0.662) C:69% T:86%	pCi/L	08/01/18 12:54	15262-20-1	
Total Radium	Total Radium Calculation	7.57 ± 1.74 (1.01)	pCi/L	08/03/18 14:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267081

Sample: GWC-4 **Lab ID: 267081002** Collected: 07/11/18 17:50 Received: 07/12/18 14:07 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	2.11 ± 0.631 (0.572) C:76% T:NA	pCi/L	07/25/18 07:09	13982-63-3	
Radium-228	EPA 9320	0.580 ± 0.415 (0.799) C:68% T:78%	pCi/L	08/01/18 12:54	15262-20-1	
Total Radium	Total Radium Calculation	2.69 ± 1.05 (1.37)	pCi/L	08/02/18 15:43	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267081

Sample: GWA-7 **Lab ID: 267081003** Collected: 07/11/18 18:45 Received: 07/12/18 14:07 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • Upon receipt at the laboratory, 2.5 mls of nitric acid were added to the samples to meet the sample preservation requirement of pH <2 for radiological analyses.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	5.27 ± 0.924 (0.167) C:97% T:NA	pCi/L	07/30/18 08:55	13982-63-3	
Radium-228	EPA 9320	0.718 ± 0.474 (0.895) C:61% T:80%	pCi/L	08/01/18 12:54	15262-20-1	
Total Radium	Total Radium Calculation	5.99 ± 1.40 (1.06)	pCi/L	08/02/18 15:43	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267081

QC Batch: 306536

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Associated Lab Samples: 267081001, 267081002, 267081003

METHOD BLANK: 1498638

Matrix: Water

Associated Lab Samples: 267081001, 267081002, 267081003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.142 ± 0.222 (0.491) C:92% T:NA	pCi/L	07/25/18 07:09	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267081

QC Batch: 306535

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Associated Lab Samples: 267081001, 267081002, 267081003

METHOD BLANK: 1498635

Matrix: Water

Associated Lab Samples: 267081001, 267081002, 267081003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.647 ± 0.329 (0.551) C:74% T:89%	pCi/L	08/01/18 12:54	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267081

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PQL - Practical Quantitation Limit.
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Act - Activity
Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).
Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)
(MDC) - Minimum Detectable Concentration
Trac - Tracer Recovery (%)
Carr - Carrier Recovery (%)
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road
Pace Project No.: 267081

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267081001	GWC-22	EPA 9315	306536		
267081002	GWC-4	EPA 9315	306536		
267081003	GWA-7	EPA 9315	306536		
267081001	GWC-22	EPA 9320	306535		
267081002	GWC-4	EPA 9320	306535		
267081003	GWA-7	EPA 9320	306535		
267081001	GWC-22	Total Radium Calculation	308363		
267081002	GWC-4	Total Radium Calculation	308261		
267081003	GWA-7	Total Radium Calculation	308261		

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Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

CHAIN OF CUSTODY RECORD

PAGE: 5 OF 6

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 PO #: laburchi@southernco.com PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: Phase 2 CCR & State D&O		CONTAINER TYPE: PRESERVATION # of CONTAINERS →		ANALYSIS REQUESTED		CONTAINER TYPE: PRESERVATION LAB #:						
Collection DATE 7-11-18 7-11-18 7-11-18	Collection TIME 1645 1750 1845	MATRIX CODE* GW GW GW	C O M P X X X	SAMPLE IDENTIFICATION GWC-22 GWC-4 GWA-7	Metals App. III & IV (EPA 6020/7470)	Metals (see below) EPA 6020	Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C)	Radium 226 & 228 (SW-646 9315/9320)	Bicarbonate Alk, Carbonate Alk, Total Alk	P 3 3 7 3	P 3 7 3	L A B I D N U M B E R →	CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen	REMARKS/ADDITIONAL INFORMATION *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: ACC RECEIVED BY:		DATE/TIME: 7/12/18 1407 DATE/TIME:	RELINQUISHED BY:		DATE/TIME: 7/12/18 1407 DATE/TIME:	FOR LAB USE ONLY		LAB #:	Entered into LIMS: Tracking #:					
RECEIVED BY:		DATE/TIME: 7/12/18 1407 Temperature: 1.3°C Min: Max:	SAMPLE SHIPPED VIA: UPS Seal: Intact Broken Not Present USPS		COURIER		CLIENT OTHER FS		COOLER ID:					

WO# : 267081

267081

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
Plant Kraft - Grumman Rd COC Phase 2 CCR & State



Sample Condition Upon Receipt

WO#: 267081

Client Name: Georgia Power

PM: BM

Due Date: 08/09/18

CLIENT: GAPower-CCR

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____

Proj. Due Date: _____
Proj. Name: _____

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used THRO2 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 1.3°C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 7/12/18 CDH

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>GW</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

July 20, 2018

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 267082

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 12, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Maria Padilla, Georgia Power
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267082

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Texas Certification #: T104704397-08-TX

Virginia Certification #: 460204

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road

Pace Project No.: 267082

Lab ID	Sample ID	Matrix	Date Collected	Date Received
267082001	GWC-22	Water	07/11/18 16:45	07/12/18 14:07
267082002	GWC-4	Water	07/11/18 17:50	07/12/18 14:07
267082003	GWA-7	Water	07/11/18 18:45	07/12/18 14:07
267082004	GWC-4	Water	07/11/18 17:50	07/12/18 14:07
267082005	GWA-7	Water	07/11/18 18:45	07/12/18 14:07

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road

Pace Project No.: 267082

Lab ID	Sample ID	Method	Analysts	Analytes Reported
267082001	GWC-22	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	KN	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267082002	GWC-4	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	KN	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267082003	GWA-7	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	KN	3
		SM 2540C	JPT	1
		EPA 300.0	MWB	3
267082004	GWC-4	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
267082005	GWA-7	EPA 6020B	CSW	16
		EPA 7470A	DRB	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267082

Sample: GWC-22		Lab ID: 267082001		Collected: 07/11/18 16:45		Received: 07/12/18 14:07		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 17:25	7440-36-0		
Arsenic	0.0011J	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 17:25	7440-38-2		
Barium	0.12	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 17:25	7440-39-3		
Beryllium	0.000070J	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 17:25	7440-41-7		
Boron	3.2	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 17:25	7440-42-8		
Cadmium	0.00023J	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 17:25	7440-43-9		
Calcium	73.7	mg/L	25.0	0.69	50	07/17/18 11:31	07/19/18 17:31	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 17:25	7440-47-3		
Cobalt	ND	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 17:25	7440-48-4		
Lead	0.0010J	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 17:25	7439-92-1		
Lithium	ND	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 17:25	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 17:25	7439-98-7		
Selenium	ND	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 17:25	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 17:25	7440-28-0		
Vanadium	0.0025J	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 17:25	7440-62-2		
Zinc	0.0057J	mg/L	0.010	0.0021	1	07/17/18 11:31	07/19/18 17:25	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 12:40	7439-97-6		
2320B Alkalinity Low Level		Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:58			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		07/18/18 15:58			
Alkalinity, Total as CaCO3	ND	mg/L	1.0	1.0	1		07/18/18 15:58			
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	876	mg/L	25.0	10.0	1		07/16/18 13:02			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	164	mg/L	5.0	0.48	20		07/19/18 15:21	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		07/17/18 18:50	16984-48-8		
Sulfate	381	mg/L	20.0	0.34	20		07/19/18 15:21	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267082

Sample: GWC-4 **Lab ID: 267082002** Collected: 07/11/18 17:50 Received: 07/12/18 14:07 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00078	1	07/17/18 11:31	07/19/18 17:37	7440-36-0	
Arsenic	0.00095J	mg/L	0.0050	0.00057	1	07/17/18 11:31	07/19/18 17:37	7440-38-2	
Barium	0.071	mg/L	0.010	0.00078	1	07/17/18 11:31	07/19/18 17:37	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	07/17/18 11:31	07/19/18 17:37	7440-41-7	
Boron	6.4	mg/L	0.040	0.0039	1	07/17/18 11:31	07/19/18 17:37	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	07/17/18 11:31	07/19/18 17:37	7440-43-9	
Calcium	8.6	mg/L	5.0	0.14	10	07/17/18 11:31	07/20/18 13:29	7440-70-2	
Chromium	0.0055J	mg/L	0.010	0.0016	1	07/17/18 11:31	07/19/18 17:37	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	07/17/18 11:31	07/19/18 17:37	7440-48-4	
Lead	0.0029J	mg/L	0.0050	0.00027	1	07/17/18 11:31	07/19/18 17:37	7439-92-1	
Lithium	0.0039J	mg/L	0.050	0.00097	1	07/17/18 11:31	07/19/18 17:37	7439-93-2	
Molybdenum	0.024	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 17:37	7439-98-7	
Selenium	0.0015J	mg/L	0.010	0.0014	1	07/17/18 11:31	07/19/18 17:37	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/17/18 11:31	07/19/18 17:37	7440-28-0	
Vanadium	0.020	mg/L	0.010	0.0019	1	07/17/18 11:31	07/19/18 17:37	7440-62-2	
Zinc	0.0028J	mg/L	0.010	0.0021	1	07/17/18 11:31	07/19/18 17:37	7440-66-6	
7470 Mercury Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 12:43	7439-97-6	
2320B Alkalinity Analytical Method: SM 2320B									
Alkalinity,Bicarbonate (CaCO3)	297	mg/L	20.0	20.0	1		07/17/18 13:49		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		07/17/18 13:49		
Alkalinity, Total as CaCO3	297	mg/L	20.0	20.0	1		07/17/18 13:49		
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	799	mg/L	25.0	10.0	1		07/16/18 13:02		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	75.9	mg/L	2.5	0.24	10		07/19/18 15:42	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		07/17/18 19:11	16984-48-8	
Sulfate	177	mg/L	10.0	0.17	10		07/19/18 15:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267082

Sample: GWA-7		Lab ID: 267082003		Collected: 07/11/18 18:45		Received: 07/12/18 14:07		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.015	0.0039	5	07/17/18 11:31	07/19/18 22:36	7440-36-0	D3	
Arsenic	ND	mg/L	0.025	0.0028	5	07/17/18 11:31	07/19/18 22:36	7440-38-2	D3	
Barium	0.065	mg/L	0.050	0.0039	5	07/17/18 11:31	07/19/18 22:36	7440-39-3	D3	
Beryllium	ND	mg/L	0.015	0.00025	5	07/17/18 11:31	07/19/18 22:36	7440-41-7	D3	
Boron	11.7	mg/L	0.20	0.020	5	07/17/18 11:31	07/19/18 22:36	7440-42-8		
Cadmium	ND	mg/L	0.0050	0.00046	5	07/17/18 11:31	07/19/18 22:36	7440-43-9	D3	
Calcium	3.9	mg/L	2.5	0.069	5	07/17/18 11:31	07/19/18 22:36	7440-70-2		
Chromium	0.018J	mg/L	0.050	0.0078	5	07/17/18 11:31	07/19/18 22:36	7440-47-3	D3	
Cobalt	ND	mg/L	0.050	0.0026	5	07/17/18 11:31	07/19/18 22:36	7440-48-4	D3	
Lead	0.0028J	mg/L	0.025	0.0014	5	07/17/18 11:31	07/19/18 22:36	7439-92-1	D3	
Lithium	ND	mg/L	0.25	0.0049	5	07/17/18 11:31	07/19/18 22:36	7439-93-2	D3	
Molybdenum	ND	mg/L	0.050	0.0097	5	07/17/18 11:31	07/19/18 22:36	7439-98-7	D3	
Selenium	ND	mg/L	0.050	0.0068	5	07/17/18 11:31	07/19/18 22:36	7782-49-2	D3	
Thallium	ND	mg/L	0.0050	0.00071	5	07/17/18 11:31	07/19/18 22:36	7440-28-0	D3	
Vanadium	0.15	mg/L	0.050	0.0097	5	07/17/18 11:31	07/19/18 22:36	7440-62-2		
Zinc	0.020J	mg/L	0.050	0.010	5	07/17/18 11:31	07/19/18 22:36	7440-66-6	D3	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	07/17/18 08:20	07/17/18 12:45	7439-97-6		
2320B Alkalinity		Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	1060	mg/L	20.0	20.0	1		07/17/18 14:08			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		07/17/18 14:08			
Alkalinity, Total as CaCO3	1060	mg/L	20.0	20.0	1		07/17/18 14:08			
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	2200	mg/L	25.0	10.0	1		07/16/18 13:02			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	177	mg/L	2.5	0.24	10		07/19/18 16:04	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		07/17/18 19:52	16984-48-8		
Sulfate	37.7	mg/L	1.0	0.017	1		07/17/18 19:52	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 267082

Sample: GWC-4		Lab ID: 267082004		Collected: 07/11/18 17:50		Received: 07/12/18 14:07		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony, Dissolved	ND	mg/L	0.0030	0.00078	1	07/16/18 11:44	07/19/18 23:28	7440-36-0		
Arsenic, Dissolved	ND	mg/L	0.0050	0.00057	1	07/16/18 11:44	07/19/18 23:28	7440-38-2		
Barium, Dissolved	0.059	mg/L	0.010	0.00078	1	07/16/18 11:44	07/19/18 23:28	7440-39-3		
Beryllium, Dissolved	ND	mg/L	0.0030	0.000050	1	07/16/18 11:44	07/19/18 23:28	7440-41-7		
Boron, Dissolved	7.8	mg/L	2.0	0.20	50	07/16/18 11:44	07/20/18 14:15	7440-42-8		
Cadmium, Dissolved	ND	mg/L	0.0010	0.000093	1	07/16/18 11:44	07/19/18 23:28	7440-43-9		
Calcium, Dissolved	9.3	mg/L	2.5	0.069	5	07/16/18 11:44	07/20/18 13:40	7440-70-2		
Chromium, Dissolved	0.0043J	mg/L	0.010	0.0016	1	07/16/18 11:44	07/19/18 23:28	7440-47-3		
Cobalt, Dissolved	ND	mg/L	0.010	0.00052	1	07/16/18 11:44	07/19/18 23:28	7440-48-4		
Lead, Dissolved	ND	mg/L	0.0050	0.00027	1	07/16/18 11:44	07/19/18 23:28	7439-92-1		
Lithium, Dissolved	0.0025J	mg/L	0.050	0.00097	1	07/16/18 11:44	07/19/18 23:28	7439-93-2		
Molybdenum, Dissolved	0.0079J	mg/L	0.010	0.0019	1	07/16/18 11:44	07/19/18 23:28	7439-98-7		
Selenium, Dissolved	ND	mg/L	0.010	0.0014	1	07/16/18 11:44	07/19/18 23:28	7782-49-2		
Thallium, Dissolved	ND	mg/L	0.0010	0.00014	1	07/16/18 11:44	07/19/18 23:28	7440-28-0		
Vanadium, Dissolved	0.020	mg/L	0.010	0.0019	1	07/16/18 11:44	07/19/18 23:28	7440-62-2		
Zinc, Dissolved	0.0024J	mg/L	0.010	0.0021	1	07/16/18 11:44	07/19/18 23:28	7440-66-6		
7470 Mercury, Dissolved		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	ND	mg/L	0.00020	0.000036	1	07/18/18 10:05	07/18/18 16:49	7439-97-6	M1,R1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267082

Sample: GWA-7		Lab ID: 267082005		Collected: 07/11/18 18:45		Received: 07/12/18 14:07		Matrix: Water		
Parameters	Results	Units	Report		DF	Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL						
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony, Dissolved	ND	mg/L	0.015	0.0039	5	07/16/18 11:44	07/20/18 00:19	7440-36-0	D3	
Arsenic, Dissolved	ND	mg/L	0.025	0.0028	5	07/16/18 11:44	07/20/18 00:19	7440-38-2	D3	
Barium, Dissolved	0.060	mg/L	0.050	0.0039	5	07/16/18 11:44	07/20/18 00:19	7440-39-3		
Beryllium, Dissolved	ND	mg/L	0.015	0.00025	5	07/16/18 11:44	07/20/18 00:19	7440-41-7	D3	
Boron, Dissolved	14.3	mg/L	2.0	0.20	50	07/16/18 11:44	07/20/18 14:21	7440-42-8		
Cadmium, Dissolved	ND	mg/L	0.0050	0.00046	5	07/16/18 11:44	07/20/18 00:19	7440-43-9	D3	
Calcium, Dissolved	4.1	mg/L	2.5	0.069	5	07/16/18 11:44	07/20/18 00:19	7440-70-2		
Chromium, Dissolved	0.016J	mg/L	0.050	0.0078	5	07/16/18 11:44	07/20/18 00:19	7440-47-3	D3	
Cobalt, Dissolved	ND	mg/L	0.050	0.0026	5	07/16/18 11:44	07/20/18 00:19	7440-48-4	D3	
Lead, Dissolved	ND	mg/L	0.025	0.0014	5	07/16/18 11:44	07/20/18 00:19	7439-92-1	D3	
Lithium, Dissolved	ND	mg/L	0.25	0.0049	5	07/16/18 11:44	07/20/18 00:19	7439-93-2	D3	
Molybdenum, Dissolved	ND	mg/L	0.050	0.0097	5	07/16/18 11:44	07/20/18 00:19	7439-98-7	D3	
Selenium, Dissolved	0.0079J	mg/L	0.050	0.0068	5	07/16/18 11:44	07/20/18 00:19	7782-49-2	D3	
Thallium, Dissolved	ND	mg/L	0.0050	0.00071	5	07/16/18 11:44	07/20/18 00:19	7440-28-0	D3	
Vanadium, Dissolved	0.16	mg/L	0.050	0.0097	5	07/16/18 11:44	07/20/18 00:19	7440-62-2		
Zinc, Dissolved	ND	mg/L	0.050	0.010	5	07/16/18 11:44	07/20/18 00:19	7440-66-6	D3	
7470 Mercury, Dissolved		Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	ND	mg/L	0.00020	0.000036	1	07/18/18 10:05	07/18/18 16:59	7439-97-6		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 267082

QC Batch: 9889 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 267082001, 267082002, 267082003

METHOD BLANK: 44843 Matrix: Water
Associated Lab Samples: 267082001, 267082002, 267082003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	07/17/18 11:38	

LABORATORY CONTROL SAMPLE: 44844

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0026	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44847 44848

Parameter	Units	267050002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	.0025	.0025	0.0026	0.0026	102	102	75-125	0	20	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 267082

QC Batch: 10001	Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A	Analysis Description: 7470 Mercury Dissolved
Associated Lab Samples: 267082004, 267082005	

METHOD BLANK: 45310 Matrix: Water

Associated Lab Samples: 267082004, 267082005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	mg/L	0.000038J	0.00020	0.000036	07/18/18 16:45	

LABORATORY CONTROL SAMPLE: 45311

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	mg/L	.0025	0.0024	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 45312 45313

Parameter	Units	267082004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	mg/L	ND	.0025	.0025	0.0016	0.0023	63	90	75-125	34	20	M1,R1

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 267082

QC Batch: 9923 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 267082001, 267082002, 267082003

METHOD BLANK: 44985 Matrix: Water
Associated Lab Samples: 267082001, 267082002, 267082003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	07/19/18 17:08	
Arsenic	mg/L	ND	0.0050	0.00057	07/19/18 17:08	
Barium	mg/L	ND	0.010	0.00078	07/19/18 17:08	
Beryllium	mg/L	ND	0.0030	0.000050	07/19/18 17:08	
Boron	mg/L	ND	0.040	0.0039	07/19/18 17:08	
Cadmium	mg/L	ND	0.0010	0.000093	07/19/18 17:08	
Calcium	mg/L	ND	0.50	0.014	07/19/18 17:08	
Chromium	mg/L	ND	0.010	0.0016	07/19/18 17:08	
Cobalt	mg/L	ND	0.010	0.00052	07/19/18 17:08	
Lead	mg/L	ND	0.0050	0.00027	07/19/18 17:08	
Lithium	mg/L	ND	0.050	0.00097	07/19/18 17:08	
Molybdenum	mg/L	ND	0.010	0.0019	07/19/18 17:08	
Selenium	mg/L	ND	0.010	0.0014	07/19/18 17:08	
Thallium	mg/L	ND	0.0010	0.00014	07/19/18 17:08	
Vanadium	mg/L	ND	0.010	0.0019	07/19/18 17:08	
Zinc	mg/L	ND	0.010	0.0021	07/19/18 17:08	

LABORATORY CONTROL SAMPLE: 44986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.11	108	80-120	
Arsenic	mg/L	.1	0.10	104	80-120	
Barium	mg/L	.1	0.10	104	80-120	
Beryllium	mg/L	.1	0.11	113	80-120	
Boron	mg/L	1	1.1	106	80-120	
Cadmium	mg/L	.1	0.11	106	80-120	
Calcium	mg/L	1	1.1	108	80-120	
Chromium	mg/L	.1	0.11	107	80-120	
Cobalt	mg/L	.1	0.11	105	80-120	
Lead	mg/L	.1	0.11	107	80-120	
Lithium	mg/L	.1	0.11	110	80-120	
Molybdenum	mg/L	.1	0.11	105	80-120	
Selenium	mg/L	.1	0.11	107	80-120	
Thallium	mg/L	.1	0.11	107	80-120	
Vanadium	mg/L	.1	0.11	107	80-120	
Zinc	mg/L	.1	0.11	113	80-120	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 267082

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44987		44988		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		267107001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Antimony	mg/L	ND	.1	.1	0.11	0.11	109	106	75-125	2	20		
Arsenic	mg/L	ND	.1	.1	0.10	0.10	103	101	75-125	1	20		
Barium	mg/L	0.057	.1	.1	0.17	0.16	112	101	75-125	7	20		
Beryllium	mg/L	ND	.1	.1	0.094	0.096	94	96	75-125	3	20		
Boron	mg/L	0.64	1	1	1.4	1.5	79	82	75-125	2	20		
Cadmium	mg/L	ND	.1	.1	0.10	0.10	103	103	75-125	0	20		
Calcium	mg/L	140	1	1	141	138	122	-184	75-125	2	20	M6	
Chromium	mg/L	ND	.1	.1	0.10	0.10	101	100	75-125	1	20		
Cobalt	mg/L	ND	.1	.1	0.099	0.099	99	99	75-125	0	20		
Lead	mg/L	ND	.1	.1	0.10	0.099	100	99	75-125	1	20		
Lithium	mg/L	0.013J	.1	.1	0.11	0.11	95	96	75-125	1	20		
Molybdenum	mg/L	0.0022J	.1	.1	0.11	0.11	108	104	75-125	4	20		
Selenium	mg/L	ND	.1	.1	0.10	0.10	104	102	75-125	2	20		
Thallium	mg/L	0.00077J	.1	.1	0.10	0.10	102	100	75-125	2	20		
Vanadium	mg/L	ND	.1	.1	0.11	0.11	107	105	75-125	2	20		
Zinc	mg/L	ND	.1	.1	0.11	0.11	110	107	75-125	2	20		

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 267082

QC Batch: 9868 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET Dissolved
Associated Lab Samples: 267082004, 267082005

METHOD BLANK: 44767 Matrix: Water
Associated Lab Samples: 267082004, 267082005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	ND	0.0030	0.00078	07/19/18 23:16	
Arsenic, Dissolved	mg/L	ND	0.0050	0.00057	07/19/18 23:16	
Barium, Dissolved	mg/L	ND	0.010	0.00078	07/19/18 23:16	
Beryllium, Dissolved	mg/L	ND	0.0030	0.000050	07/19/18 23:16	
Boron, Dissolved	mg/L	ND	0.040	0.0039	07/19/18 23:16	
Cadmium, Dissolved	mg/L	ND	0.0010	0.000093	07/19/18 23:16	
Calcium, Dissolved	mg/L	ND	0.50	0.014	07/19/18 23:16	
Chromium, Dissolved	mg/L	ND	0.010	0.0016	07/19/18 23:16	
Cobalt, Dissolved	mg/L	ND	0.010	0.00052	07/19/18 23:16	
Lead, Dissolved	mg/L	ND	0.0050	0.00027	07/19/18 23:16	
Lithium, Dissolved	mg/L	ND	0.050	0.00097	07/19/18 23:16	
Molybdenum, Dissolved	mg/L	ND	0.010	0.0019	07/19/18 23:16	
Selenium, Dissolved	mg/L	ND	0.010	0.0014	07/19/18 23:16	
Thallium, Dissolved	mg/L	ND	0.0010	0.00014	07/19/18 23:16	
Vanadium, Dissolved	mg/L	ND	0.010	0.0019	07/19/18 23:16	
Zinc, Dissolved	mg/L	ND	0.010	0.0021	07/19/18 23:16	

LABORATORY CONTROL SAMPLE: 44768

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	.1	0.10	102	80-120	
Arsenic, Dissolved	mg/L	.1	0.097	97	80-120	
Barium, Dissolved	mg/L	.1	0.10	101	80-120	
Beryllium, Dissolved	mg/L	.1	0.10	104	80-120	
Boron, Dissolved	mg/L	1	1.1	105	80-120	
Cadmium, Dissolved	mg/L	.1	0.11	105	80-120	
Calcium, Dissolved	mg/L	1	1.0	102	80-120	
Chromium, Dissolved	mg/L	.1	0.10	100	80-120	
Cobalt, Dissolved	mg/L	.1	0.10	101	80-120	
Lead, Dissolved	mg/L	.1	0.10	102	80-120	
Lithium, Dissolved	mg/L	.1	0.11	107	80-120	
Molybdenum, Dissolved	mg/L	.1	0.10	100	80-120	
Selenium, Dissolved	mg/L	.1	0.10	102	80-120	
Thallium, Dissolved	mg/L	.1	0.10	102	80-120	
Vanadium, Dissolved	mg/L	.1	0.10	105	80-120	
Zinc, Dissolved	mg/L	.1	0.11	113	80-120	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 267082

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44769		44770		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		267082004 Result	MS Spike Conc.	MSD Spike Conc.									
Antimony, Dissolved	mg/L	ND	.1	.1	0.11	0.11	110	111	75-125	1	20		
Arsenic, Dissolved	mg/L	ND	.1	.1	0.10	0.10	104	102	75-125	2	20		
Barium, Dissolved	mg/L	0.059	.1	.1	0.18	0.17	120	113	75-125	4	20		
Beryllium, Dissolved	mg/L	ND	.1	.1	0.10	0.099	104	99	75-125	4	20		
Boron, Dissolved	mg/L	7.8	1	1	7.8	7.6	-2	-22	75-125	3	20	M1	
Cadmium, Dissolved	mg/L	ND	.1	.1	0.11	0.11	105	105	75-125	0	20		
Calcium, Dissolved	mg/L	9.3	1	1	8.3	9.0	-105	-33	75-125	8	20		
Chromium, Dissolved	mg/L	0.0043J	.1	.1	0.11	0.11	104	104	75-125	0	20		
Cobalt, Dissolved	mg/L	ND	.1	.1	0.099	0.10	98	102	75-125	3	20		
Lead, Dissolved	mg/L	ND	.1	.1	0.098	0.096	98	96	75-125	2	20		
Lithium, Dissolved	mg/L	0.0025J	.1	.1	0.11	0.10	103	99	75-125	4	20		
Molybdenum, Dissolved	mg/L	0.0079J	.1	.1	0.12	0.12	110	108	75-125	2	20		
Selenium, Dissolved	mg/L	ND	.1	.1	0.10	0.10	104	103	75-125	0	20		
Thallium, Dissolved	mg/L	ND	.1	.1	0.098	0.098	98	98	75-125	0	20		
Vanadium, Dissolved	mg/L	0.020	.1	.1	0.13	0.13	111	110	75-125	0	20		
Zinc, Dissolved	mg/L	0.0024J	.1	.1	0.11	0.11	109	111	75-125	1	20		

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 267082

QC Batch: 9922 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 267082002, 267082003

METHOD BLANK: 44982 Matrix: Water
Associated Lab Samples: 267082002, 267082003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	20.0	20.0	07/17/18 13:23	

LABORATORY CONTROL SAMPLE: 44983

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	100	100	100	85-115	

SAMPLE DUPLICATE: 45088

Parameter	Units	267082002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	297	280	6	10	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 267082

QC Batch: 10031

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity, Low Level

Associated Lab Samples: 267082001

METHOD BLANK: 45487

Matrix: Water

Associated Lab Samples: 267082001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	1.0	1.0	07/18/18 15:04	

LABORATORY CONTROL SAMPLE: 45488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	50.5	101	85-115	

SAMPLE DUPLICATE: 45532

Parameter	Units	267060003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	8.0	7.5	6	10	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 267082

QC Batch: 9855 Analysis Method: SM 2540C

QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 267082001, 267082002, 267082003

LABORATORY CONTROL SAMPLE: 44724

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	404	101	84-108	

SAMPLE DUPLICATE: 44725

Parameter	Units	267056012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	485	495	2	10	

SAMPLE DUPLICATE: 44726

Parameter	Units	267101003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	447	453	1	10	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 267082

QC Batch: 9904 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 267082001, 267082002, 267082003

METHOD BLANK: 44910 Matrix: Water
Associated Lab Samples: 267082001, 267082002, 267082003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.064J	0.25	0.024	07/17/18 13:20	
Fluoride	mg/L	ND	0.30	0.029	07/17/18 13:20	
Sulfate	mg/L	ND	1.0	0.017	07/17/18 13:20	

LABORATORY CONTROL SAMPLE: 44911

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.6	96	90-110	
Fluoride	mg/L	10	10.3	103	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44912 44913

Parameter	Units	267060001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	72.6	10	10	67.0	67.1	-56	-55	90-110	0	15	E
Fluoride	mg/L	0.35	10	10	10.9	11.2	106	108	90-110	2	15	
Sulfate	mg/L	579	10	10	302	302	-2770	-2760	90-110	0	15	E

MATRIX SPIKE SAMPLE: 44914

Parameter	Units	267060002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	66.9	10	67.3	4	90-110	E
Fluoride	mg/L	0.62	10	10.9	102	90-110	
Sulfate	mg/L	598	10	304	-2940	90-110	E

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QUALIFIERS

Project: Plant Kraft - Grumman Road

Pace Project No.: 267082

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road

Pace Project No.: 267082

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
267082001	GWC-22	EPA 3005A	9923	EPA 6020B	10127
267082002	GWC-4	EPA 3005A	9923	EPA 6020B	10127
267082003	GWA-7	EPA 3005A	9923	EPA 6020B	10127
267082004	GWC-4	EPA 3005A	9868	EPA 6020B	10136
267082005	GWA-7	EPA 3005A	9868	EPA 6020B	10136
267082001	GWC-22	EPA 7470A	9889	EPA 7470A	9933
267082002	GWC-4	EPA 7470A	9889	EPA 7470A	9933
267082003	GWA-7	EPA 7470A	9889	EPA 7470A	9933
267082004	GWC-4	EPA 7470A	10001	EPA 7470A	10027
267082005	GWA-7	EPA 7470A	10001	EPA 7470A	10027
267082002	GWC-4	SM 2320B	9922		
267082003	GWA-7	SM 2320B	9922		
267082001	GWC-22	SM 2320B	10031		
267082001	GWC-22	SM 2540C	9855		
267082002	GWC-4	SM 2540C	9855		
267082003	GWA-7	SM 2540C	9855		
267082001	GWC-22	EPA 300.0	9904		
267082002	GWC-4	EPA 300.0	9904		
267082003	GWA-7	EPA 300.0	9904		

REPORT OF LABORATORY ANALYSIS

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CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201 : www.asi-lab.com

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 Pacilla Heath McCorkle PO #: <u>laburch@southernco.com</u>		PROJECT NAME/STATE: Plant Kraft Grumman Road Phase 2 CCR & State D&O	
Collection DATE	Collection TIME	MATRIX CODE*	C O M P G R A B	SAMPLE IDENTIFICATION	ANALYSIS REQUESTED
7-11-18	1645	GW	X	GW-C-22	Metals App. III & IV (EPA 6020/7470) ✓ Metals (see below) (EPA 6020) ✓ Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) ✓ Radium 226 & 228 (SW-846 9315/9320) ✓ Bicarbonate Alk, Carbonate Alk, Total Alk ✓
7-11-18	1750	GW	X	GW-C-4	Metals App. III & IV (EPA 6020/7470) ✓ Metals (see below) (EPA 6020) ✓ Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) ✓ Radium 226 & 228 (SW-846 9315/9320) ✓ Bicarbonate Alk, Carbonate Alk, Total Alk ✓
7-11-18	1845	GW	X	GW-A-7	Metals App. III & IV (EPA 6020/7470) ✓ Metals (see below) (EPA 6020) ✓ Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) ✓ Radium 226 & 228 (SW-846 9315/9320) ✓ Bicarbonate Alk, Carbonate Alk, Total Alk ✓
CONTAINER TYPE: PRESERVATION: # of CONTAINERS → 75 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 ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O 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					
L A B I D N U M B E R → 1 2 3					
SAMPLED BY AND TITLE: RECEIVED BY:		DATE/TIME: 7/12/18 1407 DATE/TIME:		RELINQUISHED BY: <i>[Signature]</i> RELINQUISHED BY:	
RECEIVED BY LAB: <i>[Signature]</i>		DATE/TIME: 7/12/18 1407		SAMPLE SHIPPED VIA: UPS	
pH checked: YES No NA		Temperature: 1.3°C Min: Max:		# of Coolers: 0	
Seal: Intact Broken		Not Present		CLIENT: COURIER: OTHER: FS:	

WO#: 267082

 267082

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR & State



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CHAIN OF CUSTODY RECORD

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 REQUESTED COMPLETION DATE: laburchi@southernco.com PROJECT NAME/STATE: Plant Kraft Grumman Road Phase 2 CCR & State D&O		CC: Mana Padilla Heath McCorkle PO #:	
CONTAINER TYPE: PRESERVATION: # of C O N T A I N E R S	ANALYSIS REQUESTED P P P P 3 3 7 3 Metals App III & IV * Field Work Metals (see below) EPA 6020 Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SW-846 9315/9320) Bicarbonate Alk, Carbonate Alk, Total Alk	DATE/TIME: 7/11/18 1750 DATE/TIME: 7/11/18 1845 DATE/TIME: 7/12/18 1407	RELINQUISHED BY: [Signature] REINQUIRED BY: [Signature]	DATE/TIME: 7/12/18 1407 DATE/TIME: 7/12/18 1407	CLIENT: [Signature] COOLERS: # of Coolers: [] Broken: [] Not Present: []
RECEIVED BY: [Signature] RECEIVED BY LAB: [Signature] Temperature: Min: 1.3C Max: []	DATE/TIME: 7/11/18 1750 DATE/TIME: 7/11/18 1845 DATE/TIME: 7/12/18 1407	DATE/TIME: 7/12/18 1407 DATE/TIME: 7/12/18 1407	DATE/TIME: 7/12/18 1407 DATE/TIME: 7/12/18 1407	DATE/TIME: 7/12/18 1407 DATE/TIME: 7/12/18 1407	CLIENT: [Signature] COOLERS: # of Coolers: [] Broken: [] Not Present: []

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR & State



Sample Condition Upon Receipt

WO#: 267082
PM: BM
Due Date: 07/19/18
CLIENT: GAPower-CCR
Proj. Due Date:
Proj. Name:

Client Name: Georgia Power

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used THR082 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 1.3C Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6C

Date and Initials of person examining contents: [Signature]

Table with 16 rows of checklist items (Chain of Custody Present, Chain of Custody Filled Out, etc.) and checkboxes for Yes, No, N/A.

Client Notification/ Resolution: Field Data Required? Y / N
Person Contacted: _____ Date/Time: _____
Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Product Name: Low-Flow System

Date: 2019-03-25 14:56:04

Project Information:

Operator Name J. Berisford
Company Name Atlantic Coast Consulting
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 403421
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 21 ft

Pump placement from TOC 18 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 21.14 ft
Screen Length 5 ft
Depth to Water 6.48 ft

Pumping Information:

Final Pumping Rate 225 mL/min
Total System Volume 0.1837319 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6.2 in
Total Volume Pumped 6.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Stabilization									
Last 5	14:35:03	600.02	21.45	6.07	2716.67	35.00	6.90	0.19	-143.12
Last 5	14:40:03	900.02	21.57	6.06	2685.37	55.00	7.00	0.11	-143.26
Last 5	14:45:03	1200.02	21.66	6.06	2708.31	66.00	7.00	0.08	-143.43
Last 5	14:50:03	1500.02	21.54	6.06	2696.41	76.00	7.00	0.07	-138.80
Last 5	14:55:04	1800.68	21.25	6.06	2679.23	88.00	7.00	0.07	-133.79
Variance 0			0.09	-0.00	22.94			-0.02	-0.17
Variance 1			-0.13	-0.00	-11.90			-0.01	4.63
Variance 2			-0.29	-0.00	-17.18			-0.00	5.01

Notes

Sunny, sample time-1455

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-25 15:27:04

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 410135
Turbidity Make/Model Hach2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 19.4 ft

Well Information:

Well ID GWA-8
Well diameter 2 in
Well Total Depth 20.9 ft
Screen Length 5 ft
Depth to Water 8.9 ft

Pumping Information:

Final Pumping Rate 195 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 18 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	15:05:09	3300.98	22.44	4.39	392.16	8.90	10.50	0.12	77.64
Last 5	15:10:09	3600.99	22.22	4.37	387.98	7.20	10.50	0.11	70.81
Last 5	15:15:10	3901.97	22.45	4.40	388.38	6.90	10.50	0.11	67.77
Last 5	15:20:12	4203.97	22.45	4.38	384.48	4.91	10.50	0.10	65.81
Last 5	15:25:14	4505.96	22.49	4.40	387.05	4.74	10.50	0.10	59.87
Variance 0			0.22	0.02	0.41			-0.00	-3.04
Variance 1			-0.00	-0.02	-3.91			-0.01	-1.96
Variance 2			0.05	0.02	2.57			-0.00	-5.94

Notes

Sampled at 1525. 77F cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-25 17:18:57

Project Information:

Operator Name J. Berisford
Company Name Atlantic Coast Consulting
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 403421
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 23 ft

Pump placement from TOC 20 ft

Well Information:

Well ID GWB-4R
Well diameter 2 in
Well Total Depth 23.31 ft
Screen Length 5 ft
Depth to Water 11.15 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 17.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Stabilization									
Last 5	16:50:09	4800.02	22.69	5.76	768.36	7.99	11.40	1.14	-47.79
Last 5	16:55:09	5100.02	23.47	5.86	788.41	7.52	11.40	5.06	-16.82
Last 5	17:00:11	5402.02	22.43	5.75	756.33	6.29	11.40	0.18	-43.11
Last 5	17:05:14	5705.02	22.30	5.75	769.80	4.71	11.40	0.16	-46.56
Last 5	17:10:14	6005.02	22.81	5.74	767.31	3.01	11.40	0.12	-45.97
Variance 0			-1.05	-0.11	-32.08			-4.88	-26.29
Variance 1			-0.13	0.00	13.48			-0.03	-3.45
Variance 2			0.51	-0.00	-2.50			-0.04	0.59

Notes

Sunny, sample time-1715

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-26 15:22:40

Project Information:

Operator Name J. Berisford
Company Name Atlantic Coast Consulting
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 403421
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 26 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWB-5R
Well diameter 2 in
Well Total Depth 26.5 ft
Screen Length 5 ft
Depth to Water 10.01 ft

Pumping Information:

Final Pumping Rate 170 mL/min
Total System Volume 0.206049 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.7 in
Total Volume Pumped 30.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Stabilization									
Last 5	15:00:37	9601.70	22.82	5.11	759.17	9.04	10.40	0.05	-8.98
Last 5	15:05:37	9901.70	22.12	5.10	760.43	7.73	10.40	0.05	-9.04
Last 5	15:10:37	10201.70	21.70	5.11	757.56	6.89	10.40	0.06	-10.22
Last 5	15:15:37	10501.71	21.29	5.11	760.17	5.72	10.40	0.06	-10.57
Last 5	15:20:37	10801.70	21.00	5.10	758.22	4.76	10.40	0.06	-10.27
Variance 0			-0.42	0.00	-2.87			0.00	-1.18
Variance 1			-0.41	-0.00	2.61			0.00	-0.35
Variance 2			-0.28	-0.00	-1.95			0.00	0.29

Notes

Cloudy, sample time-1520, FB-2-3-26-19 here, DUP-2 here

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-26 11:21:37

Project Information:

Operator Name J. Berisford
Company Name Atlantic Coast Consulting
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 403421
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 23 ft

Pump placement from TOC 20 ft

Well Information:

Well ID GWB-6R
Well diameter 2 in
Well Total Depth 23.54 ft
Screen Length 5 ft
Depth to Water 7.81 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.3 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Stabilization									
Last 5	11:00:02	2400.08	19.09	5.95	1647.38	21.00	8.00	0.03	-20.51
Last 5	11:05:02	2700.09	19.09	5.94	1641.07	24.00	8.00	0.03	-20.70
Last 5	11:10:02	3000.08	19.38	5.94	1630.50	27.00	8.00	0.02	-20.91
Last 5	11:15:02	3300.08	19.45	5.94	1632.95	25.00	8.00	0.02	-21.63
Last 5	11:20:02	3600.08	19.44	5.94	1605.12	23.00	8.00	0.03	-21.17
Variance 0			0.29	-0.00	-10.57			-0.00	-0.21
Variance 1			0.07	0.00	2.45			0.00	-0.72
Variance 2			-0.01	0.00	-27.83			0.00	0.47

Notes

Cloudy, sample time: 1120

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-26 16:26:56

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 410135
Turbidity Make/Model Hach2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 32 ft

Pump placement from TOC 25.6 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.1 ft
Screen Length 5 ft
Depth to Water 18.94 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	16:05:27	1803.01	20.95	5.78	434.13	2.23	19.00	0.24	32.19
Last 5	16:10:30	2106.00	20.66	5.78	434.20	1.70	19.00	0.24	30.31
Last 5	16:15:30	2406.00	20.48	5.78	435.93	0.83	19.00	0.16	29.37
Last 5	16:20:30	2706.02	20.41	5.77	435.83	0.47	19.00	0.16	29.05
Last 5	16:25:30	3005.99	20.31	5.77	434.62	0.45	19.00	0.16	28.89
Variance 0			-0.18	0.00	1.73			-0.07	-0.94
Variance 1			-0.08	-0.00	-0.10			-0.01	-0.32
Variance 2			-0.10	0.00	-1.21			0.01	-0.16

Notes

Sampled at 1625. 62F overcast.

Grab Samples

Product Name: Low-Flow System

Date: 2019-07-30 09:27:22

Project Information:

Operator Name O. Fuquea
Company Name Atlantic Coast Consulting
Project Name GW 2 GWC-2 Sample
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 573204
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Peri pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 36 ft

Pump placement from TOC 31.3 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 33.81 ft
Screen Length 5 ft
Depth to Water 18.79 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2506832 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 15.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	09:05:37	1800.01	23.06	4.75	62.41	9.40	18.80	0.13	66.83
Last 5	09:10:38	2101.01	23.07	4.74	61.82	7.95	18.80	0.12	71.58
Last 5	09:15:38	2400.99	23.12	4.74	62.19	7.04	18.80	0.10	77.62
Last 5	09:20:38	2701.00	23.08	4.75	62.22	5.36	18.80	0.10	84.35
Last 5	09:25:38	3001.00	23.10	4.74	61.99	4.90	18.80	0.10	92.88
Variance 0			0.05	0.00	0.38			-0.02	6.04
Variance 1			-0.04	0.01	0.03			0.01	6.73
Variance 2			0.02	-0.01	-0.23			-0.01	8.53

Notes

Sampled at 0925. Sunny 78F.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-26 17:17:39

Project Information:

Operator Name J. Berisford
Company Name Atlantic Coast Consulting
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 403421
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 24 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 27.4 ft
Screen Length 5 ft
Depth to Water 9.12 ft

Pumping Information:

Final Pumping Rate 110 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	16:55:12	3600.58	18.58	4.12	226.43	8.46	21.10	0.14	216.75
Last 5	17:00:13	3901.58	18.62	4.14	226.30	7.24	22.60	0.14	190.17
Last 5	17:05:13	4201.58	19.13	4.17	223.15	6.51	23.80	0.13	145.72
Last 5	17:10:13	4501.51	19.22	4.20	219.28	5.44	25.00	0.13	156.77
Last 5	17:15:13	4801.51	19.31	4.36	213.91	5.19	26.60	2.67	109.19
Variance 0			0.51	0.03	-3.16			-0.01	-44.45
Variance 1			0.09	0.03	-3.86			-0.00	11.05
Variance 2			0.09	0.16	-5.37			2.55	-47.58

Notes

Purged dry

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-27 09:08:58

Project Information:

Operator Name J. Berisford
Company Name Atlantic Coast Consulting
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 32° 8' 40.83"
Longitude -81° -11' -6.14"
Sonde SN 403421
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 24 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 27.4 ft
Screen Length 5 ft
Depth to Water 9.03 ft

Pumping Information:

Final Pumping Rate 110 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 47.6 in
Total Volume Pumped 2.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	08:45:03	300.12	11.81	4.33	206.87	9.68	10.90	0.71	171.64
Last 5	08:50:03	600.03	12.65	4.36	194.11	6.11	11.70	0.34	172.33
Last 5	08:55:03	900.02	11.79	4.39	186.42	5.26	12.40	0.36	162.67
Last 5	09:00:03	1200.02	11.69	4.37	192.41	4.79	13.00	0.38	174.07
Last 5	09:05:03	1500.02	12.98	4.38	193.03	4.87	13.80	0.31	178.43
Variance 0			-0.86	0.03	-7.69			0.02	-9.67
Variance 1			-0.09	-0.02	5.99			0.02	11.40
Variance 2			1.28	0.01	0.62			-0.06	4.36

Notes

Sunny, sample time:0905, well purged dry 3-26-19, allowed overnight recharge.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-27 11:48:37

Project Information:

Operator Name J. Berisford
Company Name Atlantic Coast Consulting
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 32° 8' 29.16"
Longitude -81° -11' -5.3"
Sonde SN 403421
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 22 ft

Pump placement from TOC 20 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 22.55 ft
Screen Length 5 ft
Depth to Water 12.88 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.1881953 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 41 in
Total Volume Pumped 16.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Stabilization									
Last 5	11:20:11	6306.61	18.90	5.21	181.58	8.49	16.00	0.63	56.56
Last 5	11:25:11	6606.62	18.74	5.21	195.57	7.87	16.00	0.52	55.27
Last 5	11:30:11	6906.69	18.96	5.19	211.71	7.03	16.00	0.46	55.40
Last 5	11:35:11	7206.63	19.41	5.18	218.52	5.52	16.00	0.42	56.12
Last 5	11:40:11	7506.61	19.57	5.18	220.76	4.81	16.00	0.40	57.81
Variance 0			0.21	-0.02	16.14			-0.06	0.13
Variance 1			0.45	-0.01	6.81			-0.05	0.72
Variance 2			0.16	-0.00	2.24			-0.02	1.69

Notes

Sunny, sample time: 1140

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-27 10:52:11

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 410135
Turbidity Make/Model Hach2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 24.2 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 26.7 ft
Screen Length 5 ft
Depth to Water 12.66 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 9.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	10:30:57	2402.00	19.59	4.10	954.10	3.11	13.10	0.29	152.00
Last 5	10:35:57	2702.00	19.18	4.10	945.41	2.26	13.10	0.28	143.51
Last 5	10:40:57	3001.99	19.55	4.10	946.08	3.72	13.10	0.26	143.72
Last 5	10:45:57	3301.98	19.55	4.11	947.68	2.69	13.10	0.25	133.15
Last 5	10:50:57	3601.98	19.59	4.11	944.61	2.82	13.10	0.23	126.62
Variance 0			0.36	-0.00	0.67			-0.01	0.21
Variance 1			0.00	0.01	1.60			-0.01	-10.57
Variance 2			0.04	0.00	-3.07			-0.02	-6.53

Notes

Sampled at 1050. 52F clear.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-26 15:07:40

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 410135
Turbidity Make/Model Hach2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 21.6 ft

Well Information:

Well ID GWC-13
Well diameter 2 in
Well Total Depth 24.10 ft
Screen Length 5 ft
Depth to Water 13.9 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 4.375 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	14:45:02	300.03	21.74	4.96	111.85	5.45	14.20	0.68	78.77
Last 5	14:50:02	600.03	21.55	4.96	111.92	3.99	14.20	0.58	77.04
Last 5	14:55:03	901.02	21.28	4.96	111.65	3.78	14.20	0.52	74.69
Last 5	15:00:03	1201.01	21.24	4.95	111.59	3.46	14.20	0.49	73.32
Last 5	15:05:08	1506.01	21.04	4.96	111.24	3.37	14.20	0.47	72.70
Variance 0			-0.27	0.00	-0.27			-0.06	-2.35
Variance 1			-0.04	-0.00	-0.06			-0.02	-1.37
Variance 2			-0.20	0.00	-0.35			-0.02	-0.62

Notes

Sampled at 1505. 63F overcast

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-26 14:11:28

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 410135
Turbidity Make/Model Hach2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 32 ft

Pump placement from TOC 24.5 ft

Well Information:

Well ID GWC-14
Well diameter 2 in
Well Total Depth 27 ft
Screen Length 5 ft
Depth to Water 19.19 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	13:50:03	900.02	20.35	5.74	706.64	4.11	19.40	0.18	42.29
Last 5	13:55:03	1200.01	20.14	5.74	709.50	2.75	19.40	0.17	42.52
Last 5	14:00:03	1500.01	20.49	5.74	707.66	5.26	19.40	0.15	44.48
Last 5	14:05:03	1800.00	20.67	5.74	707.51	4.88	19.40	0.14	45.53
Last 5	14:10:03	2100.00	20.67	5.74	710.11	4.30	19.40	0.14	45.67
Variance 0			0.35	-0.00	-1.83			-0.02	1.96
Variance 1			0.18	-0.00	-0.15			-0.01	1.05
Variance 2			-0.01	0.00	2.60			-0.00	0.13

Notes

Sampled at 1410. 67F cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-26 13:11:26

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 410135
Turbidity Make/Model Hach2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 32 ft

Pump placement from TOC 24.3 ft

Well Information:

Well ID GWC-15
Well diameter 2 in
Well Total Depth 26.8 ft
Screen Length 5 ft
Depth to Water 18.97 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 5.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	12:50:05	900.02	20.39	6.64	771.84	5.10	19.20	0.45	28.91
Last 5	12:55:05	1200.02	21.21	6.64	778.94	5.11	19.20	0.35	29.92
Last 5	13:00:05	1500.01	20.89	6.65	782.30	4.65	19.20	0.27	29.39
Last 5	13:05:05	1800.00	20.83	6.65	787.81	4.45	19.20	0.25	29.36
Last 5	13:10:05	2099.99	21.02	6.65	786.74	4.54	19.20	0.21	29.37
Variance 0			-0.33	0.00	3.35			-0.08	-0.53
Variance 1			-0.06	0.00	5.51			-0.03	-0.03
Variance 2			0.19	0.00	-1.07			-0.03	0.01

Notes

Sampled at 1310. 64F cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-26 09:52:19

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 410135
Turbidity Make/Model Hach2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 32 ft

Pump placement from TOC 25.7 ft

Well Information:

Well ID GWC-16
Well diameter 2 in
Well Total Depth 28.2 ft
Screen Length 5 ft
Depth to Water 20.34 ft

Pumping Information:

Final Pumping Rate 160 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 17 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	09:30:06	3601.95	20.68	5.56	1660.52	8.20	20.60	0.64	14.89
Last 5	09:35:07	3902.94	20.82	5.56	1661.27	6.86	20.60	0.61	14.65
Last 5	09:40:07	4202.94	20.94	5.57	1655.59	6.53	20.60	0.59	14.45
Last 5	09:45:07	4502.93	20.79	5.56	1673.21	5.45	20.60	0.58	14.52
Last 5	09:50:07	4802.93	20.93	5.57	1658.64	4.82	20.60	0.57	13.99
Variance 0			0.12	0.01	-5.68			-0.02	-0.20
Variance 1			-0.15	-0.01	17.62			-0.01	0.06
Variance 2			0.14	0.01	-14.57			-0.01	-0.53

Notes

Sampled at 0950. 60F cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-26 09:47:03

Project Information:

Operator Name J. Berisford
Company Name Atlantic Coast Consulting
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 403421
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 23 ft

Pump placement from TOC 20 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 23 ft
Screen Length 5 ft
Depth to Water 6.68 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 11 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Stabilization									
Last 5	09:25:19	2400.81	18.77	4.65	2235.76	8.91	7.60	0.21	19.89
Last 5	09:30:19	2700.81	18.67	4.65	2250.56	7.20	7.60	0.19	16.98
Last 5	09:35:19	3000.81	18.95	4.63	2304.50	6.62	7.60	0.19	16.57
Last 5	09:40:19	3300.81	19.12	4.62	2346.76	5.03	7.60	0.18	14.49
Last 5	09:45:19	3600.81	18.80	4.62	2360.01	4.89	7.60	0.18	13.59
Variance 0			0.28	-0.02	53.94			-0.00	-0.41
Variance 1			0.17	-0.01	42.26			-0.01	-2.08
Variance 2			-0.32	0.01	13.25			0.00	-0.90

Notes

Cloudy, sample time-0945

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-25 16:46:28

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 410135
Turbidity Make/Model Hach2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 22.8 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 24.9 ft
Screen Length 5 ft
Depth to Water 20.84 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 7.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	16:25:23	2101.00	22.85	6.28	687.30	1.14	21.20	0.17	-38.07
Last 5	16:30:23	2400.98	22.74	6.28	685.71	1.81	21.20	0.16	-37.93
Last 5	16:35:24	2701.98	22.63	6.28	686.08	0.93	21.20	0.15	-37.16
Last 5	16:40:24	3001.98	22.78	6.28	689.21	0.93	21.20	0.15	-36.05
Last 5	16:45:24	3301.97	22.66	6.28	687.08	0.82	21.20	0.16	-39.77
Variance 0			-0.11	-0.01	0.37			-0.01	0.77
Variance 1			0.15	-0.00	3.13			-0.00	1.11
Variance 2			-0.12	0.01	-2.12			0.01	-3.72

Notes

Sampled at 1645. 79F overcast.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-26 12:11:39

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 410135
Turbidity Make/Model Hach2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 26 ft

Pump placement from TOC 22.3 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 23.8 ft
Screen Length 5 ft
Depth to Water 20.28 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.206049 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 16.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	11:50:11	6005.98	20.34	6.08	369.30	1.73	20.50	2.09	15.13
Last 5	11:55:11	6305.97	20.48	6.07	368.51	1.06	20.50	2.15	14.92
Last 5	12:00:11	6605.97	20.42	6.08	401.28	1.02	20.50	1.95	13.10
Last 5	12:05:14	6908.96	20.23	6.09	405.34	0.99	20.50	2.03	12.27
Last 5	12:10:14	7208.96	20.48	6.08	409.19	0.89	20.50	2.09	13.08
Variance 0			-0.07	0.01	32.77			-0.21	-1.82
Variance 1			-0.18	0.01	4.06			0.08	-0.83
Variance 2			0.24	-0.00	3.84			0.07	0.81

Notes

Sampled at 1210. 66F cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-27 09:31:25

Project Information:

Operator Name O. Fuquea
Company Name ACC
Project Name March 2019 Detection Event
Site Name Grumman Road
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 410135
Turbidity Make/Model Hach2100Q

Pump Information:

Pump Model/Type Peri Pump
Tubing Type poly
Tubing Diameter .17 in
Tubing Length 24 ft

Pump placement from TOC 16.1 ft

Well Information:

Well ID GWC-22
Well diameter 2 in
Well Total Depth 18.6 ft
Screen Length 5 ft
Depth to Water 8.75 ft

Pumping Information:

Final Pumping Rate 165 mL/min
Total System Volume 0.1971222 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 8.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	09:10:14	1501.01	17.29	4.77	277.64	7.58	9.00	0.17	124.44
Last 5	09:15:14	1800.99	17.54	4.77	276.82	7.25	9.00	0.16	124.00
Last 5	09:20:14	2100.99	17.72	4.77	276.27	4.47	9.10	0.15	124.07
Last 5	09:25:17	2403.99	17.64	4.77	277.27	3.52	9.10	0.15	122.44
Last 5	09:30:17	2703.99	17.68	4.77	276.00	3.22	9.10	0.14	120.44
Variance 0			0.18	0.00	-0.55			-0.02	0.07
Variance 1			-0.08	-0.00	1.00			-0.00	-1.63
Variance 2			0.03	0.00	-1.28			-0.01	-2.00

Notes

Sampled at 0930. 52F partly cloudy.

Grab Samples

April 06, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 2616666

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on March 27, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2616666001	Dup-1	Water	03/26/19 00:00	03/27/19 12:30
2616666002	EB-1-3-26-19	Water	03/26/19 10:35	03/27/19 12:30
2616666003	GWC-15	Water	03/26/19 13:10	03/27/19 12:30
2616666004	GWA-8	Water	03/25/19 15:25	03/27/19 12:30
2616666005	GWC-20	Water	03/25/19 16:45	03/27/19 12:30
2616666006	GWC-16	Water	03/26/19 09:50	03/27/19 12:30
2616666007	GWC-21	Water	03/26/19 12:10	03/27/19 12:30
2616666008	GWC-14	Water	03/26/19 14:10	03/27/19 12:30
2616666009	GWC-13	Water	03/26/19 15:05	03/27/19 12:30
2616666010	GWC-1	Water	03/26/19 16:25	03/27/19 12:30
2616666011	FB-1-3-26-19	Water	03/26/19 16:45	03/27/19 12:30
2616666012	GWA-7	Water	03/25/19 14:55	03/27/19 12:30
2616666013	GWB-4R	Water	03/25/19 17:10	03/27/19 12:30
2616666014	GWC-17	Water	03/26/19 09:45	03/27/19 12:30
2616666015	GWB-6R	Water	03/26/19 11:20	03/27/19 12:30
2616666016	FB-2-3-26-19	Water	03/26/19 14:00	03/27/19 12:30
2616666017	GWB-5R	Water	03/26/19 15:20	03/27/19 12:30
2616666018	GWA-7 (Filtered)	Water	03/25/19 14:55	03/27/19 12:30
2616666019	GWB-6R (Filtered)	Water	03/26/19 11:20	03/27/19 12:30
2616666020	Dup-2	Water	03/25/19 00:00	03/27/19 12:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2616666001	Dup-1	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666002	EB-1-3-26-19	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666003	GWC-15	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666004	GWA-8	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666005	GWC-20	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666006	GWC-16	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666007	GWC-21	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666008	GWC-14	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666009	GWC-13	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666010	GWC-1	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666011	FB-1-3-26-19	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666012	GWA-7	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666013	GWB-4R	EPA 6020B	CSW	10

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666014	GWC-17	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666015	GWB-6R	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666016	FB-2-3-26-19	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666017	GWB-5R	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616666018	GWA-7 (Filtered)	EPA 6020B	CSW	10
2616666019	GWB-6R (Filtered)	EPA 6020B	CSW	10
2616666020	Dup-2	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: Dup-1		Lab ID: 2616666001		Collected: 03/26/19 00:00		Received: 03/27/19 12:30		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 15:25	04/02/19 23:04	7440-36-0	
Arsenic	0.40	mg/L	0.0050	0.00057	1	04/01/19 15:25	04/02/19 23:04	7440-38-2	
Barium	0.083	mg/L	0.010	0.00078	1	04/01/19 15:25	04/02/19 23:04	7440-39-3	
Boron	1.0	mg/L	0.040	0.0039	1	04/01/19 15:25	04/02/19 23:04	7440-42-8	
Calcium	74.3	mg/L	25.0	0.69	50	04/01/19 15:25	04/02/19 23:10	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	04/01/19 15:25	04/02/19 23:04	7440-47-3	
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 15:25	04/02/19 23:04	7439-92-1	
Selenium	0.0017J	mg/L	0.010	0.0014	1	04/01/19 15:25	04/02/19 23:04	7782-49-2	
Vanadium	0.0026J	mg/L	0.010	0.0019	1	04/01/19 15:25	04/02/19 23:04	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	04/01/19 15:25	04/02/19 23:04	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	451	mg/L	25.0	10.0	1		04/01/19 20:08		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	9.5	mg/L	0.25	0.024	1		04/03/19 16:44	16887-00-6	
Fluoride	0.068J	mg/L	0.30	0.029	1		04/03/19 16:44	16984-48-8	
Sulfate	102	mg/L	100	1.7	100		04/03/19 17:06	14808-79-8	M1

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: EB-1-3-26-19 Lab ID: 2616666002 Collected: 03/26/19 10:35 Received: 03/27/19 12:30 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 15:25	04/02/19 23:27	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/01/19 15:25	04/02/19 23:27	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	04/01/19 15:25	04/02/19 23:27	7440-39-3	
Boron	ND	mg/L	0.040	0.0039	1	04/01/19 15:25	04/02/19 23:27	7440-42-8	
Calcium	ND	mg/L	0.50	0.014	1	04/01/19 15:25	04/02/19 23:27	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	04/01/19 15:25	04/02/19 23:27	7440-47-3	
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 15:25	04/02/19 23:27	7439-92-1	
Selenium	ND	mg/L	0.010	0.0014	1	04/01/19 15:25	04/02/19 23:27	7782-49-2	
Vanadium	ND	mg/L	0.010	0.0019	1	04/01/19 15:25	04/02/19 23:27	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	04/01/19 15:25	04/02/19 23:27	7440-66-6	
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	10.0J	mg/L	25.0	10.0	1		04/01/19 20:08		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	0.49	mg/L	0.25	0.024	1		04/03/19 18:11	16887-00-6	B,M1
Fluoride	ND	mg/L	0.30	0.029	1		04/03/19 18:11	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		04/03/19 18:11	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: GWC-15		Lab ID: 2616666003		Collected: 03/26/19 13:10	Received: 03/27/19 12:30	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 15:25	04/02/19 23:33	7440-36-0		
Arsenic	0.10	mg/L	0.0050	0.00057	1	04/01/19 15:25	04/02/19 23:33	7440-38-2		
Barium	0.047	mg/L	0.010	0.00078	1	04/01/19 15:25	04/02/19 23:33	7440-39-3		
Boron	0.95	mg/L	0.040	0.0039	1	04/01/19 15:25	04/02/19 23:33	7440-42-8		
Calcium	124	mg/L	25.0	0.69	50	04/01/19 15:25	04/02/19 23:39	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	04/01/19 15:25	04/02/19 23:33	7440-47-3		
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 15:25	04/02/19 23:33	7439-92-1		
Selenium	0.0074J	mg/L	0.010	0.0014	1	04/01/19 15:25	04/02/19 23:33	7782-49-2		
Vanadium	0.0026J	mg/L	0.010	0.0019	1	04/01/19 15:25	04/02/19 23:33	7440-62-2		
Zinc	ND	mg/L	0.010	0.0021	1	04/01/19 15:25	04/02/19 23:33	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	541	mg/L	25.0	10.0	1		04/01/19 20:08			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	3.0	mg/L	0.25	0.024	1		04/03/19 18:33	16887-00-6		
Fluoride	0.13J	mg/L	0.30	0.029	1		04/03/19 18:33	16984-48-8		
Sulfate	54.0	mg/L	5.0	0.085	5		04/03/19 18:55	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: GWA-8		Lab ID: 2616666004		Collected: 03/25/19 15:25		Received: 03/27/19 12:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 15:22	04/03/19 00:13	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/01/19 15:22	04/03/19 00:13	7440-38-2	
Barium	0.064	mg/L	0.010	0.00078	1	04/01/19 15:22	04/03/19 00:13	7440-39-3	
Boron	0.098	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 00:13	7440-42-8	
Calcium	31.7	mg/L	25.0	0.69	50	04/01/19 15:22	04/03/19 00:19	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	04/01/19 15:22	04/03/19 00:13	7440-47-3	
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 15:22	04/03/19 00:13	7439-92-1	
Selenium	ND	mg/L	0.010	0.0014	1	04/01/19 15:22	04/03/19 00:13	7782-49-2	
Vanadium	ND	mg/L	0.010	0.0019	1	04/01/19 15:22	04/03/19 00:13	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	04/01/19 15:22	04/03/19 00:13	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	240	mg/L	25.0	10.0	1		04/01/19 20:07		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	17.7	mg/L	0.25	0.024	1		04/03/19 19:17	16887-00-6	
Fluoride	0.082J	mg/L	0.30	0.029	1		04/03/19 19:17	16984-48-8	
Sulfate	152	mg/L	10.0	0.17	10		04/03/19 19:39	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: GWC-20		Lab ID: 2616666005		Collected: 03/25/19 16:45		Received: 03/27/19 12:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 15:22	04/03/19 00:24	7440-36-0	
Arsenic	0.41	mg/L	0.0050	0.00057	1	04/01/19 15:22	04/03/19 00:24	7440-38-2	
Barium	0.085	mg/L	0.010	0.00078	1	04/01/19 15:22	04/03/19 00:24	7440-39-3	
Boron	1.0	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 00:24	7440-42-8	
Calcium	74.8	mg/L	25.0	0.69	50	04/01/19 15:22	04/03/19 00:30	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	04/01/19 15:22	04/03/19 00:24	7440-47-3	
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 15:22	04/03/19 00:24	7439-92-1	
Selenium	ND	mg/L	0.010	0.0014	1	04/01/19 15:22	04/03/19 00:24	7782-49-2	
Vanadium	0.0024J	mg/L	0.010	0.0019	1	04/01/19 15:22	04/03/19 00:24	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	04/01/19 15:22	04/03/19 00:24	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	449	mg/L	25.0	10.0	1		04/01/19 20:07		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	9.4	mg/L	0.25	0.024	1		04/03/19 20:00	16887-00-6	
Fluoride	0.043J	mg/L	0.30	0.029	1		04/03/19 20:00	16984-48-8	
Sulfate	95.6	mg/L	10.0	0.17	10		04/03/19 21:49	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: GWC-16		Lab ID: 2616666006		Collected: 03/26/19 09:50		Received: 03/27/19 12:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 15:22	04/03/19 00:36	7440-36-0	
Arsenic	0.089	mg/L	0.0050	0.00057	1	04/01/19 15:22	04/03/19 00:36	7440-38-2	
Barium	0.14	mg/L	0.010	0.00078	1	04/01/19 15:22	04/03/19 00:36	7440-39-3	
Boron	7.4	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 00:36	7440-42-8	
Calcium	204	mg/L	25.0	0.69	50	04/01/19 15:22	04/03/19 00:41	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	04/01/19 15:22	04/03/19 00:36	7440-47-3	
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 15:22	04/03/19 00:36	7439-92-1	
Selenium	0.0033J	mg/L	0.010	0.0014	1	04/01/19 15:22	04/03/19 00:36	7782-49-2	
Vanadium	0.0038J	mg/L	0.010	0.0019	1	04/01/19 15:22	04/03/19 00:36	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	04/01/19 15:22	04/03/19 00:36	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	1380	mg/L	25.0	10.0	1		04/01/19 20:08		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	5.1	mg/L	0.50	0.048	2		04/03/19 22:56	16887-00-6	
Fluoride	0.11J	mg/L	0.30	0.029	1		04/03/19 22:11	16984-48-8	
Sulfate	87.9	mg/L	2.0	0.034	2		04/03/19 22:56	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: GWC-21		Lab ID: 2616666007		Collected: 03/26/19 12:10	Received: 03/27/19 12:30	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 15:22	04/03/19 00:47	7440-36-0		
Arsenic	0.0045J	mg/L	0.0050	0.00057	1	04/01/19 15:22	04/03/19 00:47	7440-38-2		
Barium	0.084	mg/L	0.010	0.00078	1	04/01/19 15:22	04/03/19 00:47	7440-39-3		
Boron	0.61	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 00:47	7440-42-8		
Calcium	60.1	mg/L	25.0	0.69	50	04/01/19 15:22	04/03/19 00:53	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	04/01/19 15:22	04/03/19 00:47	7440-47-3		
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 15:22	04/03/19 00:47	7439-92-1		
Selenium	0.022	mg/L	0.010	0.0014	1	04/01/19 15:22	04/03/19 00:47	7782-49-2		
Vanadium	0.0041J	mg/L	0.010	0.0019	1	04/01/19 15:22	04/03/19 00:47	7440-62-2		
Zinc	ND	mg/L	0.010	0.0021	1	04/01/19 15:22	04/03/19 00:47	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	292	mg/L	25.0	10.0	1		04/02/19 19:21			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	11.9	mg/L	0.25	0.024	1		04/03/19 23:18	16887-00-6		
Fluoride	0.071J	mg/L	0.30	0.029	1		04/03/19 23:18	16984-48-8		
Sulfate	83.9	mg/L	5.0	0.085	5		04/03/19 23:41	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: GWC-14		Lab ID: 2616666008		Collected: 03/26/19 14:10		Received: 03/27/19 12:30		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 15:22	04/03/19 01:10	7440-36-0		
Arsenic	0.0023J	mg/L	0.0050	0.00057	1	04/01/19 15:22	04/03/19 01:10	7440-38-2		
Barium	0.034	mg/L	0.010	0.00078	1	04/01/19 15:22	04/03/19 01:10	7440-39-3		
Boron	0.037J	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 01:10	7440-42-8		
Calcium	84.2	mg/L	25.0	0.69	50	04/01/19 15:22	04/03/19 01:16	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	04/01/19 15:22	04/03/19 01:10	7440-47-3		
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 15:22	04/03/19 01:10	7439-92-1		
Selenium	0.0022J	mg/L	0.010	0.0014	1	04/01/19 15:22	04/03/19 01:10	7782-49-2		
Vanadium	0.0063J	mg/L	0.010	0.0019	1	04/01/19 15:22	04/03/19 01:10	7440-62-2		
Zinc	ND	mg/L	0.010	0.0021	1	04/01/19 15:22	04/03/19 01:10	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	496	mg/L	25.0	10.0	1		04/02/19 19:21			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	21.1	mg/L	0.25	0.024	1		04/04/19 00:03	16887-00-6		
Fluoride	0.13J	mg/L	0.30	0.029	1		04/04/19 00:03	16984-48-8		
Sulfate	192	mg/L	50.0	0.85	50		04/04/19 00:25	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: GWC-13		Lab ID: 2616666009		Collected: 03/26/19 15:05		Received: 03/27/19 12:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 15:22	04/03/19 01:22	7440-36-0	
Arsenic	0.00058J	mg/L	0.0050	0.00057	1	04/01/19 15:22	04/03/19 01:22	7440-38-2	
Barium	0.026	mg/L	0.010	0.00078	1	04/01/19 15:22	04/03/19 01:22	7440-39-3	
Boron	0.35	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 01:22	7440-42-8	
Calcium	2.4	mg/L	0.50	0.014	1	04/01/19 15:22	04/03/19 01:22	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	04/01/19 15:22	04/03/19 01:22	7440-47-3	
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 15:22	04/03/19 01:22	7439-92-1	
Selenium	ND	mg/L	0.010	0.0014	1	04/01/19 15:22	04/03/19 01:22	7782-49-2	
Vanadium	0.0029J	mg/L	0.010	0.0019	1	04/01/19 15:22	04/03/19 01:22	7440-62-2	
Zinc	0.030	mg/L	0.010	0.0021	1	04/01/19 15:22	04/03/19 01:22	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	72.0	mg/L	25.0	10.0	1		04/02/19 19:21		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	3.2	mg/L	0.25	0.024	1		04/04/19 00:48	16887-00-6	
Fluoride	0.052J	mg/L	0.30	0.029	1		04/04/19 00:48	16984-48-8	
Sulfate	33.6	mg/L	1.0	0.017	1		04/04/19 00:48	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: GWC-1		Lab ID: 2616666010		Collected: 03/26/19 16:25		Received: 03/27/19 12:30		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 15:22	04/03/19 02:13	7440-36-0	
Arsenic	0.0032J	mg/L	0.0050	0.00057	1	04/01/19 15:22	04/03/19 02:13	7440-38-2	
Barium	0.055	mg/L	0.010	0.00078	1	04/01/19 15:22	04/03/19 02:13	7440-39-3	
Boron	0.77	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 02:13	7440-42-8	
Calcium	46.3	mg/L	25.0	0.69	50	04/01/19 15:22	04/03/19 02:19	7440-70-2	
Chromium	0.0018J	mg/L	0.010	0.0016	1	04/01/19 15:22	04/03/19 02:13	7440-47-3	
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 15:22	04/03/19 02:13	7439-92-1	
Selenium	0.0023J	mg/L	0.010	0.0014	1	04/01/19 15:22	04/03/19 02:13	7782-49-2	
Vanadium	0.0051J	mg/L	0.010	0.0019	1	04/01/19 15:22	04/03/19 02:13	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	04/01/19 15:22	04/03/19 02:13	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	317	mg/L	25.0	10.0	1		04/02/19 19:21		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	7.0	mg/L	0.25	0.024	1		04/04/19 01:10	16887-00-6	
Fluoride	0.051J	mg/L	0.30	0.029	1		04/04/19 01:10	16984-48-8	
Sulfate	73.8	mg/L	10.0	0.17	10		04/04/19 03:02	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: FB-1-3-26-19		Lab ID: 2616666011		Collected: 03/26/19 16:45		Received: 03/27/19 12:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 15:22	04/03/19 02:25	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/01/19 15:22	04/03/19 02:25	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	04/01/19 15:22	04/03/19 02:25	7440-39-3	
Boron	ND	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 02:25	7440-42-8	
Calcium	ND	mg/L	0.50	0.014	1	04/01/19 15:22	04/03/19 02:25	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	04/01/19 15:22	04/03/19 02:25	7440-47-3	
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 15:22	04/03/19 02:25	7439-92-1	
Selenium	ND	mg/L	0.010	0.0014	1	04/01/19 15:22	04/03/19 02:25	7782-49-2	
Vanadium	ND	mg/L	0.010	0.0019	1	04/01/19 15:22	04/03/19 02:25	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	04/01/19 15:22	04/03/19 02:25	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		04/02/19 19:22		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	0.10J	mg/L	0.25	0.024	1		04/04/19 03:46	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 03:46	16984-48-8	
Sulfate	0.026J	mg/L	1.0	0.017	1		04/04/19 03:46	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2616666

Sample: GWA-7 Lab ID: 2616666012 Collected: 03/25/19 14:55 Received: 03/27/19 12:30 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Antimony	ND	mg/L	0.015	0.0039	5	04/01/19 15:22	04/03/19 02:30	7440-36-0	D3
Arsenic	0.0029J	mg/L	0.025	0.0028	5	04/01/19 15:22	04/03/19 02:30	7440-38-2	D3
Barium	0.054	mg/L	0.050	0.0039	5	04/01/19 15:22	04/03/19 02:30	7440-39-3	
Boron	8.5	mg/L	0.20	0.020	5	04/01/19 15:22	04/03/19 02:30	7440-42-8	
Calcium	3.9	mg/L	2.5	0.069	5	04/01/19 15:22	04/03/19 02:30	7440-70-2	
Chromium	0.017J	mg/L	0.050	0.0078	5	04/01/19 15:22	04/03/19 02:30	7440-47-3	D3
Lead	0.0019J	mg/L	0.025	0.0014	5	04/01/19 15:22	04/03/19 02:30	7439-92-1	D3
Selenium	ND	mg/L	0.050	0.0068	5	04/01/19 15:22	04/03/19 02:30	7782-49-2	D3
Vanadium	0.18	mg/L	0.050	0.0097	5	04/01/19 15:22	04/03/19 02:30	7440-62-2	
Zinc	ND	mg/L	0.050	0.010	5	04/01/19 15:22	04/03/19 02:30	7440-66-6	D3
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	2100	mg/L	25.0	10.0	1		04/01/19 20:08		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	147	mg/L	5.0	0.48	20		04/04/19 04:31	16887-00-6	
Fluoride	0.21J	mg/L	0.30	0.029	1		04/04/19 04:09	16984-48-8	
Sulfate	14.7	mg/L	1.0	0.017	1		04/04/19 04:09	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: GWB-4R		Lab ID: 2616666013		Collected: 03/25/19 17:10		Received: 03/27/19 12:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 15:22	04/03/19 02:42	7440-36-0	
Arsenic	0.0029J	mg/L	0.0050	0.00057	1	04/01/19 15:22	04/03/19 02:42	7440-38-2	
Barium	0.077	mg/L	0.010	0.00078	1	04/01/19 15:22	04/03/19 02:42	7440-39-3	
Boron	4.4	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 02:42	7440-42-8	
Calcium	55.6	mg/L	25.0	0.69	50	04/01/19 15:22	04/03/19 02:47	7440-70-2	
Chromium	0.0020J	mg/L	0.010	0.0016	1	04/01/19 15:22	04/03/19 02:42	7440-47-3	
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 15:22	04/03/19 02:42	7439-92-1	
Selenium	ND	mg/L	0.010	0.0014	1	04/01/19 15:22	04/03/19 02:42	7782-49-2	
Vanadium	0.0040J	mg/L	0.010	0.0019	1	04/01/19 15:22	04/03/19 02:42	7440-62-2	
Zinc	0.0078J	mg/L	0.010	0.0021	1	04/01/19 15:22	04/03/19 02:42	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	479	mg/L	25.0	10.0	1		04/01/19 20:08		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	19.7	mg/L	0.25	0.024	1		04/04/19 04:54	16887-00-6	
Fluoride	0.064J	mg/L	0.30	0.029	1		04/04/19 04:54	16984-48-8	
Sulfate	245	mg/L	10.0	0.17	10		04/04/19 05:16	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: GWC-17		Lab ID: 2616666014		Collected: 03/26/19 09:45		Received: 03/27/19 12:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 15:22	04/03/19 02:53	7440-36-0	
Arsenic	0.0015J	mg/L	0.0050	0.00057	1	04/01/19 15:22	04/03/19 02:53	7440-38-2	
Barium	0.025	mg/L	0.010	0.00078	1	04/01/19 15:22	04/03/19 02:53	7440-39-3	
Boron	1.2	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 02:53	7440-42-8	
Calcium	68.8	mg/L	25.0	0.69	50	04/01/19 15:22	04/03/19 02:59	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	04/01/19 15:22	04/03/19 02:53	7440-47-3	
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 15:22	04/03/19 02:53	7439-92-1	
Selenium	ND	mg/L	0.010	0.0014	1	04/01/19 15:22	04/03/19 02:53	7782-49-2	
Vanadium	0.0024J	mg/L	0.010	0.0019	1	04/01/19 15:22	04/03/19 02:53	7440-62-2	
Zinc	0.0057J	mg/L	0.010	0.0021	1	04/01/19 15:22	04/03/19 02:53	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	1220	mg/L	25.0	10.0	1		04/02/19 19:22		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	439	mg/L	25.0	2.4	100		04/04/19 06:01	16887-00-6	
Fluoride	0.89	mg/L	0.30	0.029	1		04/04/19 05:38	16984-48-8	
Sulfate	439	mg/L	100	1.7	100		04/04/19 06:01	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2616666

Sample: GWB-6R		Lab ID: 2616666015		Collected: 03/26/19 11:20		Received: 03/27/19 12:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.015	0.0039	5	04/01/19 15:22	04/03/19 03:16	7440-36-0	D3
Arsenic	0.0029J	mg/L	0.025	0.0028	5	04/01/19 15:22	04/03/19 03:16	7440-38-2	D3
Barium	0.012J	mg/L	0.050	0.0039	5	04/01/19 15:22	04/03/19 03:16	7440-39-3	D3
Boron	7.4	mg/L	0.20	0.020	5	04/01/19 15:22	04/03/19 03:16	7440-42-8	
Calcium	9.0	mg/L	2.5	0.069	5	04/01/19 15:22	04/03/19 03:16	7440-70-2	
Chromium	0.017J	mg/L	0.050	0.0078	5	04/01/19 15:22	04/03/19 03:16	7440-47-3	D3
Lead	ND	mg/L	0.025	0.0014	5	04/01/19 15:22	04/03/19 03:16	7439-92-1	D3
Selenium	0.0068J	mg/L	0.050	0.0068	5	04/01/19 15:22	04/03/19 03:16	7782-49-2	D3
Vanadium	0.086	mg/L	0.050	0.0097	5	04/01/19 15:22	04/03/19 03:16	7440-62-2	
Zinc	ND	mg/L	0.050	0.010	5	04/01/19 15:22	04/03/19 03:16	7440-66-6	D3
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	1250	mg/L	25.0	10.0	1		04/02/19 19:22		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	51.8	mg/L	5.0	0.48	20		04/04/19 08:15	16887-00-6	
Fluoride	0.046J	mg/L	0.30	0.029	1		04/04/19 06:23	16984-48-8	
Sulfate	319	mg/L	20.0	0.34	20		04/04/19 08:15	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: FB-2-3-26-19		Lab ID: 2616666016		Collected: 03/26/19 14:00	Received: 03/27/19 12:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 15:22	04/03/19 03:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/01/19 15:22	04/03/19 03:28	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	04/01/19 15:22	04/03/19 03:28	7440-39-3	
Boron	ND	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 03:28	7440-42-8	
Calcium	ND	mg/L	0.50	0.014	1	04/01/19 15:22	04/03/19 03:28	7440-70-2	
Chromium	0.0018J	mg/L	0.010	0.0016	1	04/01/19 15:22	04/03/19 03:28	7440-47-3	
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 15:22	04/03/19 03:28	7439-92-1	
Selenium	ND	mg/L	0.010	0.0014	1	04/01/19 15:22	04/03/19 03:28	7782-49-2	
Vanadium	ND	mg/L	0.010	0.0019	1	04/01/19 15:22	04/03/19 03:28	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	04/01/19 15:22	04/03/19 03:28	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	232	mg/L	25.0	10.0	1		04/02/19 19:22		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	0.086J	mg/L	0.25	0.024	1		04/04/19 08:37	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 08:37	16984-48-8	
Sulfate	0.036J	mg/L	1.0	0.017	1		04/04/19 08:37	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: GWB-5R		Lab ID: 2616666017		Collected: 03/26/19 15:20	Received: 03/27/19 12:30	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 15:22	04/03/19 03:33	7440-36-0		
Arsenic	0.0014J	mg/L	0.0050	0.00057	1	04/01/19 15:22	04/03/19 03:33	7440-38-2		
Barium	0.057	mg/L	0.010	0.00078	1	04/01/19 15:22	04/03/19 03:33	7440-39-3		
Boron	4.0	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 03:33	7440-42-8		
Calcium	36.1	mg/L	25.0	0.69	50	04/01/19 15:22	04/03/19 03:39	7440-70-2		
Chromium	0.072	mg/L	0.010	0.0016	1	04/01/19 15:22	04/03/19 03:33	7440-47-3		
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 15:22	04/03/19 03:33	7439-92-1		
Selenium	ND	mg/L	0.010	0.0014	1	04/01/19 15:22	04/03/19 03:33	7782-49-2		
Vanadium	0.0058J	mg/L	0.010	0.0019	1	04/01/19 15:22	04/03/19 03:33	7440-62-2		
Zinc	ND	mg/L	0.010	0.0021	1	04/01/19 15:22	04/03/19 03:33	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	1040	mg/L	25.0	10.0	1		04/02/19 19:22			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	47.9	mg/L	0.25	0.024	1		04/04/19 09:10	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 09:10	16984-48-8		
Sulfate	222	mg/L	10.0	0.17	10		04/04/19 09:32	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: GWA-7 (Filtered)		Lab ID: 2616666018		Collected: 03/25/19 14:55		Received: 03/27/19 12:30		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS, Dissolved		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony, Dissolved	ND	mg/L	0.015	0.0039	5	04/01/19 14:32	04/02/19 14:40	7440-36-0	D3	
Arsenic, Dissolved	ND	mg/L	0.025	0.0028	5	04/01/19 14:32	04/02/19 14:40	7440-38-2	D3	
Barium, Dissolved	0.051	mg/L	0.050	0.0039	5	04/01/19 14:32	04/02/19 14:40	7440-39-3		
Boron, Dissolved	8.9	mg/L	0.20	0.020	5	04/01/19 14:32	04/02/19 14:40	7440-42-8		
Calcium, Dissolved	3.7	mg/L	2.5	0.069	5	04/01/19 14:32	04/02/19 14:40	7440-70-2		
Chromium, Dissolved	0.016J	mg/L	0.050	0.0078	5	04/01/19 14:32	04/02/19 14:40	7440-47-3	D3	
Lead, Dissolved	ND	mg/L	0.025	0.0014	5	04/01/19 14:32	04/02/19 14:40	7439-92-1	D3	
Selenium, Dissolved	0.0070J	mg/L	0.050	0.0068	5	04/01/19 14:32	04/02/19 14:40	7782-49-2	D3	
Vanadium, Dissolved	0.17	mg/L	0.050	0.0097	5	04/01/19 14:32	04/02/19 14:40	7440-62-2		
Zinc, Dissolved	ND	mg/L	0.050	0.010	5	04/01/19 14:32	04/02/19 14:40	7440-66-6	D3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: GWB-6R (Filtered) Lab ID: 2616666019 Collected: 03/26/19 11:20 Received: 03/27/19 12:30 Matrix: Water									
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS, Dissolved Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Antimony, Dissolved	ND	mg/L	0.015	0.0039	5	04/01/19 14:32	04/02/19 14:52	7440-36-0	D3
Arsenic, Dissolved	0.0041J	mg/L	0.025	0.0028	5	04/01/19 14:32	04/02/19 14:52	7440-38-2	D3
Barium, Dissolved	0.014J	mg/L	0.050	0.0039	5	04/01/19 14:32	04/02/19 14:52	7440-39-3	D3
Boron, Dissolved	8.2	mg/L	0.20	0.020	5	04/01/19 14:32	04/02/19 14:52	7440-42-8	
Calcium, Dissolved	10.3	mg/L	2.5	0.069	5	04/01/19 14:32	04/02/19 14:52	7440-70-2	
Chromium, Dissolved	0.018J	mg/L	0.050	0.0078	5	04/01/19 14:32	04/02/19 14:52	7440-47-3	D3
Lead, Dissolved	ND	mg/L	0.025	0.0014	5	04/01/19 14:32	04/02/19 14:52	7439-92-1	D3
Selenium, Dissolved	0.0095J	mg/L	0.050	0.0068	5	04/01/19 14:32	04/02/19 14:52	7782-49-2	D3
Vanadium, Dissolved	0.096	mg/L	0.050	0.0097	5	04/01/19 14:32	04/02/19 14:52	7440-62-2	
Zinc, Dissolved	ND	mg/L	0.050	0.010	5	04/01/19 14:32	04/02/19 14:52	7440-66-6	D3

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Sample: Dup-2		Lab ID: 2616666020		Collected: 03/25/19 00:00		Received: 03/27/19 12:30		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 15:22	04/03/19 03:45	7440-36-0		
Arsenic	0.0014J	mg/L	0.0050	0.00057	1	04/01/19 15:22	04/03/19 03:45	7440-38-2		
Barium	0.058	mg/L	0.010	0.00078	1	04/01/19 15:22	04/03/19 03:45	7440-39-3		
Boron	4.2	mg/L	0.040	0.0039	1	04/01/19 15:22	04/03/19 03:45	7440-42-8		
Calcium	36.8	mg/L	25.0	0.69	50	04/01/19 15:22	04/03/19 03:50	7440-70-2		
Chromium	0.0020J	mg/L	0.010	0.0016	1	04/01/19 15:22	04/03/19 03:45	7440-47-3		
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 15:22	04/03/19 03:45	7439-92-1		
Selenium	ND	mg/L	0.010	0.0014	1	04/01/19 15:22	04/03/19 03:45	7782-49-2		
Vanadium	0.0059J	mg/L	0.010	0.0019	1	04/01/19 15:22	04/03/19 03:45	7440-62-2		
Zinc	ND	mg/L	0.010	0.0021	1	04/01/19 15:22	04/03/19 03:45	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	450	mg/L	25.0	10.0	1		04/01/19 20:08			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	48.0	mg/L	0.25	0.024	1		04/04/19 09:55	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 09:55	16984-48-8		
Sulfate	213	mg/L	10.0	0.17	10		04/04/19 10:17	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2616666

QC Batch: 25533 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2616666001, 2616666002, 2616666003

METHOD BLANK: 115216 Matrix: Water
Associated Lab Samples: 2616666001, 2616666002, 2616666003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	04/02/19 18:58	
Arsenic	mg/L	ND	0.0050	0.00057	04/02/19 18:58	
Barium	mg/L	ND	0.010	0.00078	04/02/19 18:58	
Boron	mg/L	ND	0.040	0.0039	04/02/19 18:58	
Calcium	mg/L	ND	0.50	0.014	04/02/19 18:58	
Chromium	mg/L	ND	0.010	0.0016	04/02/19 18:58	
Lead	mg/L	ND	0.0050	0.00027	04/02/19 18:58	
Selenium	mg/L	ND	0.010	0.0014	04/02/19 18:58	
Vanadium	mg/L	ND	0.010	0.0019	04/02/19 18:58	
Zinc	mg/L	ND	0.010	0.0021	04/02/19 18:58	

LABORATORY CONTROL SAMPLE: 115217

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	103	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	0.94	94	80-120	
Calcium	mg/L	1	0.97	97	80-120	
Chromium	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.10	100	80-120	
Vanadium	mg/L	0.1	0.098	98	80-120	
Zinc	mg/L	0.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 115218 115219

Parameter	Units	2616650004 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result	MSD Spike Conc.						
Antimony	mg/L	ND	0.1	0.1	0.099	0.099	99	99	75-125	1	20	
Arsenic	mg/L	0.0029J	0.1	0.1	0.098	0.099	96	96	75-125	0	20	
Barium	mg/L	0.036	0.1	0.1	0.13	0.13	96	95	75-125	1	20	
Boron	mg/L	0.030J	1	1	0.92	0.93	89	90	75-125	1	20	
Calcium	mg/L	2.5	1	1	3.4	3.4	86	91	75-125	2	20	
Chromium	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	2	20	
Lead	mg/L	ND	0.1	0.1	0.095	0.094	95	94	75-125	2	20	
Selenium	mg/L	ND	0.1	0.1	0.095	0.097	94	96	75-125	2	20	
Vanadium	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 115218												115219	
Parameter	Units	2616650004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
Zinc	mg/L	0.0030J	0.1	0.1	0.099	0.099	96	96	75-125	0	20		

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

QC Batch:	25536	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3005A	Analysis Description:	6020B MET
Associated Lab Samples:	2616666004, 2616666005, 2616666006, 2616666007, 2616666008, 2616666009, 2616666010, 2616666011, 2616666012, 2616666013, 2616666014, 2616666015, 2616666016, 2616666017, 2616666020		

METHOD BLANK:	115226	Matrix:	Water
Associated Lab Samples:	2616666004, 2616666005, 2616666006, 2616666007, 2616666008, 2616666009, 2616666010, 2616666011, 2616666012, 2616666013, 2616666014, 2616666015, 2616666016, 2616666017, 2616666020		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	04/03/19 00:01	
Arsenic	mg/L	ND	0.0050	0.00057	04/03/19 00:01	
Barium	mg/L	ND	0.010	0.00078	04/03/19 00:01	
Boron	mg/L	ND	0.040	0.0039	04/03/19 00:01	
Calcium	mg/L	ND	0.50	0.014	04/03/19 00:01	
Chromium	mg/L	ND	0.010	0.0016	04/03/19 00:01	
Lead	mg/L	ND	0.0050	0.00027	04/03/19 00:01	
Selenium	mg/L	ND	0.010	0.0014	04/03/19 00:01	
Vanadium	mg/L	ND	0.010	0.0019	04/03/19 00:01	
Zinc	mg/L	ND	0.010	0.0021	04/03/19 00:01	

LABORATORY CONTROL SAMPLE: 115227

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.099	99	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Boron	mg/L	1	0.94	94	80-120	
Calcium	mg/L	1	0.95	95	80-120	
Chromium	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.095	95	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Vanadium	mg/L	0.1	0.097	97	80-120	
Zinc	mg/L	0.1	0.095	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 115228 115229

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		2616666009	Spike Conc.	Spike Conc.	MS Result								
Antimony	mg/L	ND	0.1	0.1	0.11	0.10	107	101	75-125	5	20		
Arsenic	mg/L	0.00058J	0.1	0.1	0.10	0.099	99	98	75-125	1	20		
Barium	mg/L	0.026	0.1	0.1	0.13	0.12	103	97	75-125	5	20		
Boron	mg/L	0.35	1	1	1.4	1.3	100	96	75-125	3	20		
Calcium	mg/L	2.4	1	1	3.5	3.3	110	90	75-125	6	20		
Chromium	mg/L	ND	0.1	0.1	0.10	0.099	100	98	75-125	1	20		
Lead	mg/L	ND	0.1	0.1	0.099	0.095	99	95	75-125	3	20		
Selenium	mg/L	ND	0.1	0.1	0.10	0.097	100	96	75-125	3	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 115228		115229		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		2616666009 Result	MS Spike Conc.	MSD Spike Conc.									
Vanadium	mg/L	0.0029J	0.1	0.1	0.11	0.10	102	98	75-125	4	20		
Zinc	mg/L	0.030	0.1	0.1	0.13	0.13	100	96	75-125	3	20		

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2616666

QC Batch: 25527 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET Dissolved
Associated Lab Samples: 2616666018, 2616666019

METHOD BLANK: 115202 Matrix: Water

Associated Lab Samples: 2616666018, 2616666019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	ND	0.0030	0.00078	04/02/19 14:11	
Arsenic, Dissolved	mg/L	ND	0.0050	0.00057	04/02/19 14:11	
Barium, Dissolved	mg/L	ND	0.010	0.00078	04/02/19 14:11	
Boron, Dissolved	mg/L	ND	0.040	0.0039	04/02/19 14:11	
Calcium, Dissolved	mg/L	ND	0.50	0.014	04/02/19 14:11	
Chromium, Dissolved	mg/L	ND	0.010	0.0016	04/02/19 14:11	
Lead, Dissolved	mg/L	ND	0.0050	0.00027	04/02/19 14:11	
Selenium, Dissolved	mg/L	ND	0.010	0.0014	04/02/19 14:11	
Vanadium, Dissolved	mg/L	ND	0.010	0.0019	04/02/19 14:11	
Zinc, Dissolved	mg/L	ND	0.010	0.0021	04/02/19 14:11	

METHOD BLANK: 115204 Matrix: Water

Associated Lab Samples: 2616666018, 2616666019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	mg/L	ND	0.0030	0.00078	04/02/19 14:23	
Arsenic, Dissolved	mg/L	ND	0.0050	0.00057	04/02/19 14:23	
Barium, Dissolved	mg/L	ND	0.010	0.00078	04/02/19 14:23	
Boron, Dissolved	mg/L	ND	0.040	0.0039	04/02/19 14:23	
Calcium, Dissolved	mg/L	ND	0.50	0.014	04/02/19 14:23	
Chromium, Dissolved	mg/L	ND	0.010	0.0016	04/02/19 14:23	
Lead, Dissolved	mg/L	ND	0.0050	0.00027	04/02/19 14:23	
Selenium, Dissolved	mg/L	ND	0.010	0.0014	04/02/19 14:23	
Vanadium, Dissolved	mg/L	ND	0.010	0.0019	04/02/19 14:23	
Zinc, Dissolved	mg/L	ND	0.010	0.0021	04/02/19 14:23	

LABORATORY CONTROL SAMPLE: 115203

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	0.1	0.10	101	80-120	
Arsenic, Dissolved	mg/L	0.1	0.098	98	80-120	
Barium, Dissolved	mg/L	0.1	0.10	100	80-120	
Boron, Dissolved	mg/L	1	1.0	104	80-120	
Calcium, Dissolved	mg/L	1	1.0	102	80-120	
Chromium, Dissolved	mg/L	0.1	0.10	100	80-120	
Lead, Dissolved	mg/L	0.1	0.098	98	80-120	
Selenium, Dissolved	mg/L	0.1	0.099	99	80-120	
Vanadium, Dissolved	mg/L	0.1	0.10	103	80-120	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2616666

LABORATORY CONTROL SAMPLE: 115203

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Zinc, Dissolved	mg/L	0.1	0.097	97	80-120	

LABORATORY CONTROL SAMPLE: 115205

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	mg/L	0.1	0.099	99	80-120	
Arsenic, Dissolved	mg/L	0.1	0.095	95	80-120	
Barium, Dissolved	mg/L	0.1	0.099	99	80-120	
Boron, Dissolved	mg/L	1	1.0	101	80-120	
Calcium, Dissolved	mg/L	1	0.96	96	80-120	
Chromium, Dissolved	mg/L	0.1	0.099	99	80-120	
Lead, Dissolved	mg/L	0.1	0.098	98	80-120	
Selenium, Dissolved	mg/L	0.1	0.097	97	80-120	
Vanadium, Dissolved	mg/L	0.1	0.099	99	80-120	
Zinc, Dissolved	mg/L	0.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 115206 115207

Parameter	Units	115206		115207		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		2616679002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Antimony, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	102	102	75-125	1	20	
Arsenic, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	99	101	75-125	2	20	
Barium, Dissolved	mg/L	ND	0.1	0.1	0.11	0.11	100	99	75-125	1	20	
Boron, Dissolved	mg/L	ND	1	1	1.0	1.1	103	104	75-125	2	20	
Calcium, Dissolved	mg/L	3320 ug/L	1	1	4.2	4.2	92	91	75-125	0	20	
Chromium, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	101	102	75-125	1	20	
Lead, Dissolved	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	1	20	
Selenium, Dissolved	mg/L	ND	0.1	0.1	0.099	0.10	99	104	75-125	5	20	
Vanadium, Dissolved	mg/L	ND	0.1	0.1	0.10	0.10	101	103	75-125	1	20	
Zinc, Dissolved	mg/L	249 ug/L	0.1	0.1	0.29	0.30	95	102	75-125	2	20	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

QC Batch:	25522	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
Associated Lab Samples:	2616666001, 2616666002, 2616666003, 2616666004, 2616666005, 2616666006, 2616666012, 2616666013, 2616666020		

LABORATORY CONTROL SAMPLE: 115183

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	418	104	84-108	

SAMPLE DUPLICATE: 115184

Parameter	Units	2616550001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	294	292	1	10	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

QC Batch: 25629 Analysis Method: SM 2540C
 QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
 Associated Lab Samples: 2616666007, 2616666008, 2616666009, 2616666010, 2616666011, 2616666014, 2616666015, 2616666016,
 2616666017

LABORATORY CONTROL SAMPLE: 115527

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	406	102	84-108	

SAMPLE DUPLICATE: 115528

Parameter	Units	2616666007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	292	305	4	10	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2616666

QC Batch: 25648 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2616666001, 2616666002, 2616666003, 2616666004, 2616666005, 2616666006, 2616666007, 2616666008, 2616666009, 2616666010, 2616666011, 2616666012, 2616666013, 2616666014, 2616666015, 2616666016, 2616666017, 2616666020

METHOD BLANK: 115692 Matrix: Water
Associated Lab Samples: 2616666001, 2616666002, 2616666003, 2616666004, 2616666005, 2616666006, 2616666007, 2616666008, 2616666009, 2616666010, 2616666011, 2616666012, 2616666013, 2616666014, 2616666015, 2616666016, 2616666017, 2616666020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.072J	0.25	0.024	04/03/19 16:01	
Fluoride	mg/L	ND	0.30	0.029	04/03/19 16:01	
Sulfate	mg/L	ND	1.0	0.017	04/03/19 16:01	

LABORATORY CONTROL SAMPLE: 115693

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.0	100	90-110	
Fluoride	mg/L	10	10.1	101	90-110	
Sulfate	mg/L	10	9.8	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 115694 115695

Parameter	Units	2616666001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	9.5	10	10	19.0	19.3	95	98	90-110	1	15	
Fluoride	mg/L	0.068J	10	10	9.9	9.9	99	98	90-110	0	15	
Sulfate	mg/L	102	10	10	90.9	91.1	-109	-107	90-110	0	15	E,M1

MATRIX SPIKE SAMPLE: 115696

Parameter	Units	2616666002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.49	10	9.2	88	90-110	M1
Fluoride	mg/L	ND	10	9.3	93	90-110	
Sulfate	mg/L	ND	10	9.1	91	90-110	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2616666001	Dup-1	EPA 3005A	25533	EPA 6020B	25546
2616666002	EB-1-3-26-19	EPA 3005A	25533	EPA 6020B	25546
2616666003	GWC-15	EPA 3005A	25533	EPA 6020B	25546
2616666004	GWA-8	EPA 3005A	25536	EPA 6020B	25547
2616666005	GWC-20	EPA 3005A	25536	EPA 6020B	25547
2616666006	GWC-16	EPA 3005A	25536	EPA 6020B	25547
2616666007	GWC-21	EPA 3005A	25536	EPA 6020B	25547
2616666008	GWC-14	EPA 3005A	25536	EPA 6020B	25547
2616666009	GWC-13	EPA 3005A	25536	EPA 6020B	25547
2616666010	GWC-1	EPA 3005A	25536	EPA 6020B	25547
2616666011	FB-1-3-26-19	EPA 3005A	25536	EPA 6020B	25547
2616666012	GWA-7	EPA 3005A	25536	EPA 6020B	25547
2616666013	GWB-4R	EPA 3005A	25536	EPA 6020B	25547
2616666014	GWC-17	EPA 3005A	25536	EPA 6020B	25547
2616666015	GWB-6R	EPA 3005A	25536	EPA 6020B	25547
2616666016	FB-2-3-26-19	EPA 3005A	25536	EPA 6020B	25547
2616666017	GWB-5R	EPA 3005A	25536	EPA 6020B	25547
2616666020	Dup-2	EPA 3005A	25536	EPA 6020B	25547
2616666018	GWA-7 (Filtered)	EPA 3005A	25527	EPA 6020B	25544
2616666019	GWB-6R (Filtered)	EPA 3005A	25527	EPA 6020B	25544
2616666001	Dup-1	SM 2540C	25522		
2616666002	EB-1-3-26-19	SM 2540C	25522		
2616666003	GWC-15	SM 2540C	25522		
2616666004	GWA-8	SM 2540C	25522		
2616666005	GWC-20	SM 2540C	25522		
2616666006	GWC-16	SM 2540C	25522		
2616666007	GWC-21	SM 2540C	25629		
2616666008	GWC-14	SM 2540C	25629		
2616666009	GWC-13	SM 2540C	25629		
2616666010	GWC-1	SM 2540C	25629		
2616666011	FB-1-3-26-19	SM 2540C	25629		
2616666012	GWA-7	SM 2540C	25522		
2616666013	GWB-4R	SM 2540C	25522		
2616666014	GWC-17	SM 2540C	25629		
2616666015	GWB-6R	SM 2540C	25629		
2616666016	FB-2-3-26-19	SM 2540C	25629		
2616666017	GWB-5R	SM 2540C	25629		
2616666020	Dup-2	SM 2540C	25522		
2616666001	Dup-1	EPA 300.0	25648		
2616666002	EB-1-3-26-19	EPA 300.0	25648		
2616666003	GWC-15	EPA 300.0	25648		
2616666004	GWA-8	EPA 300.0	25648		
2616666005	GWC-20	EPA 300.0	25648		
2616666006	GWC-16	EPA 300.0	25648		
2616666007	GWC-21	EPA 300.0	25648		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616666

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2616666008	GWC-14	EPA 300.0	25648		
2616666009	GWC-13	EPA 300.0	25648		
2616666010	GWC-1	EPA 300.0	25648		
2616666011	FB-1-3-26-19	EPA 300.0	25648		
2616666012	GWA-7	EPA 300.0	25648		
2616666013	GWB-4R	EPA 300.0	25648		
2616666014	GWC-17	EPA 300.0	25648		
2616666015	GWB-6R	EPA 300.0	25648		
2616666016	FB-2-3-26-19	EPA 300.0	25648		
2616666017	GWB-5R	EPA 300.0	25648		
2616666020	Dup-2	EPA 300.0	25648		

REPORT OF LABORATORY ANALYSIS

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CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: 1 OF 4

CLIENT NAME: Georgia Power		CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239		REPORT TO:		CC:		REQUESTED COMPLETION DATE:		PO #:	
PROJECT NAME/STATE: Plant Kraft Grumman Road		PROJECT #:		CONTAINER TYPE: PRESERVATION:		ANALYSIS REQUESTED		CONTAINER TYPE: PRESERVATION:		L A B	
PROJECT #:		PROJECT #:		# of CONTAINERS		CONTAINER TYPE: PRESERVATION:		CONTAINER TYPE: PRESERVATION:		L A B	
Collection DATE		Collection TIME		MATRIX CODE*		SAMPLE IDENTIFICATION		CONTAINER TYPE: PRESERVATION:		L A B	
3-26-19		1035		GW		DUP-1		CONTAINER TYPE: PRESERVATION:		1	
3-26-19		1310		GW		FB-1-3-26-19		CONTAINER TYPE: PRESERVATION:		2	
3-25-19		1525		GW		GWA-8		CONTAINER TYPE: PRESERVATION:		3	
3-25-19		1645		GW		GWC-20		CONTAINER TYPE: PRESERVATION:		4	
3-26-19		0950		GW		GWC-16		CONTAINER TYPE: PRESERVATION:		5	
3-26-19		1210		GW		GWC-21		CONTAINER TYPE: PRESERVATION:		6	
3-26-19		1410		GW		GWC-14		CONTAINER TYPE: PRESERVATION:		7	
3-26-19		1505		GW		GWC-15		CONTAINER TYPE: PRESERVATION:		8	
3-26-19		1505		GW		GWC-13		CONTAINER TYPE: PRESERVATION:		9	
3-26-19		1625		GW		GWC-1		CONTAINER TYPE: PRESERVATION:		10	
3-26-19		1645		W		FB-1-3-26-19		CONTAINER TYPE: PRESERVATION:		11	
SAMPLED BY AND TITLE: O. FUGICA (ACC)		DATE/TIME: 3-26-19 1625		RELINQUISHED BY: [Signature]		DATE/TIME: 3/27/19 08:00		CONTAINER TYPE: PRESERVATION:		LAB #:	
RECEIVED BY: [Signature]		DATE/TIME: 3-27-19 08:00		RELINQUISHED BY: [Signature]		DATE/TIME: 3/27/19 08:00		CONTAINER TYPE: PRESERVATION:		FOR LAB USE ONLY	
RECEIVED BY LAB: O. FUGICA		DATE/TIME: 3-27-19 12:30		SAMPLE SHIPPED VIA: UPS		DATE/TIME: 3/27/19 08:00		CONTAINER TYPE: PRESERVATION:		Entered into LIMS: Tracking #:	
pH checked: Yes No NA		Ice: Yes No NA		Custody Seal: Intact Broken Not Present		# of Coolers: Cooler ID:		CONTAINER TYPE: PRESERVATION:		W0#: 2616666	



Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
Plant Kraft -Grumman Rd COC Phase 2 CCR State (002)



CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239 REPORT TO: REQUESTED COMPLETION DATE: PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #:		CONTAINER TYPE: PRESERVATION # of C O N T A I N E R S		ANALYSIS REQUESTED P P P P P P P 3 3 3 7 Metals App. III (EPA 6020/7470) Boron, Calcium State Metals (see below) CI, F, SO ₄ & TDS (EPA 300.0 & SM 2540C)		CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen					
Collection DATE 3-25-14 3-26-14		Collection TIME 1455 1120		MATRIX CODE* Gw Gw		C O M P X X		SAMPLE IDENTIFICATION GWA-7 GWB-6R		REMARKS/ADDITIONAL INFORMATION APP III plus State Metals *Field Filtered Metals Dup 2	
SAMPLED BY AND TITLE: RECEIVED BY: RECEIVED BY LAB:		DATE/TIME: 3/26/14 1120 3-27-14 08:00 3-27-14 12:30		RELINQUISHED BY: RELINQUISHED BY:		DATE/TIME: 3/27/14 0800 DATE/TIME:		LAB #: Entered into LIMS: Tracking #:		FOR LAB USE ONLY	
pH checked: Yes No NA Temperature: Min Max Intact: Broken Not Present Client: Courier Other FS Cooler ID:		USPS FED-EX USPS USPS		COOLIER # of Coolers		CLIENT OTHER FS		WO# : 2616666		PM: BM Due Date: 04/03/19 CLIENT: GAPower-CCR	

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
Plant Kraft -Grumman Rd COC Phase 2 CCR State (002)



Sample Condition Upon Receipt

Client Name: Georgia Power

WO#: 2616666

PM: BM

Due Date: 04/03/19

CLIENT: GAPower-CCR

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used 082 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 1.3°C Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 3/27/19

Table with 16 rows of checklist items and checkboxes. Includes handwritten notes like 'Field Filtered Metals' and 'Sample Dup-2 not listed on COC but logged in per container labels'.

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: COC lists 4 pages but only 3 pages present

Project Manager Review: _____

Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

April 07, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 2616740

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on March 28, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616740

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616740

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2616740001	GWC-22	Water	03/27/19 09:30	03/28/19 11:35
2616740002	GWC-9	Water	03/27/19 09:05	03/28/19 11:35
2616740003	GWC-11	Water	03/27/19 11:40	03/28/19 11:35
2616740004	GWC-12	Water	03/27/19 10:50	03/28/19 11:35
2616740005	EB-2-3-27-19	Water	03/27/19 11:00	03/28/19 11:35

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616740

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2616740001	GWC-22	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616740002	GWC-9	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616740003	GWC-11	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616740004	GWC-12	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616740005	EB-2-3-27-19	EPA 6020B	CSW	10
		SM 2540C	RLC	1
		EPA 300.0	RLC	3

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616740

Sample: GWC-22		Lab ID: 2616740001		Collected: 03/27/19 09:30		Received: 03/28/19 11:35		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 18:00	04/03/19 19:57	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	04/01/19 18:00	04/03/19 19:57	7440-38-2		
Barium	0.057	mg/L	0.010	0.00078	1	04/01/19 18:00	04/03/19 19:57	7440-39-3		
Boron	0.37	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 19:57	7440-42-8		
Calcium	28.8	mg/L	25.0	0.69	50	04/01/19 18:00	04/03/19 20:03	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	04/01/19 18:00	04/03/19 19:57	7440-47-3		
Lead	0.00047J	mg/L	0.0050	0.00027	1	04/01/19 18:00	04/03/19 19:57	7439-92-1		
Selenium	ND	mg/L	0.010	0.0014	1	04/01/19 18:00	04/03/19 19:57	7782-49-2		
Vanadium	0.0020J	mg/L	0.010	0.0019	1	04/01/19 18:00	04/03/19 19:57	7440-62-2		
Zinc	ND	mg/L	0.010	0.0021	1	04/01/19 18:00	04/03/19 19:57	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	158	mg/L	25.0	10.0	1		04/03/19 18:51			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	11.5	mg/L	0.25	0.024	1		04/04/19 02:05	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 02:05	16984-48-8		
Sulfate	103	mg/L	10.0	0.17	10		04/06/19 15:56	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616740

Sample: GWC-9		Lab ID: 2616740002		Collected: 03/27/19 09:05		Received: 03/28/19 11:35		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 18:00	04/03/19 20:20	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/01/19 18:00	04/03/19 20:20	7440-38-2	
Barium	0.19	mg/L	0.010	0.00078	1	04/01/19 18:00	04/03/19 20:20	7440-39-3	
Boron	0.016J	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 20:20	7440-42-8	
Calcium	7.7	mg/L	0.50	0.014	1	04/01/19 18:00	04/03/19 20:20	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	04/01/19 18:00	04/03/19 20:20	7440-47-3	
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 18:00	04/03/19 20:20	7439-92-1	
Selenium	ND	mg/L	0.010	0.0014	1	04/01/19 18:00	04/03/19 20:20	7782-49-2	
Vanadium	ND	mg/L	0.010	0.0019	1	04/01/19 18:00	04/03/19 20:20	7440-62-2	
Zinc	0.0026J	mg/L	0.010	0.0021	1	04/01/19 18:00	04/03/19 20:20	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	104	mg/L	25.0	10.0	1		04/03/19 18:51		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	18.9	mg/L	0.25	0.024	1		04/04/19 02:28	16887-00-6	
Fluoride	0.13J	mg/L	0.30	0.029	1		04/04/19 02:28	16984-48-8	
Sulfate	76.2	mg/L	10.0	0.17	10		04/04/19 02:51	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616740

Sample: GWC-11		Lab ID: 2616740003		Collected: 03/27/19 11:40		Received: 03/28/19 11:35		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 18:00	04/03/19 20:32	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/01/19 18:00	04/03/19 20:32	7440-38-2	
Barium	0.053	mg/L	0.010	0.00078	1	04/01/19 18:00	04/03/19 20:32	7440-39-3	
Boron	0.089	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 20:32	7440-42-8	
Calcium	25.1	mg/L	25.0	0.69	50	04/01/19 18:00	04/03/19 20:37	7440-70-2	M6
Chromium	ND	mg/L	0.010	0.0016	1	04/01/19 18:00	04/03/19 20:32	7440-47-3	
Lead	0.00029J	mg/L	0.0050	0.00027	1	04/01/19 18:00	04/03/19 20:32	7439-92-1	
Selenium	0.0014J	mg/L	0.010	0.0014	1	04/01/19 18:00	04/03/19 20:32	7782-49-2	
Vanadium	0.0023J	mg/L	0.010	0.0019	1	04/01/19 18:00	04/03/19 20:32	7440-62-2	
Zinc	ND	mg/L	0.010	0.0021	1	04/01/19 18:00	04/03/19 20:32	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	138	mg/L	25.0	10.0	1		04/03/19 18:51		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	11.9	mg/L	0.25	0.024	1		04/04/19 03:15	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 03:15	16984-48-8	
Sulfate	76.8	mg/L	10.0	0.17	10		04/04/19 05:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616740

Sample: GWC-12		Lab ID: 2616740004		Collected: 03/27/19 10:50	Received: 03/28/19 11:35	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 18:00	04/03/19 21:23	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/01/19 18:00	04/03/19 21:23	7440-38-2	
Barium	0.017	mg/L	0.010	0.00078	1	04/01/19 18:00	04/03/19 21:23	7440-39-3	
Boron	6.1	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 21:23	7440-42-8	
Calcium	63.1	mg/L	25.0	0.69	50	04/01/19 18:00	04/03/19 21:29	7440-70-2	
Chromium	ND	mg/L	0.010	0.0016	1	04/01/19 18:00	04/03/19 21:23	7440-47-3	
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 18:00	04/03/19 21:23	7439-92-1	
Selenium	ND	mg/L	0.010	0.0014	1	04/01/19 18:00	04/03/19 21:23	7782-49-2	
Vanadium	0.0049J	mg/L	0.010	0.0019	1	04/01/19 18:00	04/03/19 21:23	7440-62-2	
Zinc	0.0031J	mg/L	0.010	0.0021	1	04/01/19 18:00	04/03/19 21:23	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	673	mg/L	25.0	10.0	1		04/03/19 18:51		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	45.6	mg/L	0.25	0.024	1		04/04/19 05:34	16887-00-6	
Fluoride	0.036J	mg/L	0.30	0.029	1		04/04/19 05:34	16984-48-8	
Sulfate	579	mg/L	50.0	0.85	50		04/04/19 05:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616740

Sample: EB-2-3-27-19		Lab ID: 2616740005		Collected: 03/27/19 11:00		Received: 03/28/19 11:35		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/01/19 18:00	04/03/19 21:35	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00057	1	04/01/19 18:00	04/03/19 21:35	7440-38-2		
Barium	ND	mg/L	0.010	0.00078	1	04/01/19 18:00	04/03/19 21:35	7440-39-3		
Boron	0.0080J	mg/L	0.040	0.0039	1	04/01/19 18:00	04/03/19 21:35	7440-42-8		
Calcium	0.046J	mg/L	0.50	0.014	1	04/01/19 18:00	04/03/19 21:35	7440-70-2		
Chromium	ND	mg/L	0.010	0.0016	1	04/01/19 18:00	04/03/19 21:35	7440-47-3		
Lead	ND	mg/L	0.0050	0.00027	1	04/01/19 18:00	04/03/19 21:35	7439-92-1		
Selenium	ND	mg/L	0.010	0.0014	1	04/01/19 18:00	04/03/19 21:35	7782-49-2		
Vanadium	ND	mg/L	0.010	0.0019	1	04/01/19 18:00	04/03/19 21:35	7440-62-2		
Zinc	ND	mg/L	0.010	0.0021	1	04/01/19 18:00	04/03/19 21:35	7440-66-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C								
Total Dissolved Solids	10.0J	mg/L	25.0	10.0	1		04/03/19 18:51			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0								
Chloride	ND	mg/L	0.25	0.024	1		04/04/19 06:20	16887-00-6		
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 06:20	16984-48-8		
Sulfate	ND	mg/L	1.0	0.017	1		04/04/19 06:20	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2616740

QC Batch: 25576 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2616740001, 2616740002, 2616740003, 2616740004, 2616740005

METHOD BLANK: 115310 Matrix: Water
Associated Lab Samples: 2616740001, 2616740002, 2616740003, 2616740004, 2616740005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	04/03/19 18:09	
Arsenic	mg/L	ND	0.0050	0.00057	04/03/19 18:09	
Barium	mg/L	ND	0.010	0.00078	04/03/19 18:09	
Boron	mg/L	ND	0.040	0.0039	04/03/19 18:09	
Calcium	mg/L	ND	0.50	0.014	04/03/19 18:09	
Chromium	mg/L	ND	0.010	0.0016	04/03/19 18:09	
Lead	mg/L	ND	0.0050	0.00027	04/03/19 18:09	
Selenium	mg/L	ND	0.010	0.0014	04/03/19 18:09	
Vanadium	mg/L	ND	0.010	0.0019	04/03/19 18:09	
Zinc	mg/L	ND	0.010	0.0021	04/03/19 18:09	

LABORATORY CONTROL SAMPLE: 115311

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	111	80-120	
Arsenic	mg/L	0.1	0.11	106	80-120	
Barium	mg/L	0.1	0.10	104	80-120	
Boron	mg/L	1	1.0	105	80-120	
Calcium	mg/L	1	1.1	107	80-120	
Chromium	mg/L	0.1	0.11	106	80-120	
Lead	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.11	111	80-120	
Vanadium	mg/L	0.1	0.11	108	80-120	
Zinc	mg/L	0.1	0.11	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 115312 115313

Parameter	Units	2616740003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.12	0.11	115	112	75-125	3	20	
Arsenic	mg/L	ND	0.1	0.1	0.11	0.11	106	105	75-125	1	20	
Barium	mg/L	0.053	0.1	0.1	0.16	0.15	103	101	75-125	2	20	
Boron	mg/L	0.089	1	1	1.1	1.1	99	98	75-125	1	20	
Calcium	mg/L	25.1	1	1	25.6	24.9J	58	-14	75-125	3	20	M6
Chromium	mg/L	ND	0.1	0.1	0.11	0.11	105	105	75-125	0	20	
Lead	mg/L	0.00029J	0.1	0.1	0.10	0.10	104	102	75-125	2	20	
Selenium	mg/L	0.0014J	0.1	0.1	0.11	0.11	111	108	75-125	3	20	
Vanadium	mg/L	0.0023J	0.1	0.1	0.11	0.11	109	110	75-125	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2616740

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 115312												115313	
Parameter	Units	2616740003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
Zinc	mg/L	ND	0.1	0.1	0.11	0.11	105	103	75-125	2	20		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2616740

QC Batch: 25700 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2616740001, 2616740002, 2616740003, 2616740004, 2616740005

LABORATORY CONTROL SAMPLE: 115940

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	383	96	84-108	

SAMPLE DUPLICATE: 115941

Parameter	Units	2616689004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	10.0J	ND		10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2616740

QC Batch: 25646 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2616740001, 2616740002, 2616740003, 2616740004, 2616740005

METHOD BLANK: 115682 Matrix: Water
Associated Lab Samples: 2616740001, 2616740002, 2616740003, 2616740004, 2616740005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.024	04/03/19 12:12	
Fluoride	mg/L	ND	0.30	0.029	04/03/19 12:12	
Sulfate	mg/L	ND	1.0	0.017	04/03/19 12:12	

LABORATORY CONTROL SAMPLE: 115683

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.4	104	90-110	
Fluoride	mg/L	10	10.3	103	90-110	
Sulfate	mg/L	10	10.1	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 115684 115685

Parameter	Units	2616648001		2616648002		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
Chloride	mg/L	717	10	10	309	309	-4080	-4080	90-110	0	15	E,M1	
Fluoride	mg/L	0.32	10	10	11.0	11.1	107	107	90-110	0	15		
Sulfate	mg/L	131	10	10	106	106	-248	-248	90-110	0	15	E,M1	

MATRIX SPIKE SAMPLE: 115686

Parameter	Units	2616648002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	6470	10	1180	-53000	90-110	E,M1
Fluoride	mg/L	0.19J	10	1.9	17	90-110	M1
Sulfate	mg/L	ND	10	326	3260	90-110	E,M1

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616740

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road

Pace Project No.: 2616740

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2616740001	GWC-22	EPA 3005A	25576	EPA 6020B	25607
2616740002	GWC-9	EPA 3005A	25576	EPA 6020B	25607
2616740003	GWC-11	EPA 3005A	25576	EPA 6020B	25607
2616740004	GWC-12	EPA 3005A	25576	EPA 6020B	25607
2616740005	EB-2-3-27-19	EPA 3005A	25576	EPA 6020B	25607
2616740001	GWC-22	SM 2540C	25700		
2616740002	GWC-9	SM 2540C	25700		
2616740003	GWC-11	SM 2540C	25700		
2616740004	GWC-12	SM 2540C	25700		
2616740005	EB-2-3-27-19	SM 2540C	25700		
2616740001	GWC-22	EPA 300.0	25646		
2616740002	GWC-9	EPA 300.0	25646		
2616740003	GWC-11	EPA 300.0	25646		
2616740004	GWC-12	EPA 300.0	25646		
2616740005	EB-2-3-27-19	EPA 300.0	25646		

REPORT OF LABORATORY ANALYSIS

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CHAIN OF CUSTODY RECORD

Pace Analytical Services, Inc.
 110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
 (770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239 REPORT TO:		CONTAINER TYPE: P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER		PRESERVATION: 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O ₃ , ≤6°C 7 - ≤6°C not frozen	
REQUESTED COMPLETION DATE: _____ PROJECT NAME/STATE: Plant Kraft Grumman Road		ANALYSIS REQUESTED: P 3 P 3 P 7 Metals App. III (EPA 6020/7470) Boron, Calcium State Metals (see below) Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C)		CONTAINER TYPE: P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER	
PROJECT #:		CONTAINERS →		REMARKS/ADDITIONAL INFORMATION	
Collection DATE	Collection TIME	MATRIX CODE	C O M P	G R A B	SAMPLE IDENTIFICATION
3-27-19	0930	GW	X		GWC-22
3-27-19	0905	GW	X		GWC-9
3-27-19	1140	GW	X		GWC-11
3-27-19	1050	GW	X		GWC-12
3-27-19	1100	W	X		EB-2-3-27-19
SAMPLED BY AND TITLE: O. FLOQUA (MC)		DATE/TIME: 3-27-19 1100		RELINQUISHED BY:	
RECEIVED BY:		DATE/TIME:		RELINQUISHED BY:	
RECEIVED BY LAB: Jessica Wilby		DATE/TIME: 3-28-19 1135		RELINQUISHED BY:	
Checked: (Yes) No NA (Yes) No NA (Yes) No NA		Temperature: Min: Max: 1°		SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER	
Intact Broken Not Present		# of Coolers		Cooler ID:	

FOR LAB USE ONLY
 LAB #: 2616740
WO#: 2616740

 2616740

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR State (002)



Sample Condition Upon Receipt

WO#: 2616740

Client Name: Georgia Power

PM: BM

Due Date: 04/04/19

CLIENT: GAPower-CCR

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used 083

Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 1°

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 3/28/19 JW

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.	
-Includes date/time/ID/Analysis Matrix: <u>WT</u>			
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.	
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.	
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution:

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) Page 17 of 17

August 09, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Kraft - Grumman Road
Pace Project No.: 2621369

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 30, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2621369

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant Kraft - Grumman Road

Pace Project No.: 2621369

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2621369001	GWC-2	Water	07/30/19 09:25	07/30/19 16:07

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SAMPLE ANALYTE COUNT

Project: Plant Kraft - Grumman Road

Pace Project No.: 2621369

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2621369001	GWC-2	EPA 6020B	CSW	16
		EPA 7470A	DRB	1
		SM 2320B	JAD	3
		SM 2540C	M1O	1
		EPA 300.0	MWB	3

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Kraft - Grumman Road
Pace Project No.: 2621369

Sample: GWC-2		Lab ID: 2621369001		Collected: 07/30/19 09:25		Received: 07/30/19 16:07		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A							
Antimony	ND	mg/L	0.0030	0.00027	1	08/02/19 11:43	08/02/19 18:11	7440-36-0	
Arsenic	0.00039J	mg/L	0.0050	0.00035	1	08/02/19 11:43	08/02/19 18:11	7440-38-2	
Barium	0.052	mg/L	0.010	0.00049	1	08/02/19 11:43	08/02/19 18:11	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	08/02/19 11:43	08/02/19 18:11	7440-41-7	
Boron	0.020J	mg/L	0.040	0.0049	1	08/02/19 11:43	08/02/19 18:11	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.00011	1	08/02/19 11:43	08/02/19 18:11	7440-43-9	
Calcium	0.43	mg/L	0.10	0.011	1	08/02/19 11:43	08/02/19 18:11	7440-70-2	
Chromium	0.00065J	mg/L	0.010	0.00039	1	08/02/19 11:43	08/02/19 18:11	7440-47-3	
Cobalt	0.00032J	mg/L	0.010	0.00030	1	08/02/19 11:43	08/02/19 18:11	7440-48-4	
Lead	0.00020J	mg/L	0.0050	0.000046	1	08/02/19 11:43	08/02/19 18:11	7439-92-1	
Lithium	ND	mg/L	0.050	0.00078	1	08/02/19 11:43	08/02/19 18:11	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	08/02/19 11:43	08/02/19 18:11	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	08/02/19 11:43	08/02/19 18:11	7782-49-2	
Thallium	0.00011J	mg/L	0.0010	0.000052	1	08/02/19 11:43	08/02/19 18:11	7440-28-0	
Vanadium	ND	mg/L	0.010	0.00071	1	08/02/19 11:43	08/02/19 18:11	7440-62-2	
Zinc	0.0067J	mg/L	0.010	0.0015	1	08/02/19 11:43	08/02/19 18:11	7440-66-6	B
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	mg/L	0.00050	0.00014	1	08/01/19 11:58	08/01/19 15:31	7439-97-6	
2320B Alkalinity Low Level		Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	1.0	mg/L	1.0	1.0	1		08/06/19 18:09		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		08/06/19 18:09		
Alkalinity, Total as CaCO3	1.0	mg/L	1.0	1.0	1		08/06/19 18:09		
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	70.0	mg/L	25.0	10.0	1		08/02/19 14:16		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Chloride	7.1	mg/L	0.25	0.024	1		08/07/19 07:59	16887-00-6	
Fluoride	0.083J	mg/L	0.30	0.029	1		08/07/19 07:59	16984-48-8	
Sulfate	12.3	mg/L	1.0	0.017	1		08/07/19 07:59	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2621369

QC Batch:	32881	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
Associated Lab Samples:	2621369001		

METHOD BLANK: 147807 Matrix: Water

Associated Lab Samples: 2621369001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	08/01/19 15:26	

LABORATORY CONTROL SAMPLE: 147808

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 147809 147810

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		2621369001 Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Mercury	mg/L	ND	0.0025	0.0025	0.0023	0.0023	92	91	75-125	1	20		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2621369

QC Batch: 32943 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2621369001

METHOD BLANK: 148313 Matrix: Water
Associated Lab Samples: 2621369001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	08/02/19 18:00	
Arsenic	mg/L	ND	0.0050	0.00035	08/02/19 18:00	
Barium	mg/L	ND	0.010	0.00049	08/02/19 18:00	
Beryllium	mg/L	ND	0.0030	0.000074	08/02/19 18:00	
Boron	mg/L	ND	0.040	0.0049	08/02/19 18:00	
Cadmium	mg/L	ND	0.0010	0.00011	08/02/19 18:00	
Calcium	mg/L	ND	0.10	0.011	08/02/19 18:00	
Chromium	mg/L	ND	0.010	0.00039	08/02/19 18:00	
Cobalt	mg/L	ND	0.010	0.00030	08/02/19 18:00	
Lead	mg/L	ND	0.0050	0.000046	08/02/19 18:00	
Lithium	mg/L	ND	0.050	0.00078	08/02/19 18:00	
Molybdenum	mg/L	ND	0.010	0.00095	08/02/19 18:00	
Selenium	mg/L	ND	0.010	0.0013	08/02/19 18:00	
Thallium	mg/L	ND	0.0010	0.000052	08/02/19 18:00	
Vanadium	mg/L	ND	0.010	0.00071	08/02/19 18:00	
Zinc	mg/L	0.0043J	0.010	0.0015	08/02/19 18:00	

LABORATORY CONTROL SAMPLE: 148314

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	103	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.098	98	80-120	
Beryllium	mg/L	0.1	0.096	96	80-120	
Boron	mg/L	1	0.98	98	80-120	
Cadmium	mg/L	0.1	0.095	95	80-120	
Calcium	mg/L	1	0.98	98	80-120	
Chromium	mg/L	0.1	0.10	103	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.10	102	80-120	
Selenium	mg/L	0.1	0.099	99	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	
Vanadium	mg/L	0.1	0.10	100	80-120	
Zinc	mg/L	0.1	0.10	105	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2621369

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 148315		148316		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		2621369001 Result	MS Spike Conc.	MSD Spike Conc.									
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	105	102	75-125	3	20		
Arsenic	mg/L	0.00039J	0.1	0.1	0.10	0.095	99	94	75-125	5	20		
Barium	mg/L	0.052	0.1	0.1	0.15	0.15	98	93	75-125	3	20		
Beryllium	mg/L	ND	0.1	0.1	0.10	0.099	102	99	75-125	3	20		
Boron	mg/L	0.020J	1	1	1.1	0.99	110	97	75-125	12	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.097	100	97	75-125	2	20		
Calcium	mg/L	0.43	1	1	1.4	1.4	96	94	75-125	1	20		
Chromium	mg/L	0.00065J	0.1	0.1	0.10	0.10	102	99	75-125	3	20		
Cobalt	mg/L	0.00032J	0.1	0.1	0.10	0.098	101	98	75-125	4	20		
Lead	mg/L	0.00020J	0.1	0.1	0.10	0.099	104	99	75-125	4	20		
Lithium	mg/L	ND	0.1	0.1	0.11	0.10	105	101	75-125	4	20		
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.10	106	102	75-125	3	20		
Selenium	mg/L	ND	0.1	0.1	0.099	0.097	98	96	75-125	2	20		
Thallium	mg/L	0.00011J	0.1	0.1	0.10	0.098	102	98	75-125	4	20		
Vanadium	mg/L	ND	0.1	0.1	0.10	0.099	101	99	75-125	2	20		
Zinc	mg/L	0.0067J	0.1	0.1	0.11	0.11	103	101	75-125	2	20		

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2621369

QC Batch: 33142

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity, Low Level

Associated Lab Samples: 2621369001

METHOD BLANK: 149021

Matrix: Water

Associated Lab Samples: 2621369001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	1.0	1.0	08/06/19 17:53	

LABORATORY CONTROL SAMPLE: 149022

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	47.5	95	85-115	

SAMPLE DUPLICATE: 149023

Parameter	Units	2621369001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	1.0	1.0	0	10	

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road

Pace Project No.: 2621369

QC Batch:	32957	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
Associated Lab Samples:	2621369001		

LABORATORY CONTROL SAMPLE: 148387

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	389	97	84-108	

SAMPLE DUPLICATE: 148388

Parameter	Units	2621369001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	70.0	24.0J	98	10	R1

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QUALITY CONTROL DATA

Project: Plant Kraft - Grumman Road
Pace Project No.: 2621369

QC Batch: 33150 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2621369001

METHOD BLANK: 149039 Matrix: Water
Associated Lab Samples: 2621369001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.026J	0.25	0.024	08/07/19 04:10	
Fluoride	mg/L	ND	0.30	0.029	08/07/19 04:10	
Sulfate	mg/L	0.018J	1.0	0.017	08/07/19 04:10	

LABORATORY CONTROL SAMPLE: 149040

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.8	108	90-110	
Fluoride	mg/L	10	10.7	107	90-110	
Sulfate	mg/L	10	10.6	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 149041 149042

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		2621246001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
Chloride	mg/L	53.7	20	20	71.2	71.5	88	89	90-110	0	15	M1	
Fluoride	mg/L	0.49	20	20	20.5	21.1	100	103	90-110	3	15		
Sulfate	mg/L	ND	20	20	ND	ND	0	0	90-110		15	M1	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Kraft - Grumman Road

Pace Project No.: 2621369

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Kraft - Grumman Road
Pace Project No.: 2621369

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2621369001	GWC-2	EPA 3005A	32943	EPA 6020B	32978
2621369001	GWC-2	EPA 7470A	32881	EPA 7470A	32893
2621369001	GWC-2	SM 2320B	33142		
2621369001	GWC-2	SM 2540C	32957		
2621369001	GWC-2	EPA 300.0	33150		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CHAIN OF CUSTODY RECORD

CLIENT NAME: Georgia Power CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 241 Ralph McGill Blvd SE B10185 Atlanta, GA 30308 404-506-7239 REPORT TO: REQUESTED COMPLETION DATE: PROJECT NAME/STATE: Plant Kraft Grumman Road PROJECT #: GWL-2 GWL-2 SAMPLE		CONTAINER TYPE: PRESERVATION: # of CONTAINERS → 3		ANALYSIS REQUESTED P P P P P P P 3 3 3 7 3 Metals App. III & IV (EPA 6020/7470) Metals (see below) EPA 6020 Cl, F, SO ₄ & TDS (EPA 300.0 & SM 2540C) Radium 226 & 228 (SV# 846 9315/9320) Bicarbonate Alk, Carbonate Alk, Total Alk			CONTAINER TYPE P - PLASTIC A - AMBER GLASS G - CLEAR GLASS V - VOA VIAL S - STERILE O - OTHER PRESERVATION 1 - HCl, ≤6°C 2 - H ₂ SO ₄ , ≤6°C 3 - HNO ₃ 4 - NaOH, ≤6°C 5 - NaOH/ZnAc, ≤6°C 6 - Na ₂ S ₂ O 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	
Collection DATE 7-30-19 Collection TIME 0925 MATRIX CODE* GW GRA <input checked="" type="checkbox"/>	SAMPLE IDENTIFICATION GWL-2	RELINQUISHED BY: <i>[Signature]</i> DATE/TIME: 7-30-19 0925		FOR LAB USE ONLY LAB # Entered into LIMS Tracking #				
SAMPLED BY AND TITLE: O. F. DUQUEA RECEIVED BY:		RELINQUISHED BY: <i>[Signature]</i> DATE/TIME: 7-30-19 1607		RECEIVED BY: <i>[Signature]</i> DATE/TIME: 7-30-19 1607				
RECEIVED BY: <i>[Signature]</i> DATE/TIME: 7-30-19 1607		RECEIVED BY: <i>[Signature]</i> DATE/TIME: 7-30-19 1607		RECEIVED BY: <i>[Signature]</i> DATE/TIME: 7-30-19 1607				

NO#: 2621369

 2621369

Plant Kraft Grumman Road State constituents: As, Ba, Cr, Pb, Sb, Se, V, Zn
 Plant Kraft - Grumman Rd COC Phase 2 CCR & State



Sample Condition Upon Receipt

Client Name: GIA Power

Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____
Tracking #: _____

WO#: **2621369**

PM: **BM** Due Date: **08/06/19**
CLIENT: **GAPower-CCR**

Custody Seal on Cooler/Box Present: yes no Seals intact: yes

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used 83

Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Cooler Temperature 0.9

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 7/30/19 MK

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	_____	

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

APPENDIX B

Statistical Analyses

100% ND

Date: 8/13/2019 11:28 AM

Grumman Road Landfill Client: Southern Company Data: Grumman Road

Antimony (mg/L)

GWA-8, GWC-1, GWC-12, GWC-15, GWC-17, GWC-2, GWC-21, GWC-22, GWB-5R, GWB-6R

Arsenic (mg/L)

GWC-11, GWC-9

Selenium (mg/L)

GWC-13

Interwell Prediction Limit Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 8/13/2019, 5:32 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Calcium (mg/L)	GWC-1	31.7	n/a	3/26/2019	46.3	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-12	31.7	n/a	3/27/2019	63.1	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-14	31.7	n/a	3/26/2019	84.2	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-15	31.7	n/a	3/26/2019	124	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-16	31.7	n/a	3/26/2019	204	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-17	31.7	n/a	3/26/2019	68.8	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-20	31.7	n/a	3/25/2019	74.8	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-21	31.7	n/a	3/26/2019	60.1	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-4R	31.7	n/a	3/25/2019	55.6	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-5R	31.7	n/a	3/26/2019	36.1	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-17	260	n/a	3/26/2019	439	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Fluoride (mg/L)	GWC-17	0.5626	n/a	3/26/2019	0.89	Yes	20	15	No	0.0004115	Param Inter 1 of 2
pH (SU)	GWC-12	6.43	4.28	3/27/2019	4.11	Yes	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
pH (SU)	GWC-15	6.43	4.28	3/26/2019	6.65	Yes	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-12	160	n/a	3/27/2019	579	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-14	160	n/a	3/26/2019	192	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-17	160	n/a	3/26/2019	439	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-4R	160	n/a	3/25/2019	245	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-5R	160	n/a	3/26/2019	222	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-6R	160	n/a	3/26/2019	319	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2

Interwell Prediction Limit All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 8/13/2019, 5:32 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Calcium (mg/L)	GWC-1	31.7	n/a	3/26/2019	46.3	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-11	31.7	n/a	3/27/2019	25.1	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-12	31.7	n/a	3/27/2019	63.1	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-13	31.7	n/a	3/26/2019	2.4	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-14	31.7	n/a	3/26/2019	84.2	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-15	31.7	n/a	3/26/2019	124	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-16	31.7	n/a	3/26/2019	204	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-17	31.7	n/a	3/26/2019	68.8	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-2	31.7	n/a	7/30/2019	0.43	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-20	31.7	n/a	3/25/2019	74.8	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-21	31.7	n/a	3/26/2019	60.1	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-22	31.7	n/a	3/27/2019	28.8	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWC-9	31.7	n/a	3/27/2019	7.7	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-4R	31.7	n/a	3/25/2019	55.6	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-5R	31.7	n/a	3/26/2019	36.1	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Calcium (mg/L)	GWB-6R	31.7	n/a	3/26/2019	9	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-1	260	n/a	3/26/2019	7	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-11	260	n/a	3/27/2019	11.9	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-12	260	n/a	3/27/2019	45.6	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-13	260	n/a	3/26/2019	3.2	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-14	260	n/a	3/26/2019	21.1	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-15	260	n/a	3/26/2019	3	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-16	260	n/a	3/26/2019	5.1	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-17	260	n/a	3/26/2019	439	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-2	260	n/a	7/30/2019	7.1	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-20	260	n/a	3/25/2019	9.4	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-21	260	n/a	3/26/2019	11.9	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-22	260	n/a	3/27/2019	11.5	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWC-9	260	n/a	3/27/2019	18.9	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-4R	260	n/a	3/25/2019	19.7	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-5R	260	n/a	3/26/2019	47.9	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Chloride (mg/L)	GWB-6R	260	n/a	3/26/2019	51.8	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Fluoride (mg/L)	GWC-1	0.5626	n/a	3/26/2019	0.051	No	20	15	No	0.0004115	Param Inter 1 of 2
Fluoride (mg/L)	GWC-11	0.5626	n/a	3/27/2019	0.3ND	No	20	15	No	0.0004115	Param Inter 1 of 2
Fluoride (mg/L)	GWC-12	0.5626	n/a	3/27/2019	0.036	No	20	15	No	0.0004115	Param Inter 1 of 2
Fluoride (mg/L)	GWC-13	0.5626	n/a	3/26/2019	0.052	No	20	15	No	0.0004115	Param Inter 1 of 2
Fluoride (mg/L)	GWC-14	0.5626	n/a	3/26/2019	0.13	No	20	15	No	0.0004115	Param Inter 1 of 2
Fluoride (mg/L)	GWC-15	0.5626	n/a	3/26/2019	0.13	No	20	15	No	0.0004115	Param Inter 1 of 2
Fluoride (mg/L)	GWC-16	0.5626	n/a	3/26/2019	0.11	No	20	15	No	0.0004115	Param Inter 1 of 2
Fluoride (mg/L)	GWC-17	0.5626	n/a	3/26/2019	0.89	Yes	20	15	No	0.0004115	Param Inter 1 of 2
Fluoride (mg/L)	GWC-2	0.5626	n/a	7/30/2019	0.083	No	20	15	No	0.0004115	Param Inter 1 of 2
Fluoride (mg/L)	GWC-20	0.5626	n/a	3/25/2019	0.043	No	20	15	No	0.0004115	Param Inter 1 of 2
Fluoride (mg/L)	GWC-21	0.5626	n/a	3/26/2019	0.071	No	20	15	No	0.0004115	Param Inter 1 of 2
Fluoride (mg/L)	GWC-22	0.5626	n/a	3/27/2019	0.3ND	No	20	15	No	0.0004115	Param Inter 1 of 2
Fluoride (mg/L)	GWC-9	0.5626	n/a	3/27/2019	0.13	No	20	15	No	0.0004115	Param Inter 1 of 2
Fluoride (mg/L)	GWB-4R	0.5626	n/a	3/25/2019	0.064	No	20	15	No	0.0004115	Param Inter 1 of 2
Fluoride (mg/L)	GWB-5R	0.5626	n/a	3/26/2019	0.3ND	No	20	15	No	0.0004115	Param Inter 1 of 2
Fluoride (mg/L)	GWB-6R	0.5626	n/a	3/26/2019	0.046	No	20	15	No	0.0004115	Param Inter 1 of 2
pH (SU)	GWC-1	6.43	4.28	3/26/2019	5.77	No	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
pH (SU)	GWC-11	6.43	4.28	3/27/2019	5.18	No	18	0	n/a	0.008377	NP Inter (normality) 1 of 2

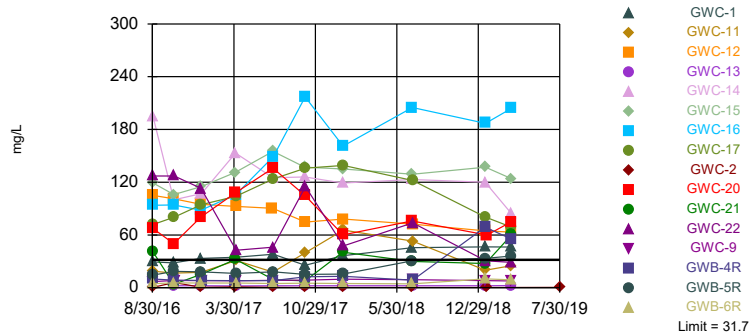
Interwell Prediction Limit All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 8/13/2019, 5:32 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
pH (SU)	GWC-12	6.43	4.28	3/27/2019	4.11	Yes	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
pH (SU)	GWC-13	6.43	4.28	3/26/2019	4.96	No	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
pH (SU)	GWC-14	6.43	4.28	3/26/2019	5.74	No	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
pH (SU)	GWC-15	6.43	4.28	3/26/2019	6.65	Yes	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
pH (SU)	GWC-16	6.43	4.28	3/26/2019	5.57	No	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
pH (SU)	GWC-17	6.43	4.28	3/26/2019	4.62	No	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
pH (SU)	GWC-2	6.43	4.28	7/30/2019	4.74	No	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
pH (SU)	GWC-20	6.43	4.28	3/25/2019	6.28	No	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
pH (SU)	GWC-21	6.43	4.28	3/26/2019	6.08	No	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
pH (SU)	GWC-22	6.43	4.28	3/27/2019	4.77	No	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
pH (SU)	GWC-9	6.43	4.28	3/27/2019	4.38	No	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
pH (SU)	GWB-4R	6.43	4.28	3/25/2019	5.74	No	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
pH (SU)	GWB-5R	6.43	4.28	3/26/2019	5.1	No	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
pH (SU)	GWB-6R	6.43	4.28	3/26/2019	5.94	No	18	0	n/a	0.008377	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-1	160	n/a	3/26/2019	73.8	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-11	160	n/a	3/27/2019	76.8	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-12	160	n/a	3/27/2019	579	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-13	160	n/a	3/26/2019	33.6	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-14	160	n/a	3/26/2019	192	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-15	160	n/a	3/26/2019	54	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-16	160	n/a	3/26/2019	87.9	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-17	160	n/a	3/26/2019	439	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-2	160	n/a	7/30/2019	12.3	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-20	160	n/a	3/25/2019	95.6	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-21	160	n/a	3/26/2019	83.9	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-22	160	n/a	3/27/2019	103	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWC-9	160	n/a	3/27/2019	76.2	No	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-4R	160	n/a	3/25/2019	245	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-5R	160	n/a	3/26/2019	222	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GWB-6R	160	n/a	3/26/2019	319	Yes	20	0	n/a	0.003493	NP Inter (normality) 1 of 2

Exceeds Limit: GWC-1, GWC-12, GWC-14, GWC-15, GWC-16, GWC-17, GWC-20...

Calcium Interwell Non-parametric

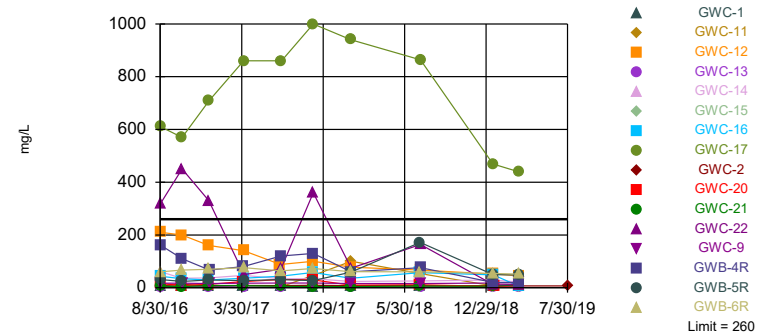


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 20 background values. Annual per-constituent alpha = 0.1059. Individual comparison alpha = 0.003493 (1 of 2). Comparing 16 points to limit.

Prediction Limit Analysis Run 8/13/2019 5:29 PM View: Appendix III Interwell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit: GWC-17

Chloride Interwell Non-parametric

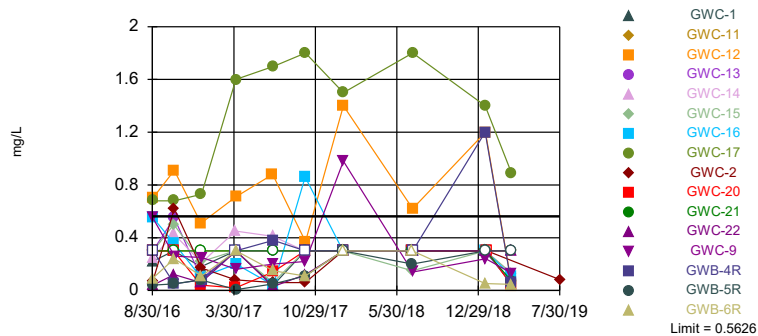


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 20 background values. Annual per-constituent alpha = 0.1059. Individual comparison alpha = 0.003493 (1 of 2). Comparing 16 points to limit.

Prediction Limit Analysis Run 8/13/2019 5:29 PM View: Appendix III Interwell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit: GWC-17

Fluoride Interwell Parametric

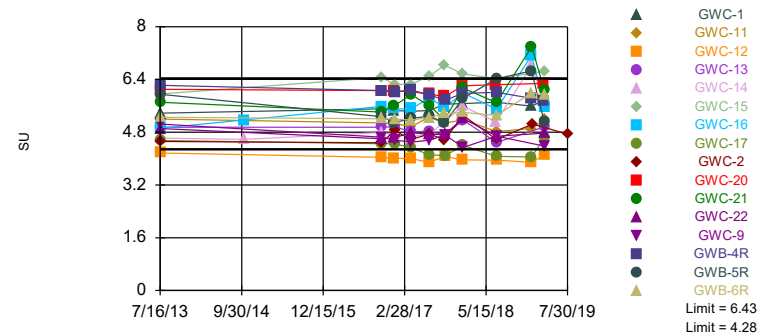


Background Data Summary: Mean=0.2126, Std. Dev.=0.1427, n=20, 15% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9195, critical = 0.868. Kappa = 2.452 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.006563. Individual comparison alpha = 0.0004115. Comparing 16 points to limit.

Prediction Limit Analysis Run 8/13/2019 5:29 PM View: Appendix III Interwell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limits: GWC-12, GWC-15

pH Interwell Non-parametric

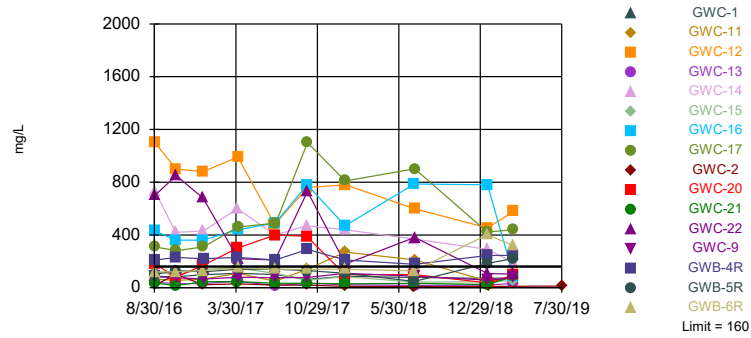


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 18 background values. Annual per-constituent alpha = 0.2514. Individual comparison alpha = 0.008377 (1 of 2). Comparing 16 points to limit.

Prediction Limit Analysis Run 8/13/2019 5:29 PM View: Appendix III Interwell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit: GWC-12, GWC-14, GWC-17, GWC-4R, GWC-5R, GWC-6R

Sulfate 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 20 background values. Annual per-constituent alpha = 0.1059. Individual comparison alpha = 0.003493 (1 of 2). Comparing 16 points to limit.

Prediction Limit Analysis Run 8/13/2019 5:29 PM View: Appendix III Interwell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 8/13/2019 5:32 PM View: Appendix III Interwell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-6R	GWB-5R	GWA-8 (bg)	GWC-1	GWC-9	GWC-22	GWC-2	GWC-12	GWC-11
8/30/2016	4.68	14.3	23.8	29.4					
8/31/2016					6.9	127	0.371 (J)	105	18.8
9/1/2016									
10/24/2016			22.5						
10/25/2016				28.3					
10/26/2016	5.45	18.6				127	5.84	101	16.6
10/27/2016					8.2				
1/3/2017		18.1	22.1						
1/4/2017				33.4		113		94.9	17.6
1/5/2017	5.35						0.379 (J)		
1/6/2017					7.97				
4/3/2017			24.6 (J)						
4/4/2017				34.6			0.993		
4/5/2017								92.5	
4/6/2017	5.41	16.2			7.95	42.7			30.9
7/10/2017								90.3	
7/11/2017			23.5			46			17.7
7/12/2017	4.81	18.1		38	8.37				
7/13/2017							0.388 (J)		
10/2/2017			22.7						
10/3/2017	5.17	15.2		25.5			0.251 (J)		39.8
10/4/2017					8.57	115		74.6	
1/9/2018	4.73		23.2						
1/10/2018		15.5		36.5			0.177 (J)		
1/11/2018					9.78	47.6		78.1	65.6
7/9/2018			24.6 (J)						
7/10/2018	4.5	30.6		45.5			0.17 (J)		
7/11/2018					9.2	73.7		72.2	53
1/16/2019	10.1	33.3	27.7	46.5					
1/17/2019								64.7	19.8 (J)
1/18/2019					8.1	30.6			
1/21/2019							0.19 (J)		
3/25/2019			31.7						
3/26/2019	9	36.1		46.3					
3/27/2019					7.7	28.8		63.1	25.1
7/30/2019							0.43		

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 8/13/2019 5:32 PM View: Appendix III Interwell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-6R	GWB-5R	GWC-1	GWA-8 (bg)	GWC-11	GWC-2	GWC-22	GWC-13	GWC-12
8/30/2016	60	31	5.5	15					
8/31/2016					3.5	7.8	320	4.3	210
9/1/2016									
10/24/2016				13					
10/25/2016			5.1						
10/26/2016	67	24			2.5	12	450	4.9	200
10/27/2016									
1/3/2017		29		13					
1/4/2017			6.9		3.8		330		160
1/5/2017	70					7.4		4.1	
1/6/2017									
4/3/2017				14					
4/4/2017			6.5			8.7			
4/5/2017									140
4/6/2017	76	27			7.1		50	3.7	
7/10/2017									88
7/11/2017				13	3.1		70		
7/12/2017	64	31	6.5					2.6	
7/13/2017						8.3			
10/2/2017				15					
10/3/2017	73	27	4.5		46	9			
10/4/2017							360	3	100
1/9/2018	61			13					
1/10/2018		59	6.9			8.2		3.4	
1/11/2018					100		74		78
7/9/2018				15.4					
7/10/2018	60.2	172	6.2			7.3			
7/11/2018					53.7		164	3.2	66.9
1/16/2019	54.1	49.7	6.6	16				3.8	
1/17/2019					6.6				52
1/18/2019							11		
1/21/2019						6.9			
3/25/2019				17.7					
3/26/2019	51.8	47.9	7					3.2	
3/27/2019					11.9		11.5		45.6
7/30/2019						7.1			

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 8/13/2019 5:32 PM View: Appendix III Interwell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-6R	GWB-5R	GWC-1	GWA-8 (bg)	GWC-11	GWC-2	GWC-22	GWC-13	GWC-12
8/30/2016	0.09 (J)	0.04 (J)	0.22 (J)	0.1 (J)					
8/31/2016					<0.3	0.07 (J)	0.04 (J)	<0.3	0.7
9/1/2016									
10/24/2016				0.18 (J)					
10/25/2016			<0.3						
10/26/2016	0.24 (J)	0.05 (J)			<0.3	0.62	0.12 (J)	0.55	0.91
10/27/2016									
1/3/2017		0.08 (J)		0.18 (J)					
1/4/2017			0.18 (J)		<0.3		0.06 (J)		0.51
1/5/2017	0.11 (J)					0.17 (J)		0.09 (J)	
1/6/2017									
4/3/2017				0.12 (J)					
4/4/2017			<0.3			0.08 (J)			
4/5/2017									0.71
4/6/2017	0.3	0.006 (J)			<0.3		<0.3	<0.3	
7/10/2017									0.88
7/11/2017				0.39	<0.3		0.03 (J)		
7/12/2017	0.15 (J)	0.05 (J)	0.04 (J)					<0.3	
7/13/2017						0.06 (J)			
10/2/2017				0.12 (J)					
10/3/2017	0.11 (J)	0.11 (J)	<0.3		<0.3	0.06 (J)			
10/4/2017							0.12 (J)	<0.3	0.37
1/9/2018	<0.3			0.21 (J)					
1/10/2018		<0.3	<0.3			<0.3		<0.3	
1/11/2018					<0.3		<0.3		1.4
7/9/2018				0.04 (J)					
7/10/2018	<0.3	0.2 (J)	<0.3			<0.3			
7/11/2018					<0.3		<0.3	<0.3	0.62
1/16/2019	0.053 (J)	<0.3	<0.3	<0.3				<0.3	
1/17/2019					<0.3				1.2
1/18/2019							<0.3		
1/21/2019						<0.3			
3/25/2019				0.082 (J)					
3/26/2019	0.046 (J)	<0.3	0.051 (J)					0.052 (J)	
3/27/2019					<0.3		<0.3		0.036 (J)
7/30/2019						0.083 (J)			

Prediction Limit

Constituent: pH (SU) Analysis Run 8/13/2019 5:32 PM View: Appendix III Interwell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-13	GWC-2	GWC-17	GWC-1	GWC-11	GWC-21	GWC-22	GWC-16	GWC-20
7/16/2013	4.95	4.52	4.55	5.38	5.2	5.71	4.91	4.92	6.1
10/11/2014								5.17	
10/24/2016									
10/25/2016				5.51		5.41		5.58	6.06
10/26/2016	4.95	4.48	4.45		5.08		4.6		
10/27/2016									
1/3/2017									
1/4/2017				5.46	5.06	5.6	4.63	5.51	6.05
1/5/2017	4.97	4.85	4.45						
1/6/2017									
4/3/2017									
4/4/2017		4.58		5.43		5.94			6.03
4/5/2017	4.81		4.33					5.51	
4/6/2017					4.97		4.79		
7/10/2017									
7/11/2017					5.26		4.73		5.96
7/12/2017	4.83			5.46				5.84	
7/13/2017		4.74	4.11			5.6			
10/2/2017									5.88
10/3/2017		4.57		5.65	5.07	5.18		5.55	
10/4/2017	4.71		4.09				4.74		
1/9/2018						6.14			
1/10/2018	5.17	5.31		5.67				5.99	6.21
1/11/2018			4.4		5.18		5.22		
7/9/2018									6.24
7/10/2018		4.58		5.71		5.7		5.5	
7/11/2018	4.49		4.07		4.82		4.68		
1/16/2019			4.05	5.59					
1/17/2019					4.91	7.39		7.13	
1/21/2019		5.05							
3/25/2019									6.28
3/26/2019	4.96		4.62	5.77		6.08		5.57	
3/27/2019					5.18		4.77		
7/30/2019		4.74							

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 8/13/2019 5:32 PM View: Appendix III Interwell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-6R	GWB-5R	GWC-1	GWA-8 (bg)	GWC-11	GWC-2	GWC-22	GWC-13	GWC-12
8/30/2016	120	100	87	140					
8/31/2016					64	21	700	43	1100
9/1/2016									
10/24/2016				160					
10/25/2016			83						
10/26/2016	120	130			56	100	850	29	900
10/27/2016									
1/3/2017		120		140					
1/4/2017			99		65		680		880
1/5/2017	130					22		32	
1/6/2017									
4/3/2017				140					
4/4/2017			110			29			
4/5/2017									990
4/6/2017	150	140			110		220	49	
7/10/2017									480
7/11/2017				130	49		210		
7/12/2017	140	140	100					16	
7/13/2017						20			
10/2/2017				150					
10/3/2017	140	130	63		140	20			
10/4/2017							730	33	760
1/9/2018	140			120					
1/10/2018		110	86			9.5		22	
1/11/2018					270		180		780
7/9/2018				123					
7/10/2018	128	48.1	77.7			8.5			
7/11/2018					211		381	17.8	598
1/16/2019	402	184	71.2	129				20.2	
1/17/2019					50.3				454
1/18/2019							107		
1/21/2019						10.2			
3/25/2019				152					
3/26/2019	319	222	73.8					33.6	
3/27/2019					76.8		103		579
7/30/2019						12.3			

Intrawell Prediction Limit Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 8/13/2019, 5:42 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	GWC-13	0.3009	3/26/2019	0.35	Yes	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-16	6.286	3/26/2019	7.4	Yes	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWB-6R	4.2	3/26/2019	7.4	Yes	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWB-5R	559.8	3/26/2019	1040	Yes	7	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWB-6R	569	3/26/2019	1250	Yes	8	0	No	0.0004702	Param Intra 1 of 3

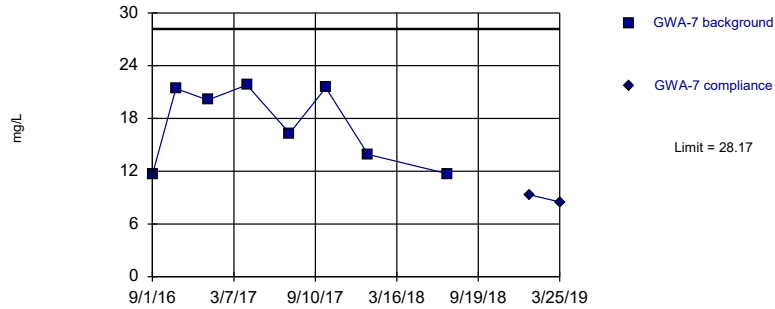
Intrawell Prediction Limit All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 8/13/2019, 5:42 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	GWA-7	28.17	3/25/2019	8.5	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWA-8	0.1446	3/25/2019	0.098	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-1	1.625	3/26/2019	0.77	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-11	0.3714	3/27/2019	0.089	No	8	0	ln(x)	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-12	9.63	3/27/2019	6.1	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-13	0.3009	3/26/2019	0.35	Yes	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-14	0.08961	3/26/2019	0.037	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-15	1.943	3/26/2019	0.95	No	7	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-16	6.286	3/26/2019	7.4	Yes	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-17	1.869	3/26/2019	1.2	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-2	0.05241	7/30/2019	0.02	No	8	0	sqrt(x)	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-20	5.558	3/25/2019	1	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-21	1.031	3/26/2019	0.61	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-22	16.9	3/27/2019	0.37	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWC-9	0.03214	3/27/2019	0.016	No	7	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWB-4R	9.727	3/25/2019	4.4	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWB-5R	7.397	3/26/2019	4	No	8	0	No	0.0004702	Param Intra 1 of 3
Boron (mg/L)	GWB-6R	4.2	3/26/2019	7.4	Yes	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWA-7	4478	3/25/2019	2100	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWA-8	384.6	3/25/2019	240	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-1	460.5	3/26/2019	317	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-11	760	3/27/2019	138	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-12	1845	3/27/2019	673	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-13	150.3	3/26/2019	72	No	8	25	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-14	1226	3/26/2019	496	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-15	672	3/26/2019	541	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-16	1386	3/26/2019	1380	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-17	2945	3/26/2019	1220	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-2	157.3	7/30/2019	70	No	8	12.5	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-20	1016	3/25/2019	449	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-21	328.6	3/26/2019	292	No	8	12.5	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-22	2575	3/27/2019	158	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWC-9	272.4	3/27/2019	104	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWB-4R	1282	3/25/2019	479	No	8	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWB-5R	559.8	3/26/2019	1040	Yes	7	0	No	0.0004702	Param Intra 1 of 3
Total Dissolved Solids (mg/L)	GWB-6R	569	3/26/2019	1250	Yes	8	0	No	0.0004702	Param Intra 1 of 3

Within Limit

Boron
Intrawell Parametric

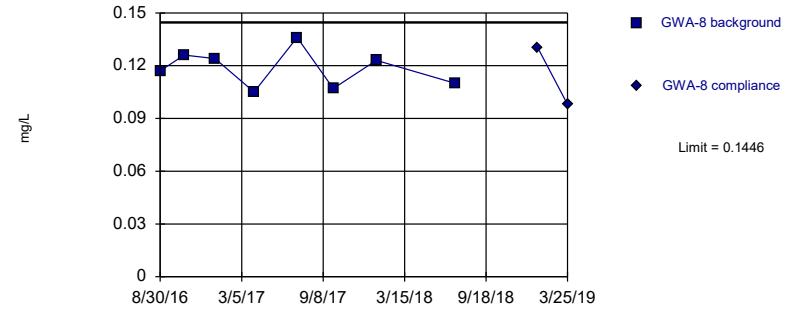


Background Data Summary: Mean=17.29, Std. Dev.=4.455, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8385, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:37 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

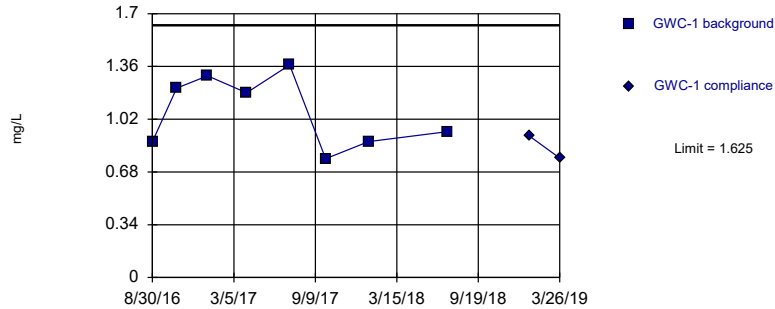


Background Data Summary: Mean=0.1185, Std. Dev.=0.0107, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9464, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:37 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

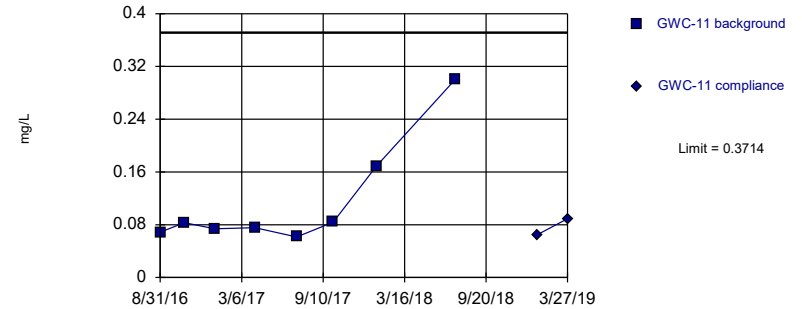


Background Data Summary: Mean=1.067, Std. Dev.=0.2284, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9038, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:37 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

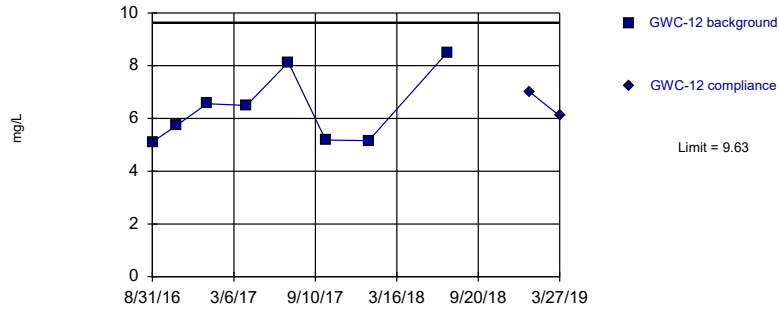


Background Data Summary (based on natural log transformation): Mean=-2.326, Std. Dev.=0.5469, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7728, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:37 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron Intrawell Parametric

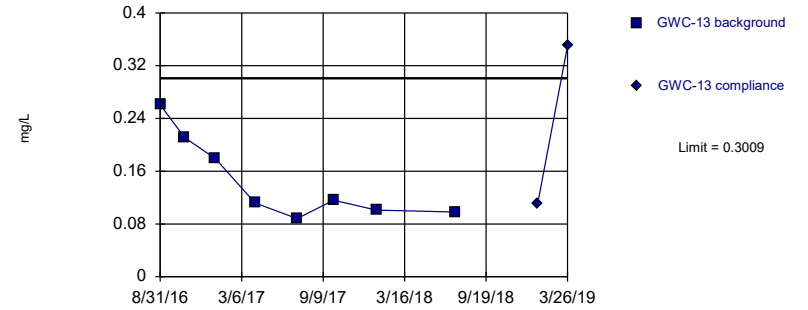


Background Data Summary: Mean=6.358, Std. Dev.=1.34, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8556, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:37 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Boron Intrawell Parametric

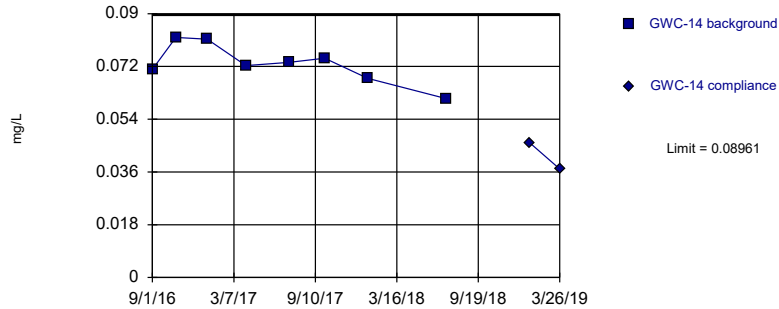


Background Data Summary: Mean=0.1458, Std. Dev.=0.06354, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8407, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:37 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron Intrawell Parametric

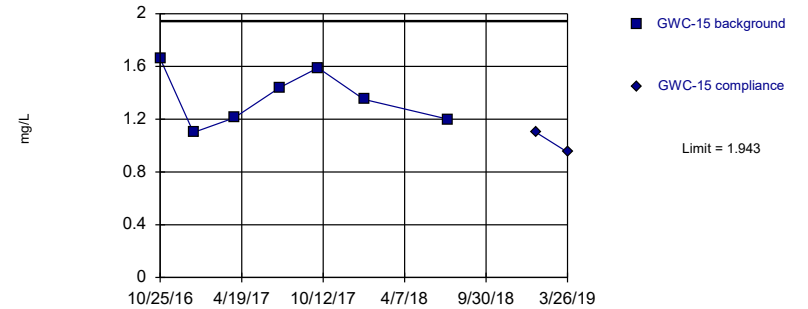


Background Data Summary: Mean=0.07295, Std. Dev.=0.006824, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9516, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:37 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron Intrawell Parametric

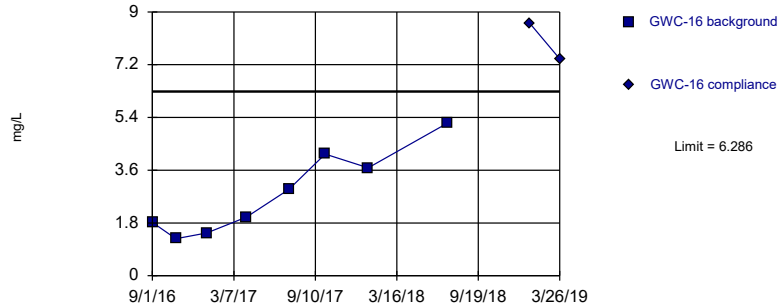


Background Data Summary: Mean=1.364, Std. Dev.=0.2101, n=7. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9415, critical = 0.73. Kappa = 2.756 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:37 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Boron
Intrawell Parametric

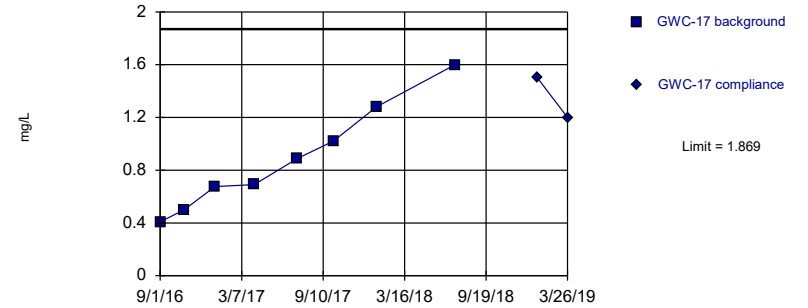


Background Data Summary: Mean=2.815, Std. Dev.=1.422, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9229, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:37 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

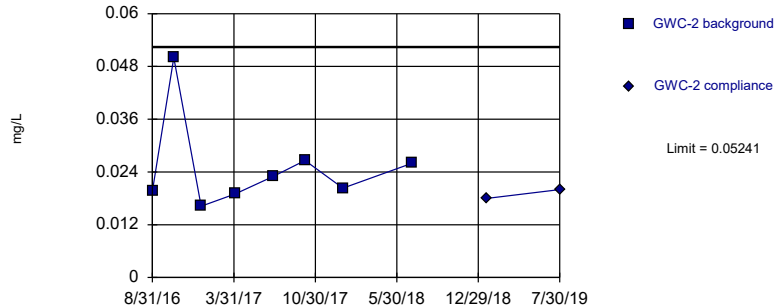


Background Data Summary: Mean=0.8828, Std. Dev.=0.4041, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.945, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:37 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

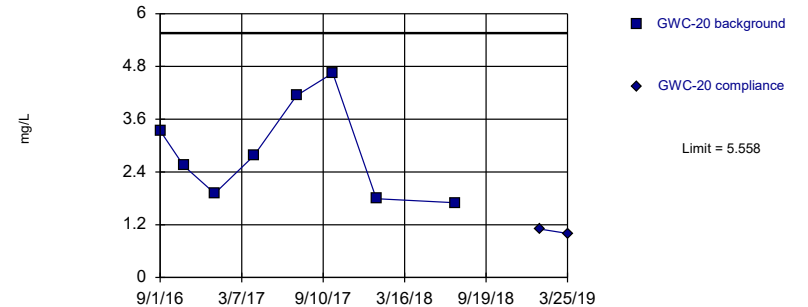


Background Data Summary (based on square root transformation): Mean=0.1559, Std. Dev.=0.02991, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.794, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:37 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

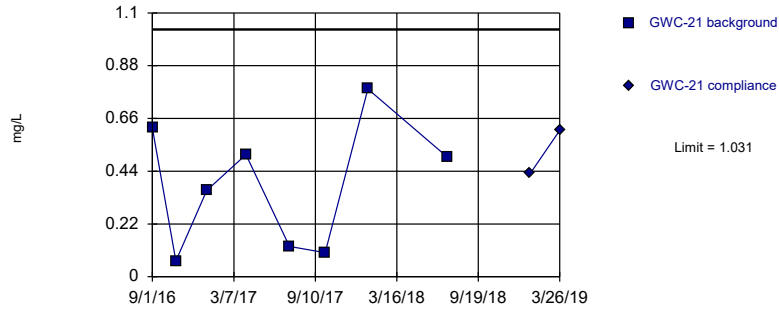


Background Data Summary: Mean=2.855, Std. Dev.=1.107, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9083, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:37 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron Intrawell Parametric

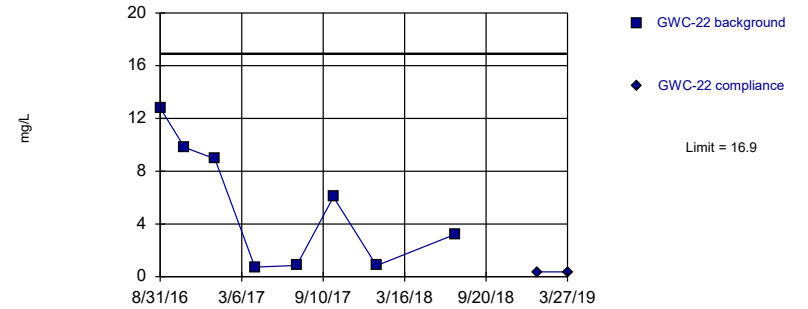


Background Data Summary: Mean=0.383, Std. Dev.=0.2654, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9192, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:37 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron Intrawell Parametric

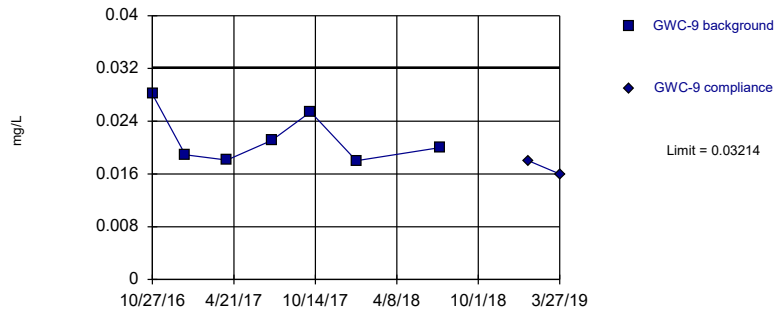


Background Data Summary: Mean=5.403, Std. Dev.=4.71, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8833, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:37 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron Intrawell Parametric

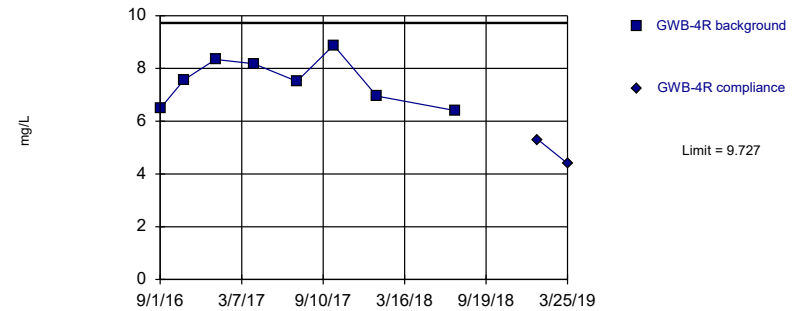


Background Data Summary: Mean=0.02137, Std. Dev.=0.003908, n=7. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8482, critical = 0.73. Kappa = 2.756 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron Intrawell Parametric

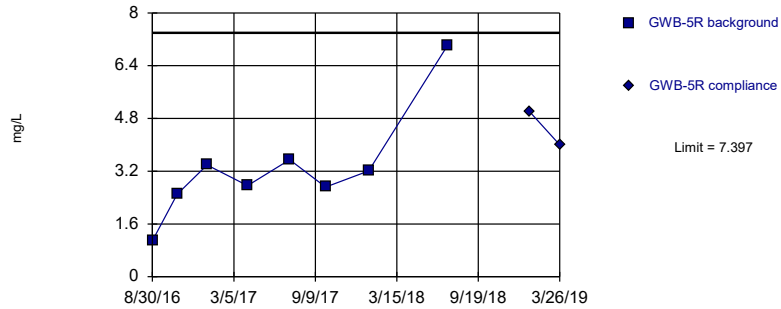


Background Data Summary: Mean=7.539, Std. Dev.=0.8959, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9474, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Boron
Intrawell Parametric

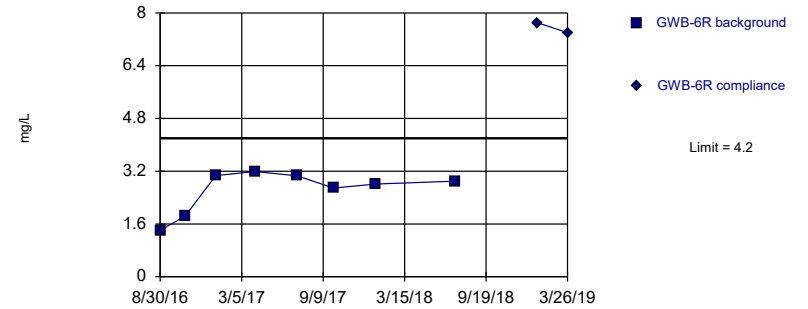


Background Data Summary: Mean=3.278, Std. Dev.=1.687, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.824, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Boron
Intrawell Parametric

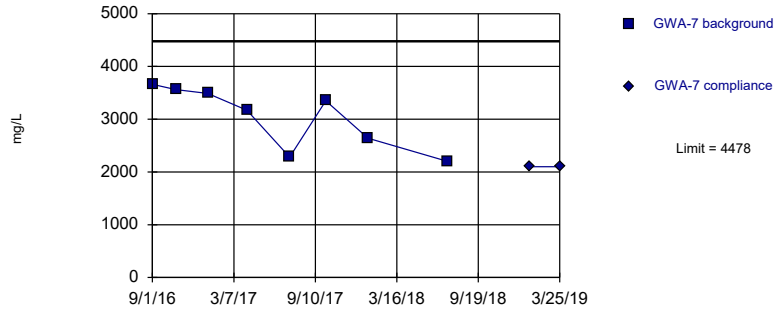


Background Data Summary: Mean=2.62, Std. Dev.=0.6468, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8089, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

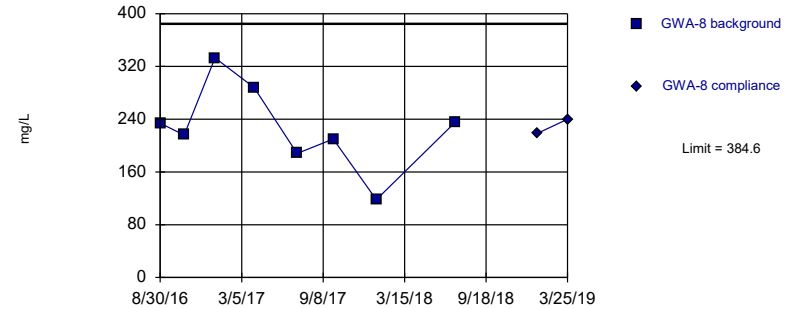


Background Data Summary: Mean=3044, Std. Dev.=587.2, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8674, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

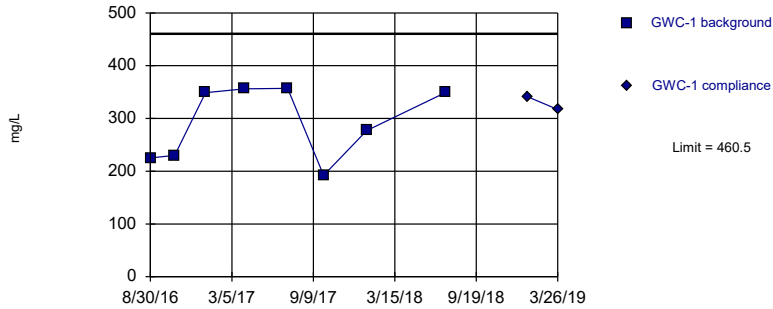


Background Data Summary: Mean=227.8, Std. Dev.=64.23, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9672, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids Intrawell Parametric

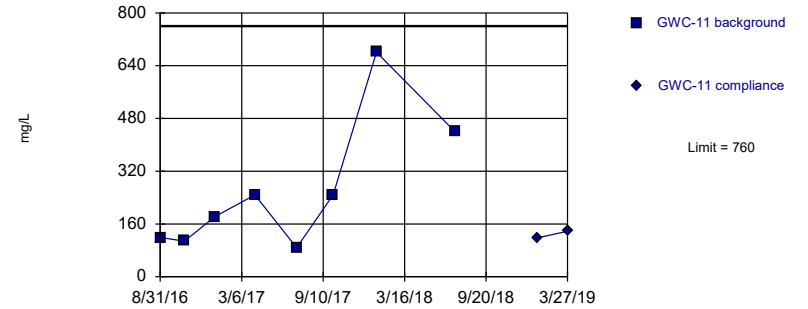


Background Data Summary: Mean=291.9, Std. Dev.=69.05, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8265, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids Intrawell Parametric

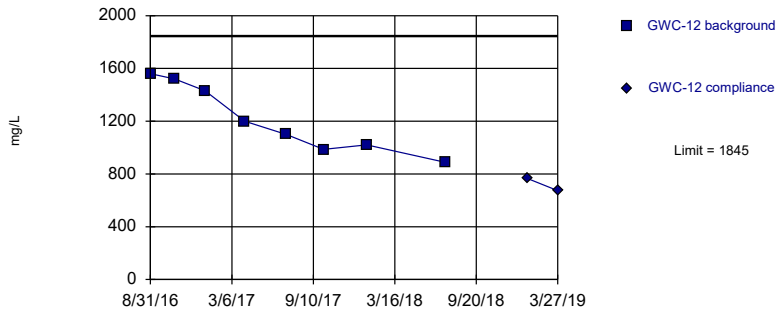


Background Data Summary: Mean=264.3, Std. Dev.=203, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8328, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids Intrawell Parametric

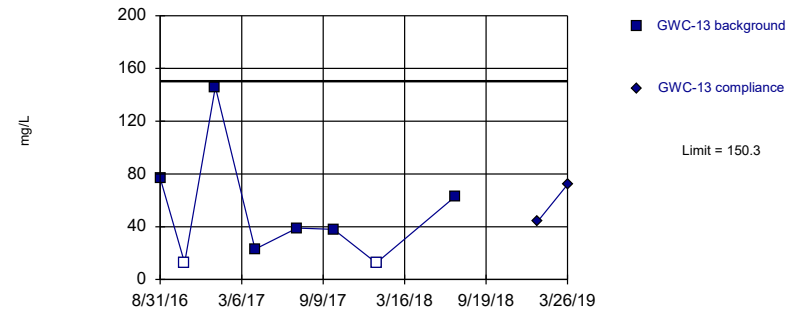


Background Data Summary: Mean=1213, Std. Dev.=258.9, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9083, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids Intrawell Parametric

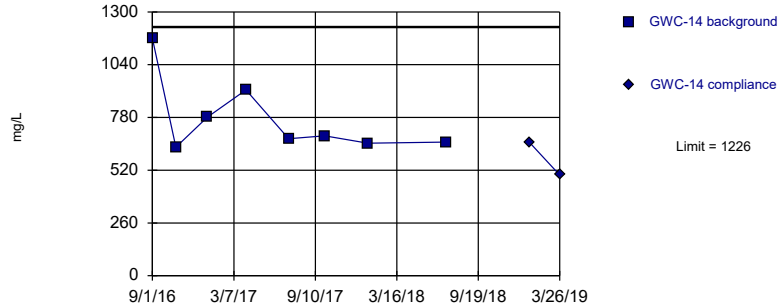


Background Data Summary (after Kaplan-Meier Adjustment): Mean=54, Std. Dev.=39.43, n=8, 25% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8424, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

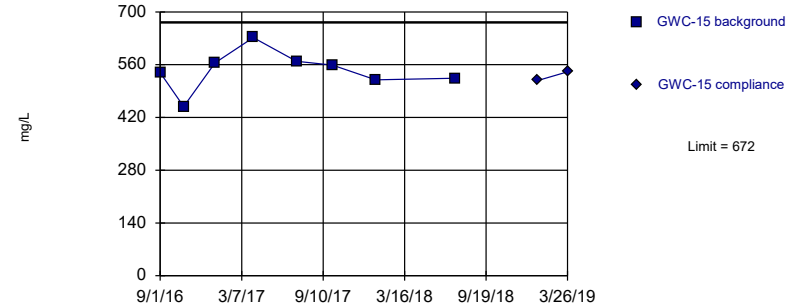


Background Data Summary: Mean=772, Std. Dev.=185.8, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7657, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

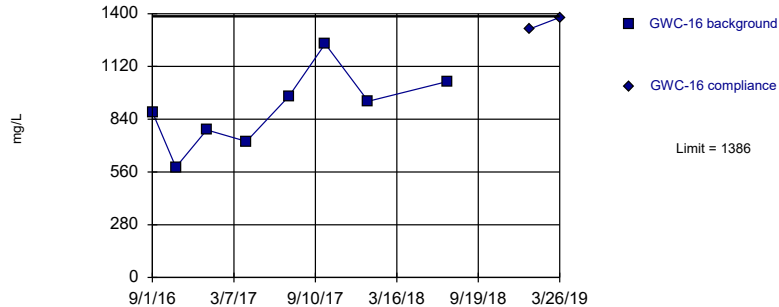


Background Data Summary: Mean=544.6, Std. Dev.=52.18, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9496, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

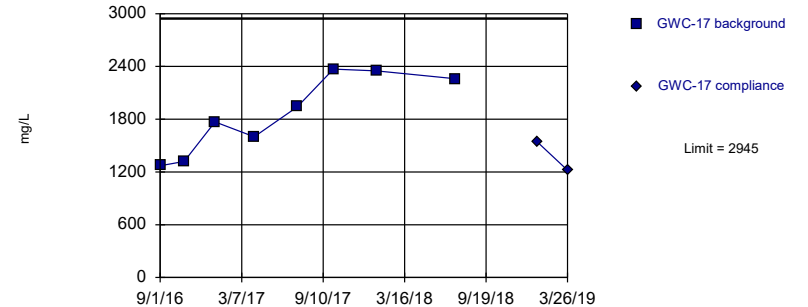


Background Data Summary: Mean=893.1, Std. Dev.=201.8, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.991, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

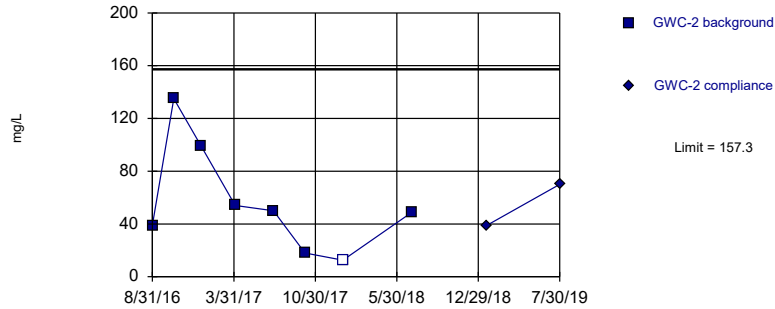


Background Data Summary: Mean=1860, Std. Dev.=444.3, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9015, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

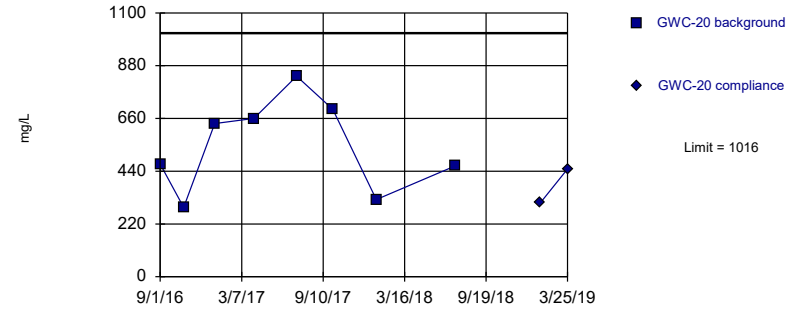


Background Data Summary: Mean=57.06, Std. Dev.=41.05, n=8, 12.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8896, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

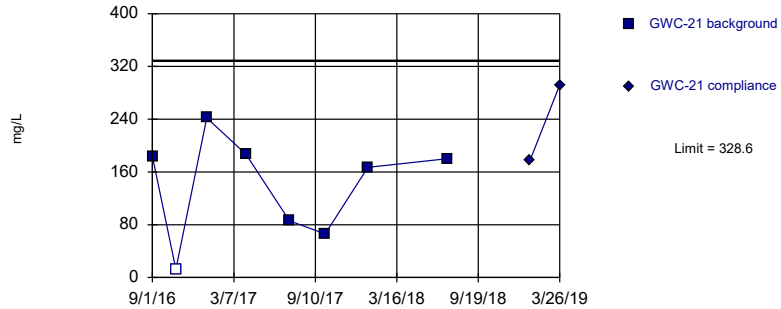


Background Data Summary: Mean=546.9, Std. Dev.=192, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9463, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

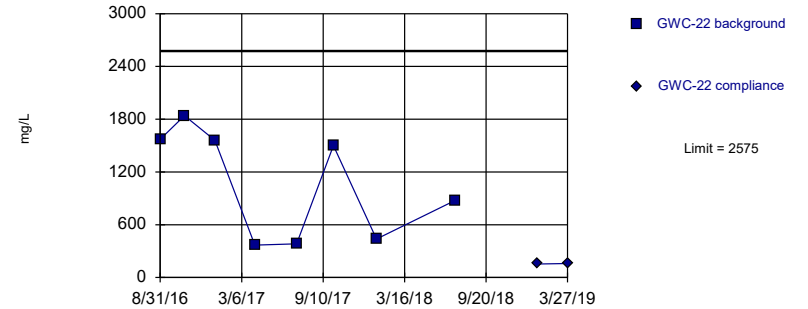


Background Data Summary: Mean=140.6, Std. Dev.=77.02, n=8, 12.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9156, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

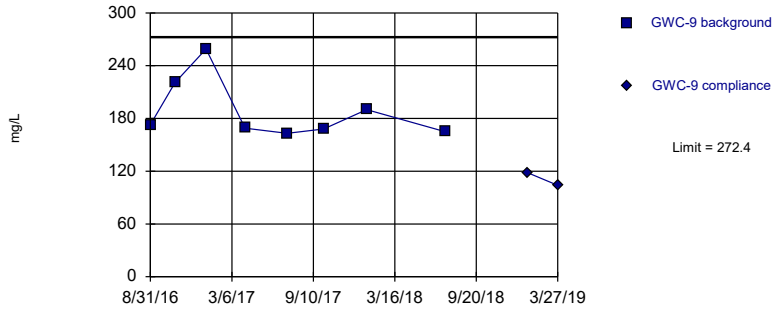


Background Data Summary: Mean=1067, Std. Dev.=617.6, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8394, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

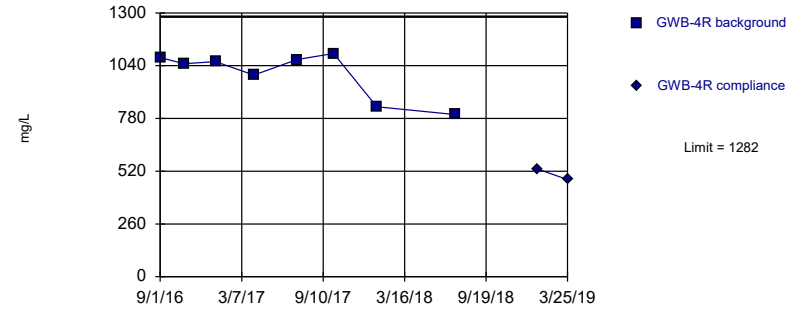


Background Data Summary: Mean=188.5, Std. Dev.=34.38, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7713, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Total Dissolved Solids
Intrawell Parametric

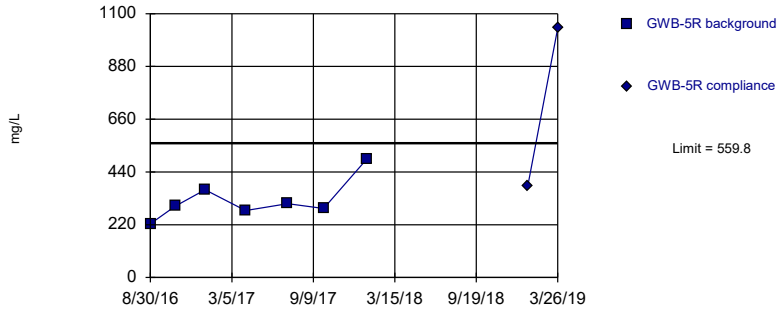


Background Data Summary: Mean=998.9, Std. Dev.=115.9, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7896, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Total Dissolved Solids
Intrawell Parametric

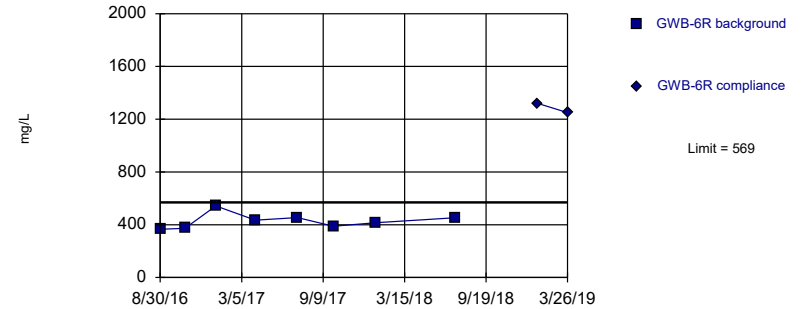


Background Data Summary: Mean=322.1, Std. Dev.=86.22, n=7. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8686, critical = 0.73. Kappa = 2.756 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Total Dissolved Solids
Intrawell Parametric



Background Data Summary: Mean=428.3, Std. Dev.=57.63, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9117, critical = 0.749. Kappa = 2.442 (c=7, w=16, 1 of 3, event alpha = 0.05132). Report alpha = 0.0004702.

Prediction Limit Analysis Run 8/13/2019 5:38 PM View: Appendix III Intrawell PL
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Prediction Limit

Constituent: Boron Analysis Run 8/13/2019 5:42 PM View: Appendix III Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-12	GWC-12	GWC-13	GWC-13	GWC-14	GWC-14	GWC-15	GWC-15
8/31/2016	5.1		0.261					
9/1/2016					0.071 (J)			
10/25/2016					0.0819 (J)		1.66	
10/26/2016	5.74		0.211					
1/4/2017	6.56							
1/5/2017			0.179		0.0813		1.1	
4/3/2017							1.21	
4/4/2017					0.0723			
4/5/2017	6.49							
4/6/2017			0.112					
7/10/2017	8.13							
7/11/2017					0.0734		1.44	
7/12/2017			0.0882					
10/2/2017					0.0748		1.59	
10/4/2017	5.18		0.116					
1/9/2018					0.0679		1.35	
1/10/2018			0.101					
1/11/2018	5.16							
7/9/2018					0.061			
7/10/2018							1.2	
7/11/2018	8.5		0.098					
1/16/2019				0.11		0.046		
1/17/2019		7						1.1
3/26/2019				0.35		0.037 (J)		0.95
3/27/2019		6.1						

Prediction Limit

Constituent: Boron Analysis Run 8/13/2019 5:42 PM View: Appendix III Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-16	GWC-16	GWC-17	GWC-17	GWC-2	GWC-2	GWC-20	GWC-20
8/31/2016					0.0196 (J)			
9/1/2016	1.82		0.408				3.34	
10/25/2016	1.26						2.54	
10/26/2016			0.5		0.05 (J)			
1/4/2017	1.46						1.91	
1/5/2017			0.676		0.0162 (J)			
4/4/2017					0.019 (J)		2.77	
4/5/2017	2		0.69					
7/11/2017							4.14	
7/12/2017	2.95							
7/13/2017			0.888		0.023 (J)			
10/2/2017							4.65	
10/3/2017	4.15				0.0266 (J)			
10/4/2017			1.02					
1/10/2018	3.68				0.0203 (J)		1.79	
1/11/2018			1.28					
7/9/2018							1.7	
7/10/2018	5.2				0.026 (J)			
7/11/2018			1.6					
1/16/2019				1.5				
1/17/2019		8.6						
1/21/2019						0.018 (J)		1.1
3/25/2019								1
3/26/2019		7.4		1.2				
7/30/2019						0.02 (J)		

Prediction Limit

Constituent: Boron Analysis Run 8/13/2019 5:42 PM View: Appendix III IntraWell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-21	GWC-21	GWC-22	GWC-22	GWC-9	GWC-9	GWB-4R	GWB-4R
8/31/2016			12.8					
9/1/2016	0.62						6.48	
10/25/2016	0.0658 (J)							
10/26/2016			9.81				7.57	
10/27/2016					0.0281 (J)			
1/4/2017	0.36		8.94					
1/6/2017					0.0189 (J)		8.34	
4/4/2017	0.509						8.18	
4/6/2017			0.733		0.0181 (J)			
7/11/2017			0.852					
7/12/2017					0.0211 (J)		7.51	
7/13/2017	0.126							
10/3/2017	0.1							
10/4/2017			6.05		0.0254 (J)		8.88	
1/9/2018	0.783							
1/11/2018			0.838		0.018 (J)		6.95	
7/10/2018	0.5							
7/11/2018			3.2		0.02 (J)		6.4	
1/16/2019								5.3
1/17/2019		0.43						
1/18/2019				0.37		0.018 (J)		
3/25/2019								4.4
3/26/2019		0.61						
3/27/2019				0.37		0.016 (J)		

Prediction Limit

Constituent: Boron, Total Dissolved Solids Analysis Run 8/13/2019 5:42 PM View: Appendix III Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWB-5R	GWB-6R	GWB-6R	GWA-7	GWA-7	GWA-8	GWA-8
8/30/2016	1.09		1.41				234	
9/1/2016					3660			
10/24/2016							216	
10/25/2016					3560			
10/26/2016	2.5		1.83					
1/3/2017	3.39						333	
1/5/2017			3.07					
1/6/2017					3490			
4/3/2017							288	
4/6/2017	2.76		3.19		3170			
7/11/2017							188	
7/12/2017	3.55		3.06					
7/13/2017					2280			
10/2/2017							210	
10/3/2017	2.72		2.69					
10/4/2017					3350			
1/9/2018			2.81		2640		118	
1/10/2018	3.21							
7/9/2018							235	
7/10/2018	7		2.9					
7/11/2018					2200			
1/16/2019		5		7.7		2100		219
3/25/2019						2100		240
3/26/2019		4		7.4				

Prediction Limit

Constituent: Total Dissolved Solids Analysis Run 8/13/2019 5:42 PM View: Appendix III Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-1	GWC-11	GWC-11	GWC-12	GWC-12	GWC-13	GWC-13
8/30/2016	225							
8/31/2016			119		1560		77	
10/25/2016	230							
10/26/2016			108		1520		<25	
1/4/2017	349		182		1430			
1/5/2017							146	
4/4/2017	356							
4/5/2017					1200			
4/6/2017			248				23 (J)	
7/10/2017					1100			
7/11/2017			88					
7/12/2017	357						39	
10/3/2017	192		248					
10/4/2017					986		38	
1/10/2018	277						<25	
1/11/2018			681		1020			
7/10/2018	349							
7/11/2018			440		888		63	
1/16/2019		341						44
1/17/2019				118		765		
3/26/2019		317						72
3/27/2019				138		673		

Prediction Limit

Constituent: Total Dissolved Solids Analysis Run 8/13/2019 5:42 PM View: Appendix III Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-14	GWC-14	GWC-15	GWC-15	GWC-16	GWC-16	GWC-17	GWC-17
9/1/2016	1170		539		878		1270	
10/25/2016	633		449		585			
10/26/2016							1320	
1/4/2017					783			
1/5/2017	781		565				1770	
4/3/2017			632					
4/4/2017	916							
4/5/2017					722		1600	
7/11/2017	675		569					
7/12/2017					962			
7/13/2017							1940	
10/2/2017	689		559					
10/3/2017					1240			
10/4/2017							2370	
1/9/2018	653		520					
1/10/2018					935			
1/11/2018							2350	
7/9/2018	659							
7/10/2018			524		1040			
7/11/2018							2260	
1/16/2019		656						1540
1/17/2019				518 (D)		1320		
3/26/2019		496		541		1380		1220

Prediction Limit

Constituent: Total Dissolved Solids Analysis Run 8/13/2019 5:42 PM View: Appendix III Intrawell PL

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-2	GWC-2	GWC-20	GWC-20	GWC-21	GWC-21	GWC-22	GWC-22
8/31/2016	39						1570	
9/1/2016			470		184			
10/25/2016			289		<25			
10/26/2016	135						1840	
1/4/2017			639		242		1560	
1/5/2017	99							
4/4/2017	54		660		187			
4/6/2017							368	
7/11/2017			836				383	
7/13/2017	50				86			
10/2/2017			698					
10/3/2017	18 (J)				66			
10/4/2017							1500	
1/9/2018					167			
1/10/2018	<25		322					
1/11/2018							438	
7/9/2018			461					
7/10/2018	49				180			
7/11/2018							876	
1/17/2019						178		
1/18/2019								154
1/21/2019		39		307				
3/25/2019				449				
3/26/2019						292		
3/27/2019								158
7/30/2019		70						

Prediction Limit

Constituent: Total Dissolved Solids Analysis Run 8/13/2019 5:42 PM View: Appendix III Intrawell PL
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWC-9	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWB-6R	GWB-6R
8/30/2016					224		365	
8/31/2016	173							
9/1/2016			1080					
10/26/2016			1050		297		373	
10/27/2016	221							
1/3/2017					366			
1/5/2017							543	
1/6/2017	259		1060					
4/4/2017			994					
4/6/2017	169				279		434	
7/12/2017	163		1070		308		454	
10/3/2017					288		389	
10/4/2017	168		1100					
1/9/2018							415	
1/10/2018					493			
1/11/2018	190		838					
7/10/2018							453	
7/11/2018	165		799					
1/16/2019				530		382		1320
1/18/2019		118						
3/25/2019				479				
3/26/2019						1040		1250
3/27/2019		104						

Intrawell Prediction Limit Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 8/13/2019, 5:28 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Barium (mg/L)	GWC-16	0.0944	3/26/2019	0.14	Yes	59	0	n/a	0.0005506	NP Intra (normality) 1 of 2
Chromium (mg/L)	GWB-5R	0.03	3/26/2019	0.072	Yes	38	39.47	n/a	0.001294	NP Intra (normality) 1 of 2

Intrawell Prediction Limit All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 8/13/2019, 5:28 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	GWA-7	0.015	3/25/2019	0.015ND	No	41	85.37	n/a	0.001118	NP Intra (NDs) 1 of 2
Antimony (mg/L)	GWC-11	0.003	3/27/2019	0.003ND	No	43	90.7	n/a	0.001037	NP Intra (NDs) 1 of 2
Antimony (mg/L)	GWC-13	0.003	3/26/2019	0.003ND	No	43	97.67	n/a	0.001037	NP Intra (NDs) 1 of 2
Antimony (mg/L)	GWC-14	0.005	3/26/2019	0.003ND	No	64	98.44	n/a	0.0004732	NP Intra (NDs) 1 of 2
Antimony (mg/L)	GWC-16	0.006	3/26/2019	0.003ND	No	64	98.44	n/a	0.0004732	NP Intra (NDs) 1 of 2
Antimony (mg/L)	GWC-20	0.003	3/25/2019	0.003ND	No	22	95.45	n/a	0.003707	NP Intra (NDs) 1 of 2
Antimony (mg/L)	GWC-9	0.003	3/27/2019	0.003ND	No	43	97.67	n/a	0.001037	NP Intra (NDs) 1 of 2
Antimony (mg/L)	GWB-4R	0.003	3/25/2019	0.003ND	No	43	93.02	n/a	0.001037	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWA-7	0.0287	3/25/2019	0.0029	No	41	58.54	n/a	0.001118	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWA-8	0.005	3/25/2019	0.005ND	No	63	92.06	n/a	0.000487	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-1	0.0071	3/26/2019	0.0032	No	39	69.23	n/a	0.001226	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-12	0.005	3/27/2019	0.005ND	No	43	93.02	n/a	0.001037	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-13	0.0064	3/26/2019	0.00058	No	43	95.35	n/a	0.001037	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-14	0.011	3/26/2019	0.0023	No	64	81.25	n/a	0.0004732	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-17	0.005	3/26/2019	0.0015	No	43	86.05	n/a	0.001037	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-2	0.005	7/30/2019	0.00039	No	41	97.56	n/a	0.001118	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-21	0.005	3/26/2019	0.0045	No	17	76.47	n/a	0.005914	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWC-22	0.005	3/27/2019	0.005ND	No	21	61.9	n/a	0.003999	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWB-4R	0.0068	3/25/2019	0.0029	No	39	61.54	n/a	0.001226	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWB-5R	0.023	3/26/2019	0.0014	No	42	71.43	n/a	0.001077	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	GWB-6R	0.025	3/26/2019	0.0029	No	43	60.47	n/a	0.001037	NP Intra (NDs) 1 of 2
Barium (mg/L)	GWA-7	0.2043	3/25/2019	0.054	No	41	0	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWA-8	0.14	3/25/2019	0.064	No	60	0	n/a	0.0005281	NP Intra (normality) 1 of 2
Barium (mg/L)	GWC-1	0.1141	3/26/2019	0.055	No	42	0	sqrt(x)	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-11	0.2074	3/27/2019	0.053	No	42	0	sqrt(x)	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-12	0.1722	3/27/2019	0.017	No	38	0	ln(x)	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-13	0.03175	3/26/2019	0.026	No	42	14.29	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-14	0.1324	3/26/2019	0.034	No	62	0	x^(1/3)	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-15	0.05948	3/26/2019	0.047	No	40	0	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-16	0.0944	3/26/2019	0.14	Yes	59	0	n/a	0.0005506	NP Intra (normality) 1 of 2
Barium (mg/L)	GWC-17	0.247	3/26/2019	0.025	No	42	0	x^2	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-2	0.07214	7/30/2019	0.052	No	39	0	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-20	0.1775	3/25/2019	0.085	No	22	0	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-21	0.1503	3/26/2019	0.084	No	21	0	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWC-22	0.1535	3/27/2019	0.057	No	21	0	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWB-4R	0.261	3/25/2019	0.077	No	42	0	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWB-5R	0.3072	3/26/2019	0.057	No	40	0	No	0.0004115	Param Intra 1 of 2
Barium (mg/L)	GWB-6R	0.2605	3/26/2019	0.012	No	42	0	sqrt(x)	0.0004115	Param Intra 1 of 2
Chromium (mg/L)	GWA-7	0.068	3/25/2019	0.017	No	41	36.59	n/a	0.001118	NP Intra (normality) 1 of 2
Chromium (mg/L)	GWA-8	0.014	3/25/2019	0.01ND	No	61	93.44	n/a	0.0005144	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-1	0.0021	3/26/2019	0.0018	No	41	70.73	n/a	0.001118	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-11	0.01	3/27/2019	0.01ND	No	43	69.77	n/a	0.001037	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-12	0.01	3/27/2019	0.01ND	No	43	72.09	n/a	0.001037	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-13	0.01	3/26/2019	0.01ND	No	43	79.07	n/a	0.001037	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-14	0.014	3/26/2019	0.01ND	No	61	67.21	n/a	0.0005144	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-15	0.01	3/26/2019	0.01ND	No	43	72.09	n/a	0.001037	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-16	0.01	3/26/2019	0.01ND	No	62	80.65	n/a	0.0005007	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-17	0.01	3/26/2019	0.01ND	No	42	78.57	n/a	0.001077	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-2	0.01	7/30/2019	0.00065	No	41	90.24	n/a	0.001118	NP Intra (NDs) 1 of 2

Intrawell Prediction Limit All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 8/13/2019, 5:28 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Chromium (mg/L)	GWC-20	0.01	3/25/2019	0.01ND	No	22	54.55	n/a	0.003707	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-21	0.01	3/26/2019	0.01ND	No	21	57.14	n/a	0.003999	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-22	0.01	3/27/2019	0.01ND	No	21	80.95	n/a	0.003999	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-9	0.014	3/27/2019	0.01ND	No	43	65.12	n/a	0.001037	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWB-4R	0.03411	3/25/2019	0.002	No	43	0	No	0.0004115	Param Intra 1 of 2
Chromium (mg/L)	GWB-5R	0.03	3/26/2019	0.072	Yes	38	39.47	n/a	0.001294	NP Intra (normality) 1 of 2
Chromium (mg/L)	GWB-6R	0.025	3/26/2019	0.017	No	42	7.143	n/a	0.001077	NP Intra (normality) 1 of 2
Lead (mg/L)	GWA-7	0.025	3/25/2019	0.0019	No	40	65	n/a	0.001159	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWA-8	0.0095	3/25/2019	0.005ND	No	62	90.32	n/a	0.0005007	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-1	0.005	3/26/2019	0.005ND	No	43	97.67	n/a	0.001037	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-11	0.013	3/27/2019	0.00029	No	42	78.57	n/a	0.001077	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-12	0.005	3/27/2019	0.005ND	No	43	76.74	n/a	0.001037	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-13	0.0078	3/26/2019	0.005ND	No	43	81.4	n/a	0.001037	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-14	0.005	3/26/2019	0.005ND	No	62	95.16	n/a	0.0005007	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-15	0.0065	3/26/2019	0.005ND	No	43	88.37	n/a	0.001037	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-16	0.017	3/26/2019	0.005ND	No	62	88.71	n/a	0.0005007	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-17	0.005	3/26/2019	0.005ND	No	43	93.02	n/a	0.001037	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-2	0.0069	7/30/2019	0.0002	No	41	90.24	n/a	0.001118	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-20	0.005	3/25/2019	0.005ND	No	22	86.36	n/a	0.003707	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-21	0.005	3/26/2019	0.005ND	No	21	80.95	n/a	0.003999	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-22	0.013	3/27/2019	0.00047	No	21	57.14	n/a	0.003999	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWC-9	0.0051	3/27/2019	0.005ND	No	42	88.1	n/a	0.001077	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWB-4R	0.011	3/25/2019	0.005ND	No	37	59.46	n/a	0.001361	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWB-5R	0.075	3/26/2019	0.005ND	No	42	64.29	n/a	0.001077	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWB-6R	0.025	3/26/2019	0.025ND	No	43	81.4	n/a	0.001037	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWA-7	0.05	3/25/2019	0.05ND	No	42	66.67	n/a	0.001077	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWA-8	0.01	3/25/2019	0.01ND	No	62	96.77	n/a	0.0005007	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-1	0.023	3/26/2019	0.0023	No	41	58.54	n/a	0.001118	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-11	0.036	3/27/2019	0.01	No	43	62.79	n/a	0.001037	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-12	0.01	3/27/2019	0.01ND	No	43	93.02	n/a	0.001037	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-14	0.1	3/26/2019	0.0022	No	63	23.81	n/a	0.000487	NP Intra (normality) 1 of 2
Selenium (mg/L)	GWC-15	0.01	3/26/2019	0.0074	No	39	92.31	n/a	0.001226	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-16	0.0085	3/26/2019	0.0033	No	62	75.81	n/a	0.0005007	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-17	0.01	3/26/2019	0.01ND	No	43	83.72	n/a	0.001037	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-2	0.01	7/30/2019	0.01ND	No	41	92.68	n/a	0.001118	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-20	0.01	3/25/2019	0.01ND	No	22	86.36	n/a	0.003707	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-21	0.04932	3/26/2019	0.022	No	21	4.762	No	0.0004115	Param Intra 1 of 2
Selenium (mg/L)	GWC-22	0.01	3/27/2019	0.01ND	No	21	80.95	n/a	0.003999	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWC-9	0.01	3/27/2019	0.01ND	No	43	97.67	n/a	0.001037	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWB-4R	0.01	3/25/2019	0.01ND	No	34	67.65	n/a	0.001599	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWB-5R	0.011	3/26/2019	0.01ND	No	43	88.37	n/a	0.001037	NP Intra (NDs) 1 of 2
Selenium (mg/L)	GWB-6R	0.05	3/26/2019	0.05	No	43	83.72	n/a	0.001037	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWA-7	0.425	3/25/2019	0.18	No	41	29.27	n/a	0.001118	NP Intra (normality) 1 of 2
Vanadium (mg/L)	GWA-8	0.01	3/25/2019	0.01ND	No	60	91.67	n/a	0.0005281	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-1	0.01	3/26/2019	0.0051	No	39	58.97	n/a	0.001226	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-11	0.01	3/27/2019	0.0023	No	40	55	n/a	0.001159	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-12	0.01	3/27/2019	0.0049	No	40	80	n/a	0.001159	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-13	0.01	3/26/2019	0.0029	No	40	80	n/a	0.001159	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-14	0.04977	3/26/2019	0.0063	No	62	16.13	sqrt(x)	0.0004115	Param Intra 1 of 2
Vanadium (mg/L)	GWC-15	0.01	3/26/2019	0.0026	No	40	72.5	n/a	0.001159	NP Intra (NDs) 1 of 2

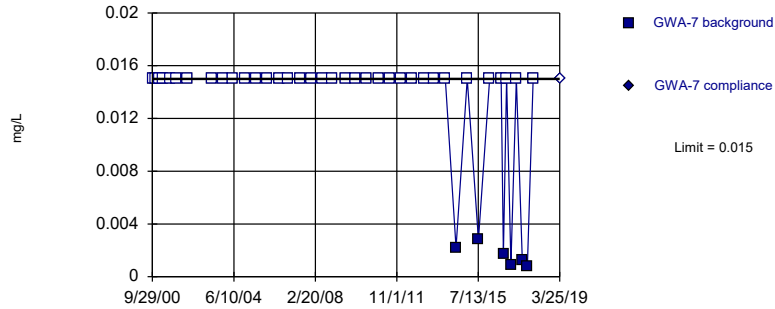
Intrawell Prediction Limit All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 8/13/2019, 5:28 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Vanadium (mg/L)	GWC-16	0.012	3/26/2019	0.0038	No	62	50	n/a	0.0005007	NP Intra (normality) 1 of 2
Vanadium (mg/L)	GWC-17	0.01	3/26/2019	0.0024	No	40	75	n/a	0.001159	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-2	0.01	7/30/2019	0.01ND	No	38	100	n/a	0.001294	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-20	0.01	3/25/2019	0.0024	No	21	38.1	n/a	0.003999	NP Intra (normality) 1 of 2
Vanadium (mg/L)	GWC-21	0.007919	3/26/2019	0.0041	No	18	33.33	ln(x)	0.0004115	Param Intra 1 of 2
Vanadium (mg/L)	GWC-22	0.01	3/27/2019	0.002	No	18	61.11	n/a	0.005373	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-9	0.014	3/27/2019	0.01ND	No	40	87.5	n/a	0.001159	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWB-4R	0.1423	3/25/2019	0.004	No	40	0	sqrt(x)	0.0004115	Param Intra 1 of 2
Vanadium (mg/L)	GWB-5R	0.04817	3/26/2019	0.0058	No	33	15.15	ln(x)	0.0004115	Param Intra 1 of 2
Vanadium (mg/L)	GWB-6R	0.18	3/26/2019	0.086	No	40	7.5	n/a	0.001159	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWA-7	0.0853	3/25/2019	0.05ND	No	39	30.77	n/a	0.001226	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWA-8	0.01	3/25/2019	0.01ND	No	57	24.56	n/a	0.0005955	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWC-1	0.011	3/26/2019	0.01ND	No	40	85	n/a	0.001159	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-11	0.013	3/27/2019	0.01ND	No	39	69.23	n/a	0.001226	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-12	0.053	3/27/2019	0.0031	No	35	25.71	n/a	0.001497	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWC-13	0.036	3/26/2019	0.03	No	38	28.95	n/a	0.001294	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWC-14	0.011	3/26/2019	0.01ND	No	63	87.3	n/a	0.000487	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-15	0.011	3/26/2019	0.01ND	No	41	90.24	n/a	0.001118	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-16	0.01	3/26/2019	0.01ND	No	61	67.21	n/a	0.0005144	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-17	0.0175	3/26/2019	0.0057	No	40	32.5	n/a	0.001159	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWC-2	0.012	7/30/2019	0.0067	No	37	81.08	n/a	0.001361	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-20	0.01	3/25/2019	0.01ND	No	20	85	n/a	0.004291	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-21	0.01	3/26/2019	0.01ND	No	17	58.82	n/a	0.005914	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-22	0.02471	3/27/2019	0.01ND	No	17	11.76	No	0.0004115	Param Intra 1 of 2
Zinc (mg/L)	GWC-9	0.0059	3/27/2019	0.0026	No	37	45.95	n/a	0.001361	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWB-4R	0.1912	3/25/2019	0.0078	No	40	17.5	ln(x)	0.0004115	Param Intra 1 of 2
Zinc (mg/L)	GWB-5R	0.036	3/26/2019	0.01ND	No	33	51.52	n/a	0.001701	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWB-6R	0.05	3/26/2019	0.05ND	No	19	26.32	n/a	0.004832	NP Intra (normality) 1 of 2

Within Limit

Antimony Intrawell Non-parametric

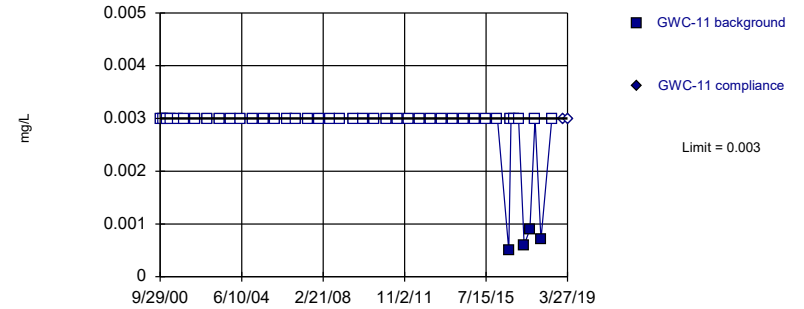


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 85.37% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Antimony Intrawell Non-parametric

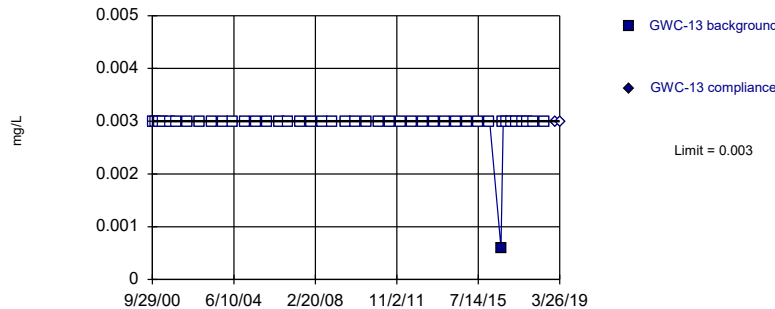


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 90.7% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Antimony Intrawell Non-parametric

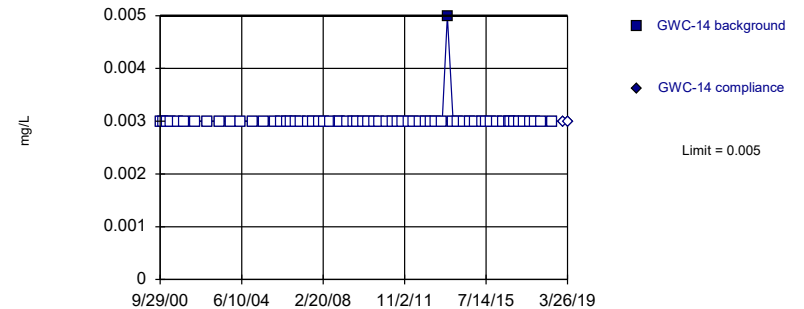


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 97.67% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Antimony Intrawell Non-parametric

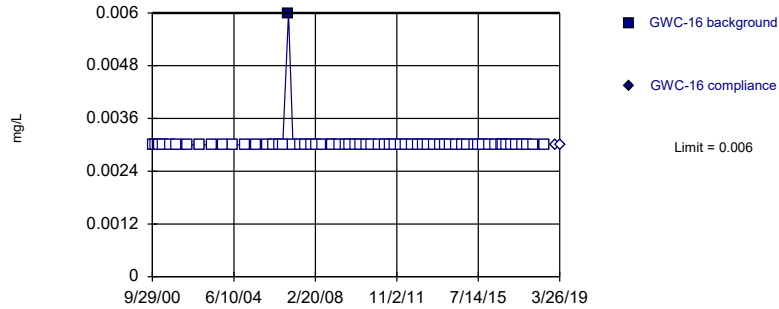


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 64 background values. 98.44% NDs. Well-constituent pair annual alpha = 0.0009462. Individual comparison alpha = 0.0004732 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Antimony Intrawell Non-parametric

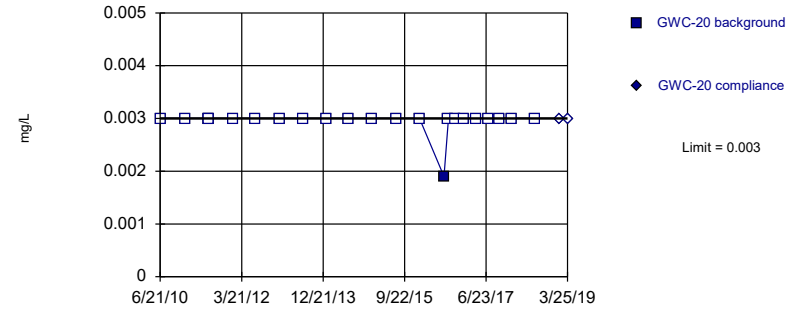


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 64 background values. 98.44% NDs. Well-constituent pair annual alpha = 0.0009462. Individual comparison alpha = 0.0004732 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Antimony Intrawell Non-parametric

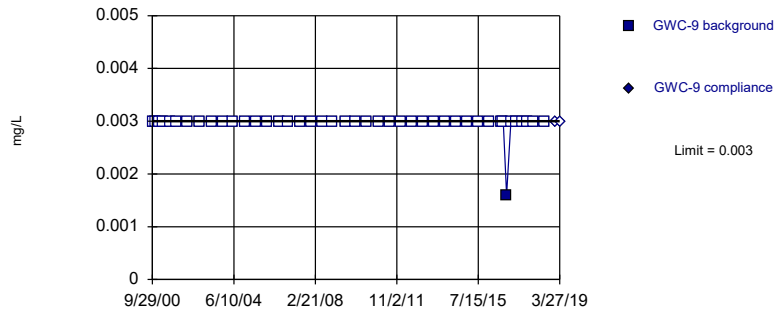


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 22 background values. 95.45% NDs. Well-constituent pair annual alpha = 0.007401. Individual comparison alpha = 0.003707 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Antimony Intrawell Non-parametric

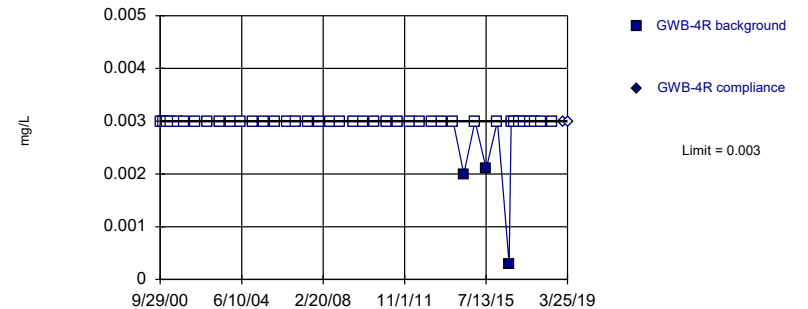


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 97.67% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Antimony Intrawell Non-parametric

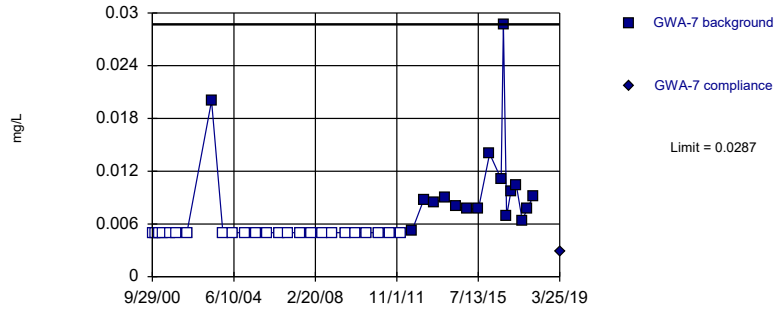


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 93.02% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic Intrawell Non-parametric

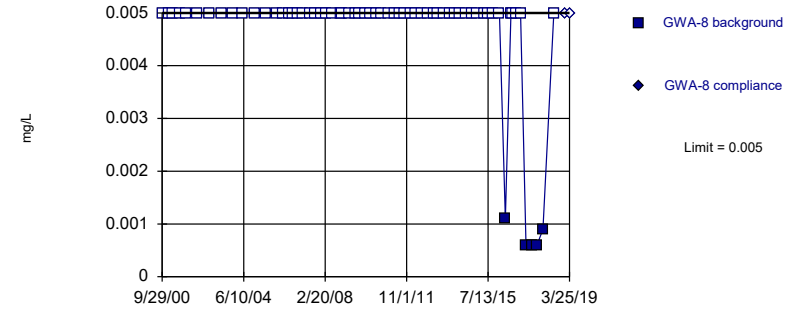


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 58.54% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic Intrawell Non-parametric

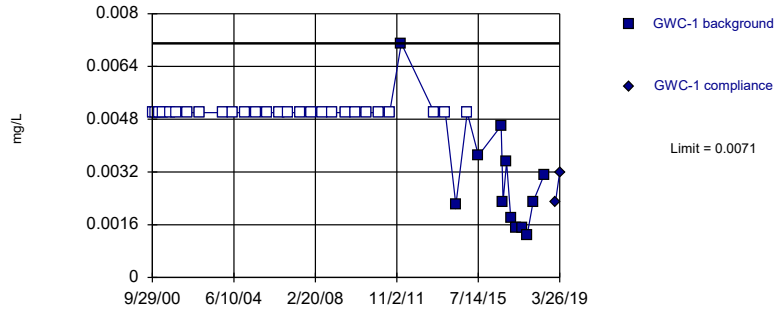


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 63 background values. 92.06% NDs. Well-constituent pair annual alpha = 0.0009737. Individual comparison alpha = 0.000487 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic Intrawell Non-parametric

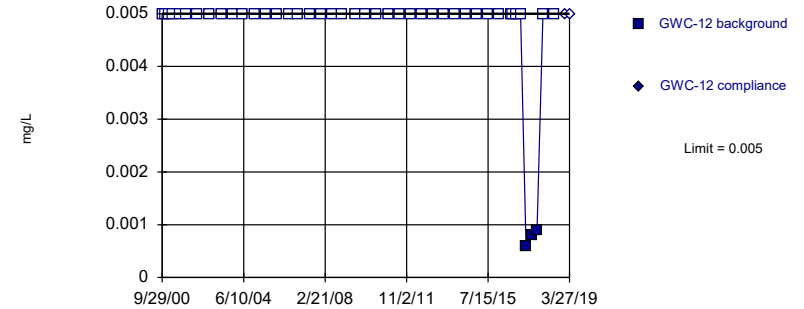


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 39 background values. 69.23% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic Intrawell Non-parametric

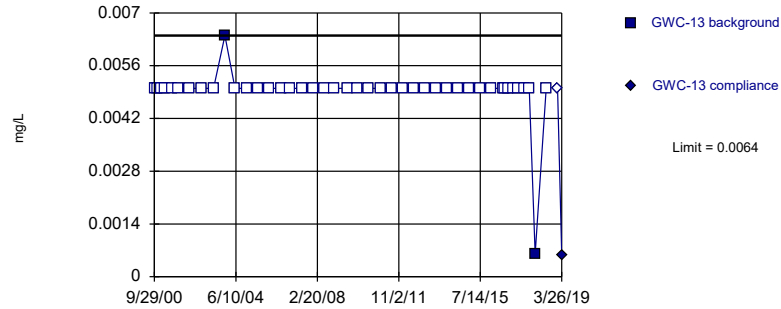


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 93.02% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

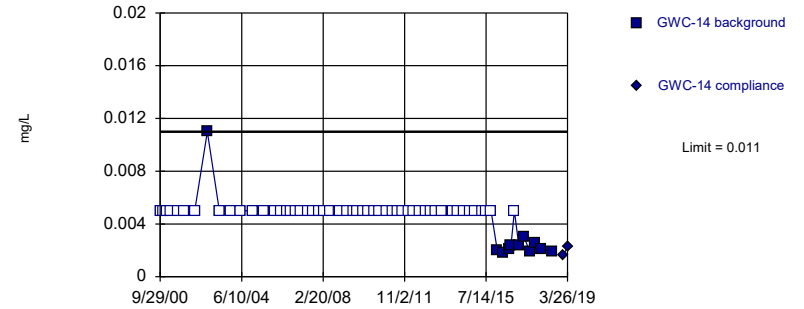
Arsenic
Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 95.35% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Within Limit

Arsenic
Intrawell Non-parametric

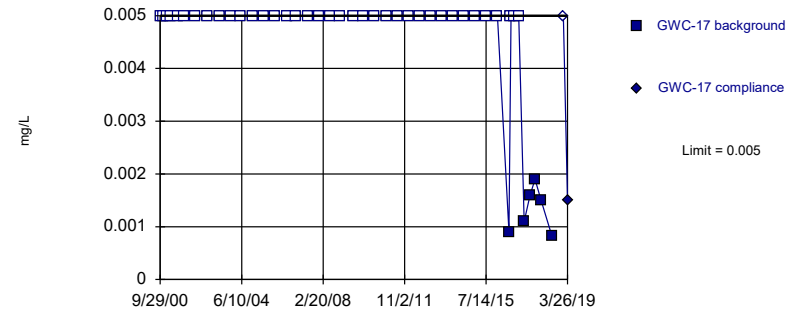


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 64 background values. 81.25% NDs. Well-constituent pair annual alpha = 0.0009462. Individual comparison alpha = 0.0004732 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
Intrawell Non-parametric

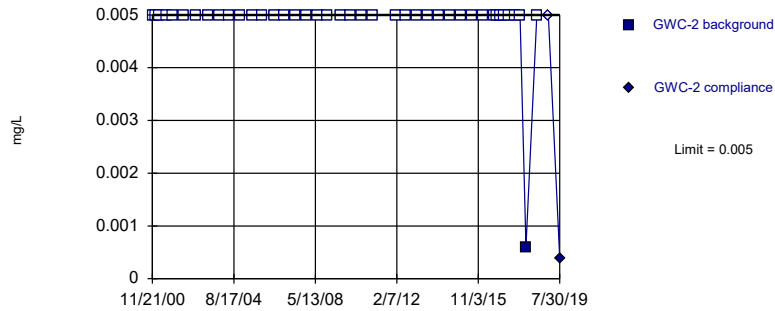


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 86.05% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
 Intrawell Non-parametric

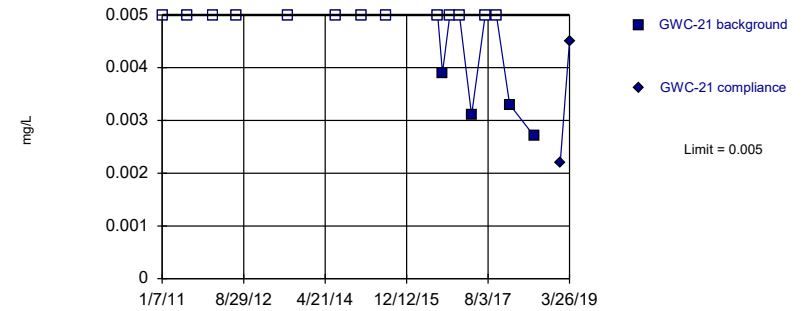


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 97.56% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
 Intrawell Non-parametric

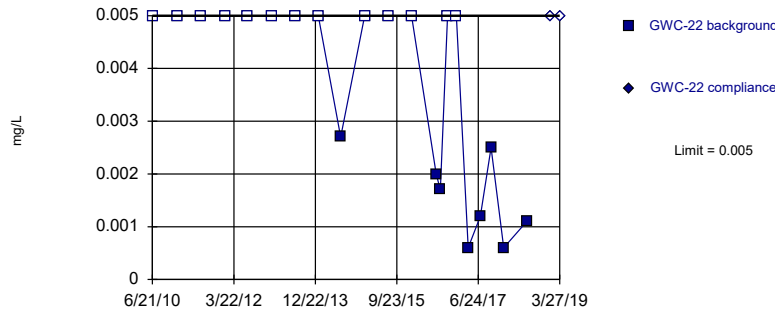


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 76.47% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
 Intrawell Non-parametric

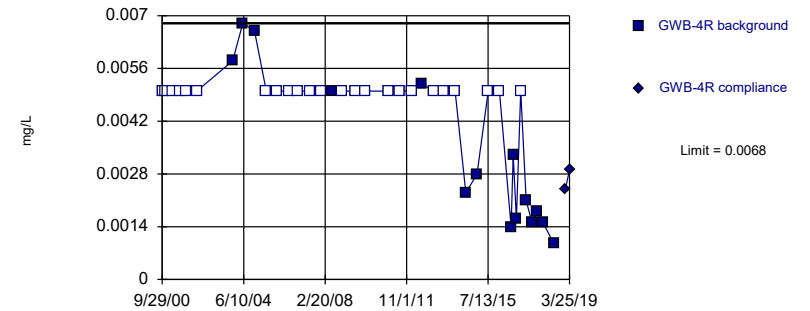


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 61.9% NDs. Well-constituent pair annual alpha = 0.007982. Individual comparison alpha = 0.003999 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
 Intrawell Non-parametric

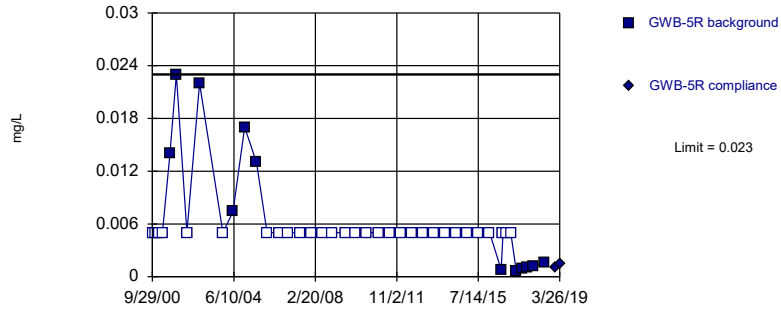


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 39 background values. 61.54% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
Intrawell Non-parametric

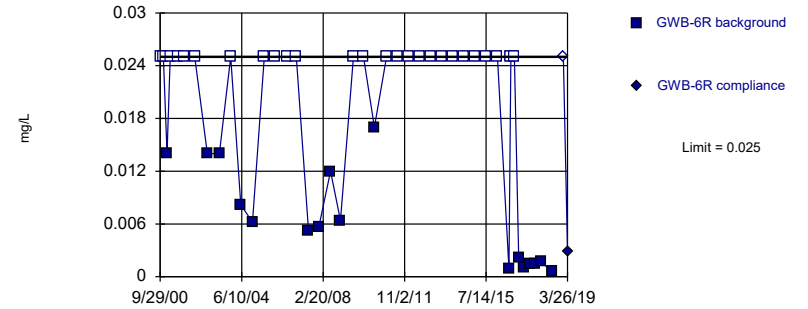


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 42 background values. 71.43% NDs. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:12 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Arsenic
Intrawell Non-parametric

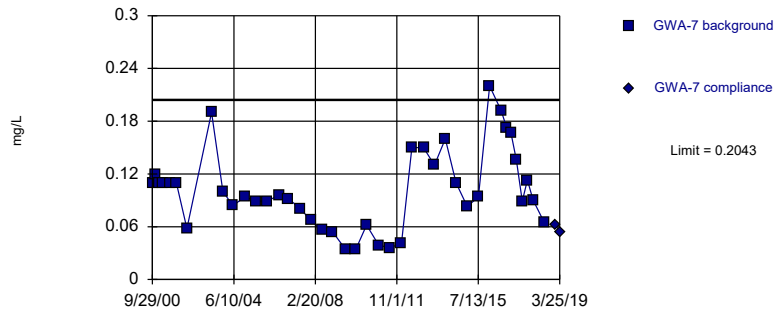


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 60.47% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:13 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Parametric

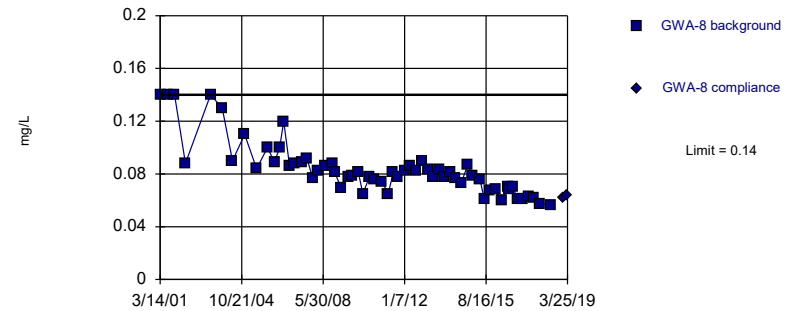


Background Data Summary: Mean=0.1021, Std. Dev.=0.04574, n=41. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9479, critical = 0.92. Kappa = 2.233 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:13 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell 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 60 background values. Well-constituent pair annual alpha = 0.001056. Individual comparison alpha = 0.0005281 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:13 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Parametric

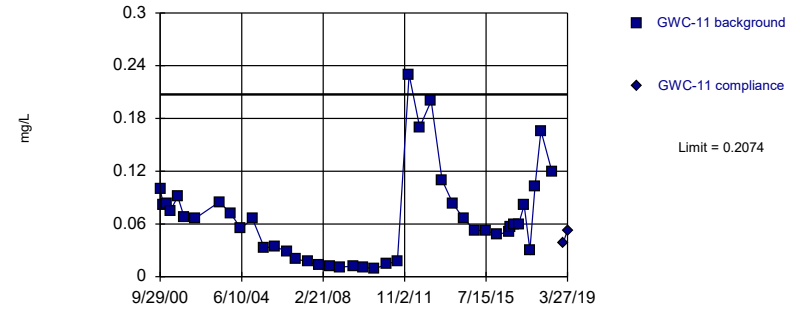


Background Data Summary (based on square root transformation): Mean=0.2379, Std. Dev.=0.04483, n=42. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9416, critical = 0.922. Kappa = 2.228 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:13 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Parametric

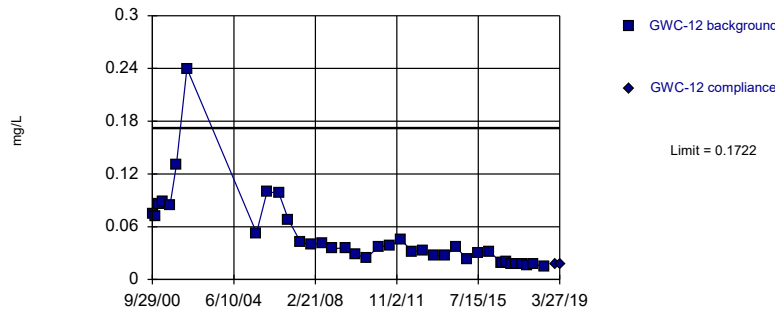


Background Data Summary (based on square root transformation): Mean=0.2407, Std. Dev.=0.09636, n=42. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9464, critical = 0.922. Kappa = 2.228 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:13 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Parametric

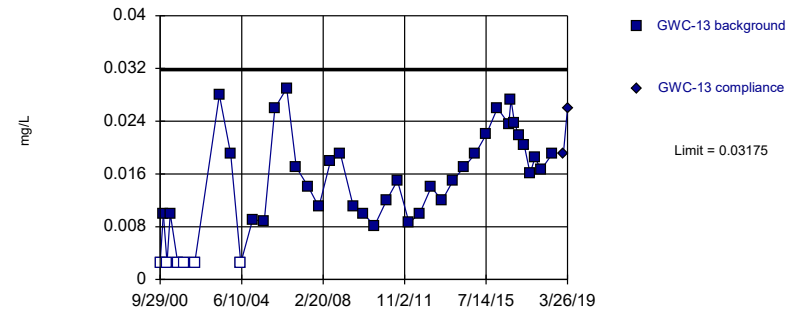


Background Data Summary (based on natural log transformation): Mean=-3.263, Std. Dev.=0.6683, n=38. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9444, critical = 0.916. Kappa = 2.25 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:13 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Parametric

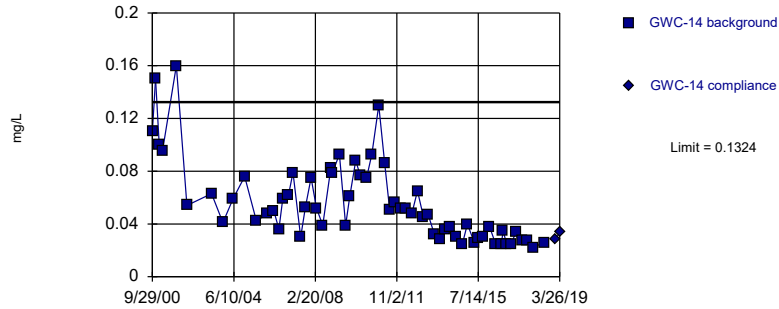


Background Data Summary: Mean=0.01478, Std. Dev.=0.00762, n=42, 14.29% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9482, critical = 0.922. Kappa = 2.228 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:13 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium Intrawell Parametric

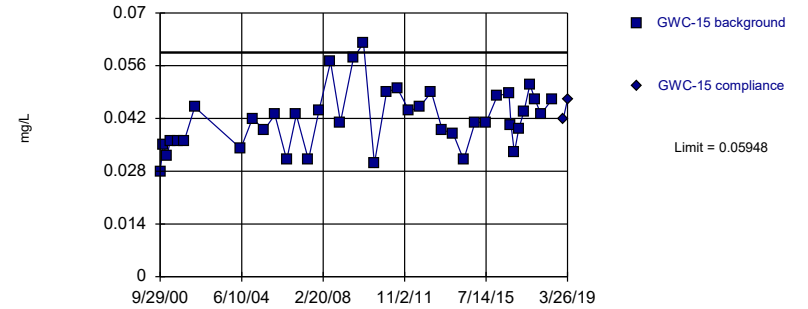


Background Data Summary (based on cube root transformation): Mean=0.3719, Std. Dev.=0.06371, n=62.
 Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9525, critical = 0.947. Kappa = 2.162 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:13 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium Intrawell Parametric

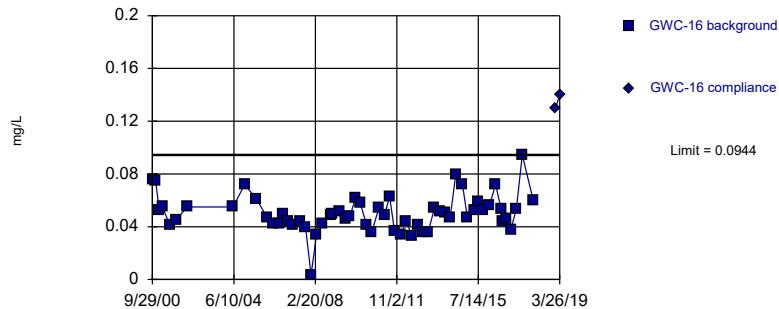


Background Data Summary: Mean=0.04178, Std. Dev.=0.00791, n=40. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.969, critical = 0.919. Kappa = 2.238 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:13 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Barium Intrawell Non-parametric

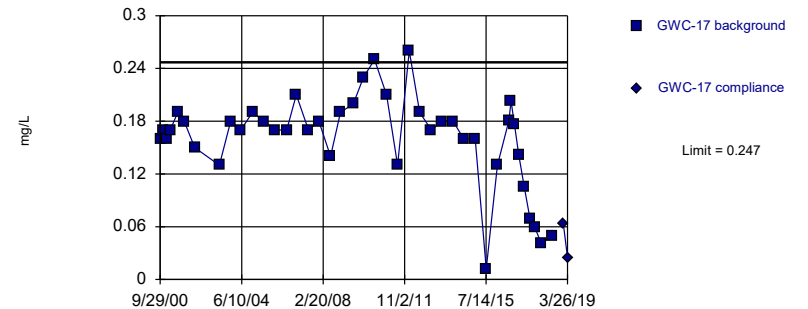


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 59 background values. Well-constituent pair annual alpha = 0.001101. Individual comparison alpha = 0.0005506 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:13 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium Intrawell Parametric

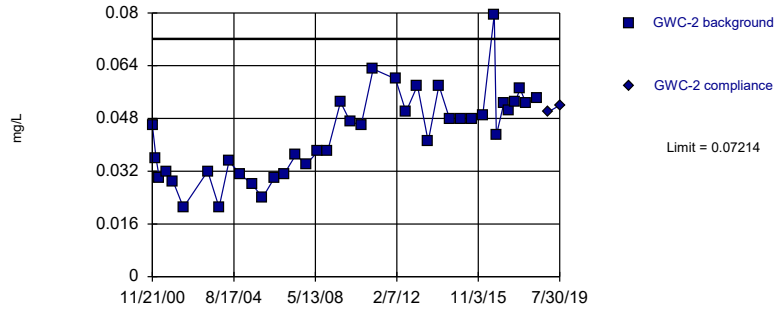


Background Data Summary (based on square transformation): Mean=0.02849, Std. Dev.=0.01459, n=42. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9442, critical = 0.922. Kappa = 2.228 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:13 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Parametric

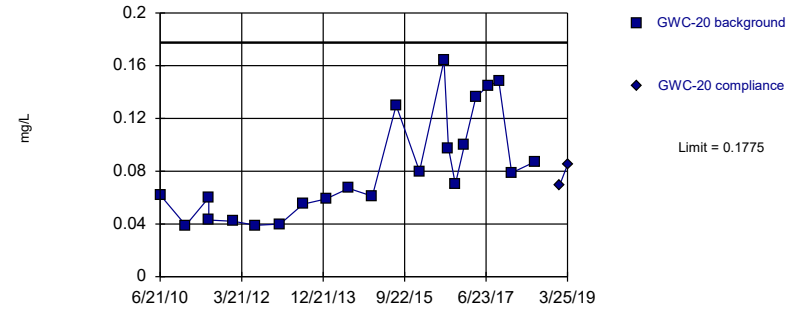


Background Data Summary: Mean=0.04318, Std. Dev.=0.0129, n=39. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9652, critical = 0.917. Kappa = 2.244 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:13 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Parametric

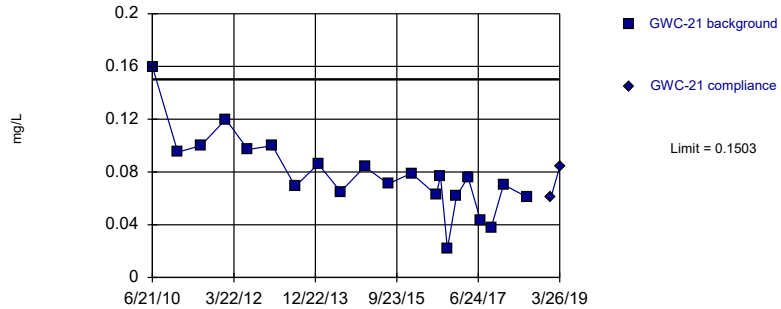


Background Data Summary: Mean=0.08198, Std. Dev.=0.03928, n=22. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8843, critical = 0.878. Kappa = 2.431 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:13 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Parametric

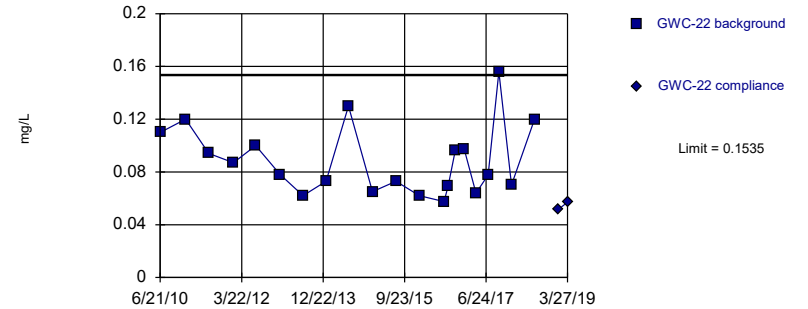


Background Data Summary: Mean=0.07795, Std. Dev.=0.0295, n=21. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9451, critical = 0.873. Kappa = 2.452 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:13 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Parametric

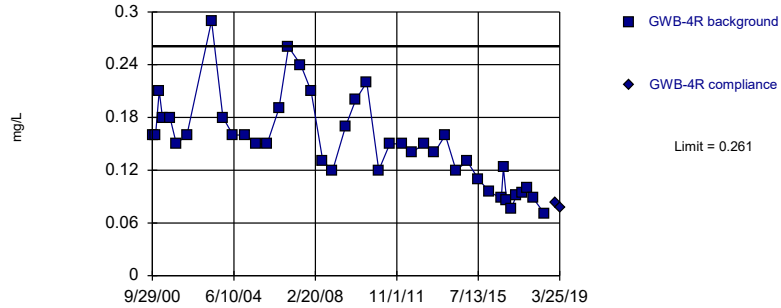


Background Data Summary: Mean=0.08871, Std. Dev.=0.02642, n=21. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9073, critical = 0.873. Kappa = 2.452 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:13 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Parametric

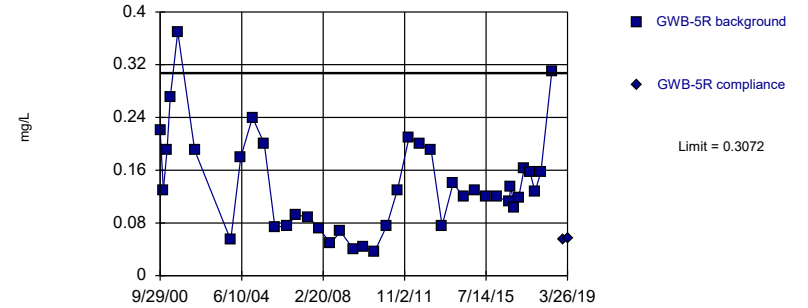


Background Data Summary: Mean=0.1503, Std. Dev.=0.04972, n=42. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9535, critical = 0.922. Kappa = 2.228 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:13 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Parametric

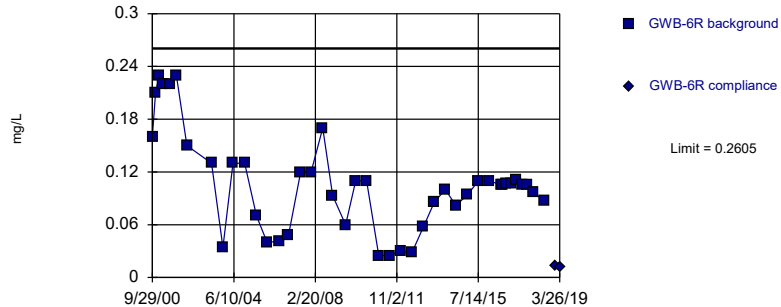


Background Data Summary: Mean=0.1394, Std. Dev.=0.07497, n=40. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.93, critical = 0.919. Kappa = 2.238 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:14 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Barium
Intrawell Parametric

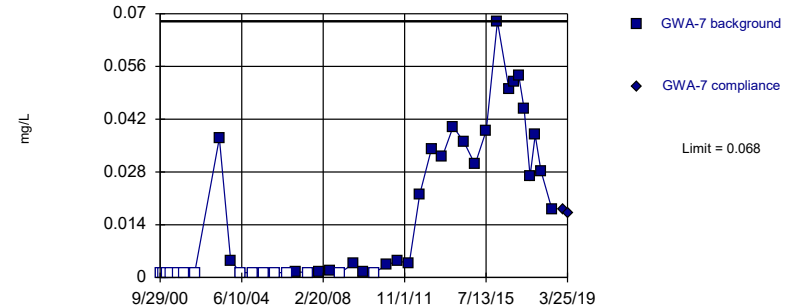


Background Data Summary (based on square root transformation): Mean=0.3159, Std. Dev.=0.0873, n=42. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9364, critical = 0.922. Kappa = 2.228 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:14 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium
Intrawell Non-parametric

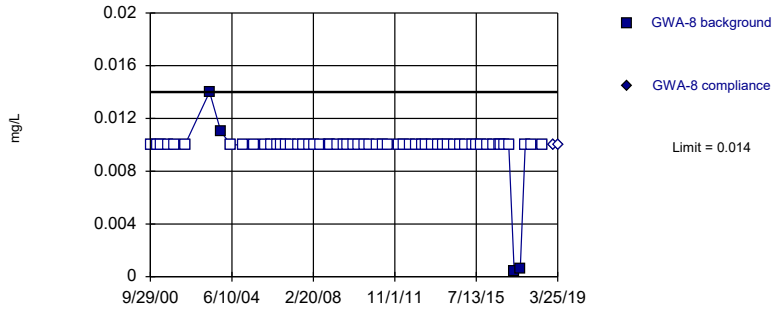


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 41 background values. 36.59% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:14 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

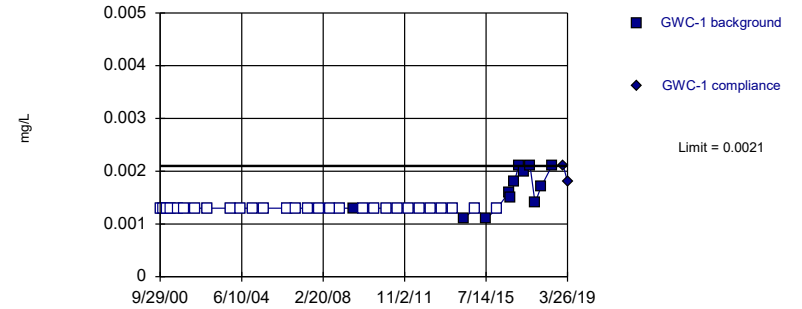


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 61 background values. 93.44% NDs. Well-constituent pair annual alpha = 0.001029. Individual comparison alpha = 0.0005144 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:14 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

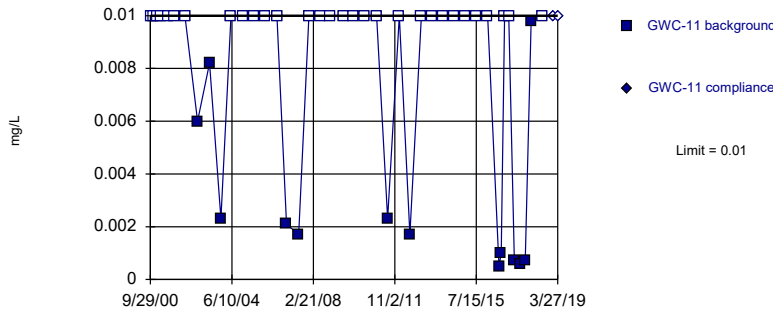


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 70.73% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:14 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

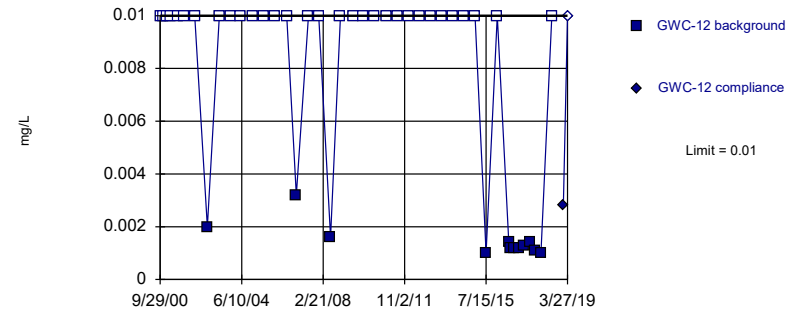


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 69.77% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:14 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

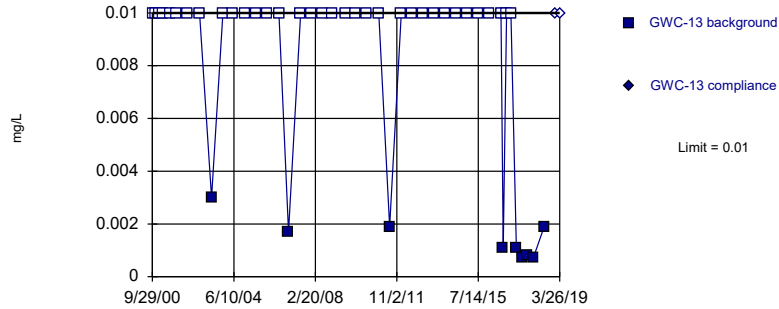


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 72.09% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:14 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

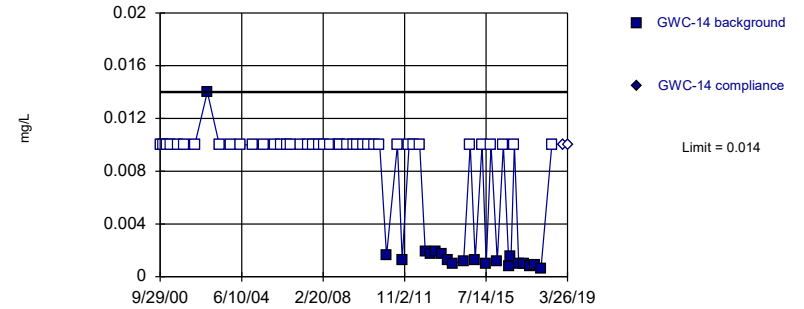


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 79.07% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:14 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

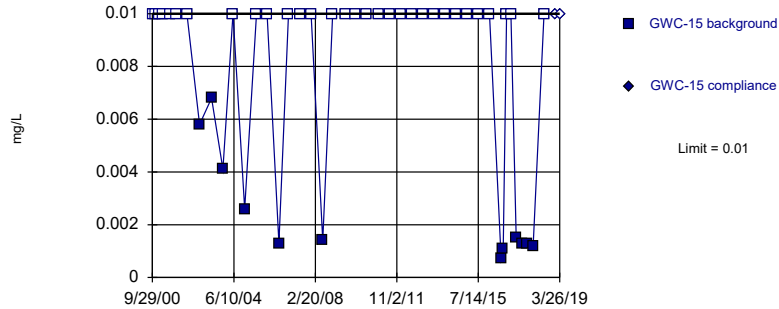


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 61 background values. 67.21% NDs. Well-constituent pair annual alpha = 0.001029. Individual comparison alpha = 0.0005144 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:14 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

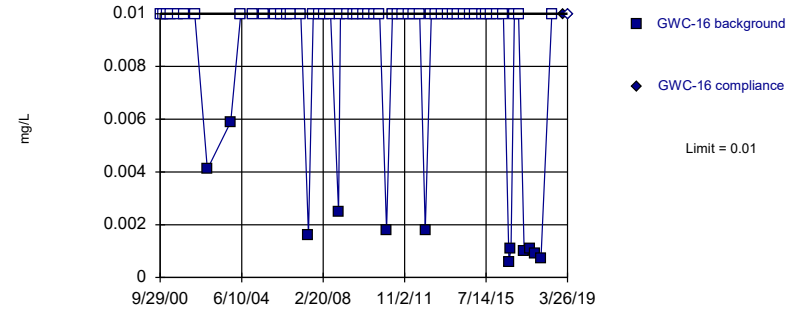


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 72.09% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:14 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

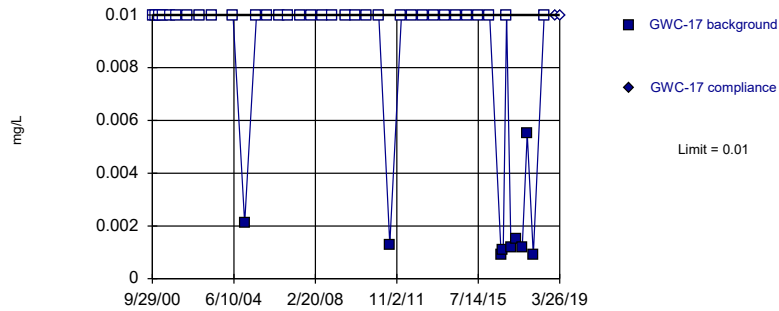


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 62 background values. 80.65% NDs. Well-constituent pair annual alpha = 0.001001. Individual comparison alpha = 0.0005007 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:14 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

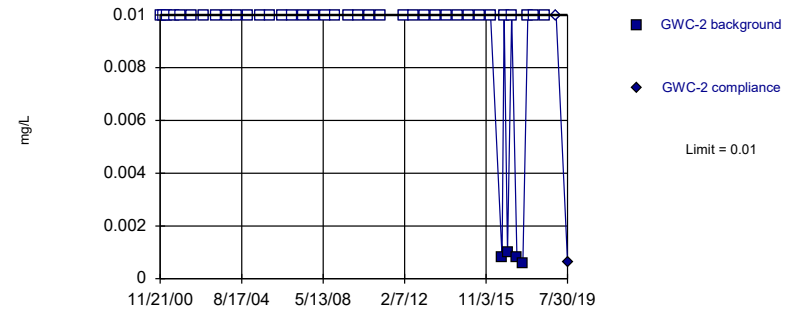


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 42 background values. 78.57% NDs. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:14 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

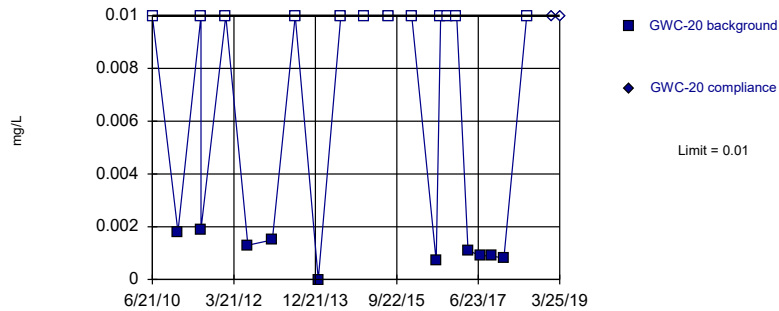


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 90.24% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:14 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

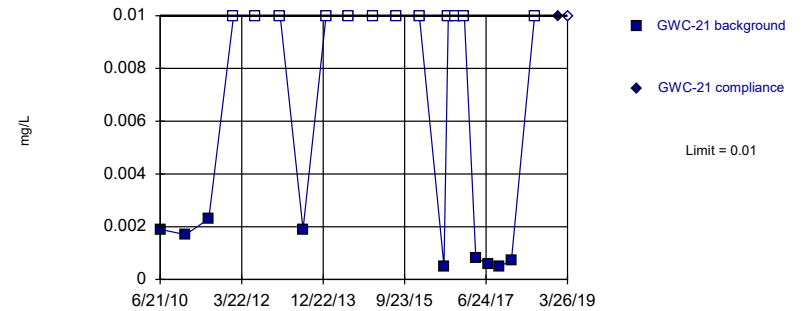


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 22 background values. 54.55% NDs. Well-constituent pair annual alpha = 0.007401. Individual comparison alpha = 0.003707 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:14 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

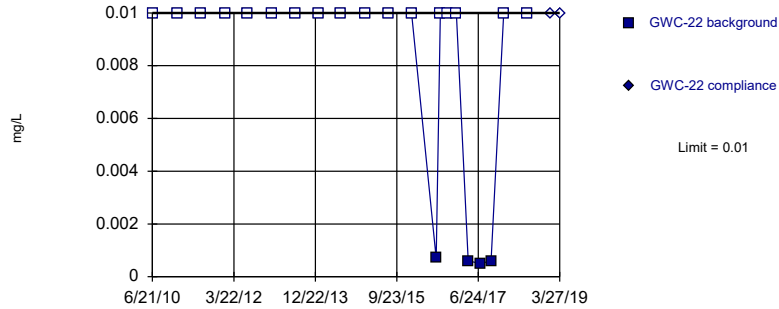


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 57.14% NDs. Well-constituent pair annual alpha = 0.007982. Individual comparison alpha = 0.003999 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium
Intrawell Non-parametric

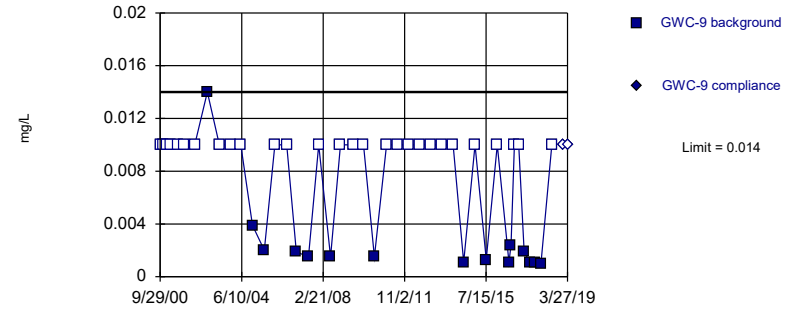


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 80.95% NDs. Well-constituent pair annual alpha = 0.007982. Individual comparison alpha = 0.003999 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium
Intrawell Non-parametric

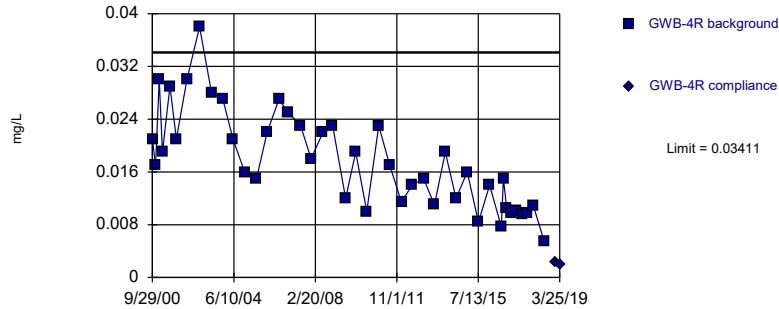


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 65.12% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium
Intrawell Parametric

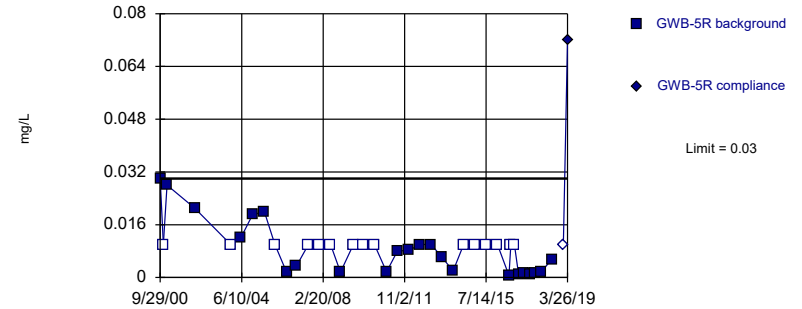


Background Data Summary: Mean=0.01774, Std. Dev.=0.007368, n=43. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9562, critical = 0.923. Kappa = 2.222 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Exceeds Limit

Chromium
Intrawell Non-parametric

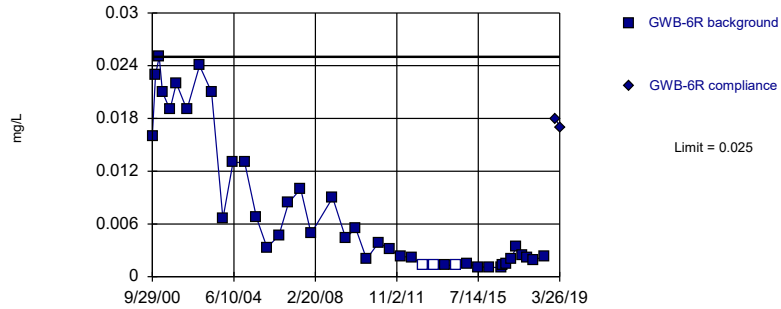


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 38 background values. 39.47% NDs. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Chromium Intrawell Non-parametric

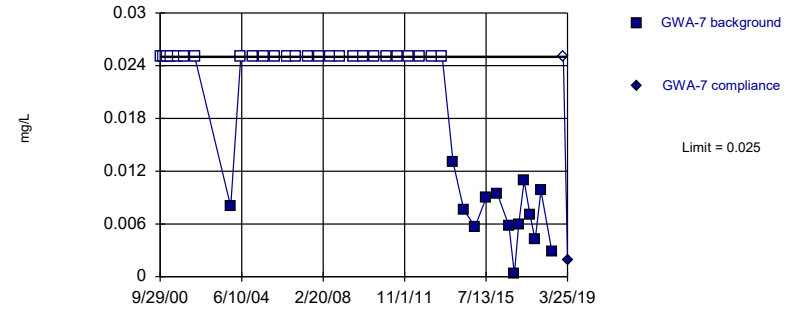


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 42 background values. 7.143% NDs. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

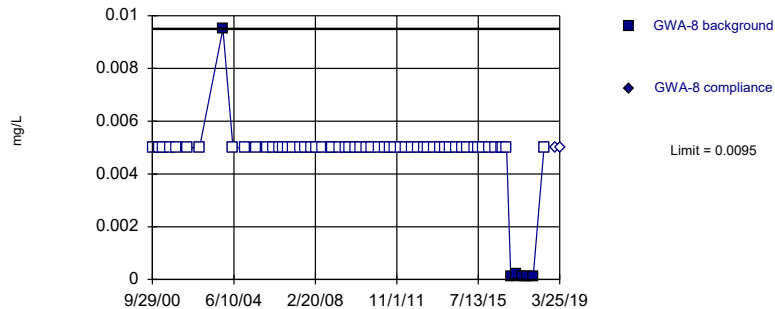


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 65% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

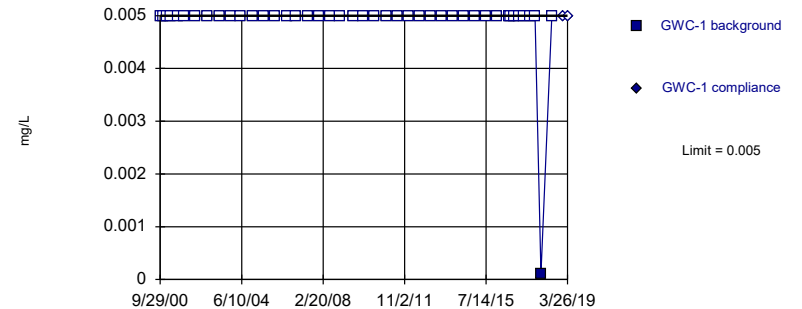


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 62 background values. 90.32% NDs. Well-constituent pair annual alpha = 0.001001. Individual comparison alpha = 0.0005007 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

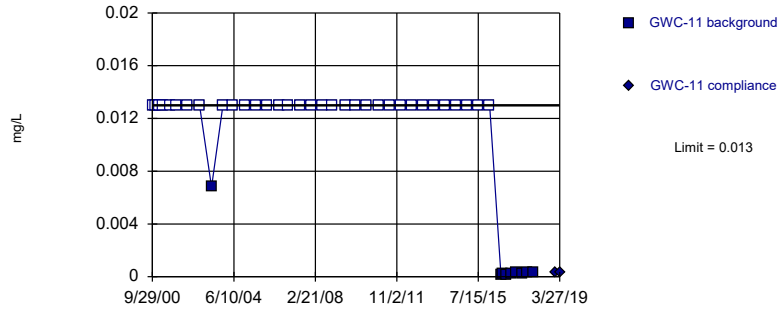


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 97.67% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

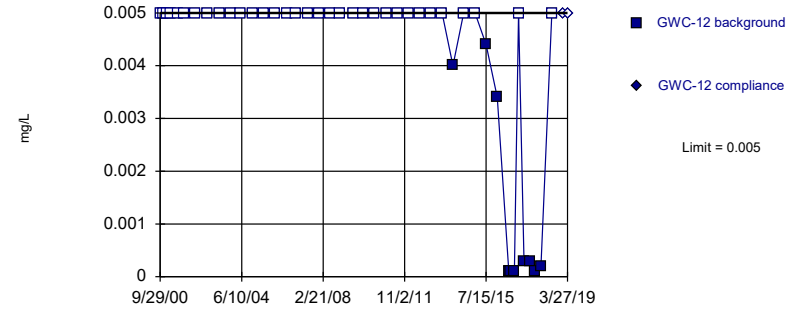


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 42 background values. 78.57% NDs. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

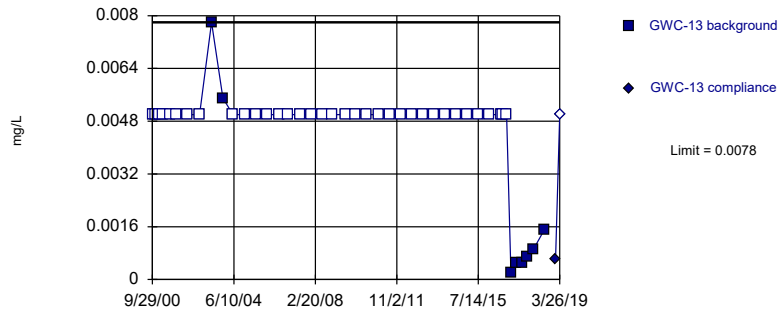


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 76.74% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

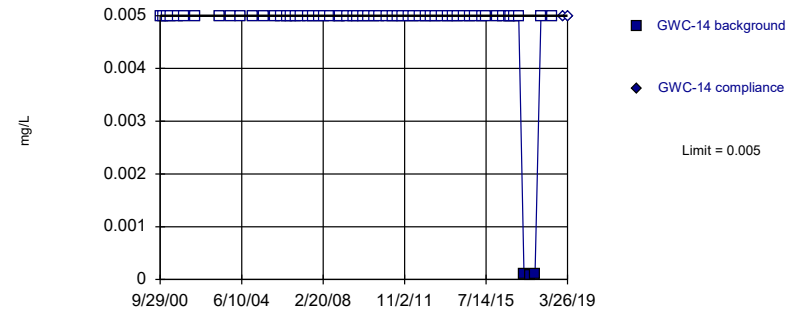


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 81.4% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

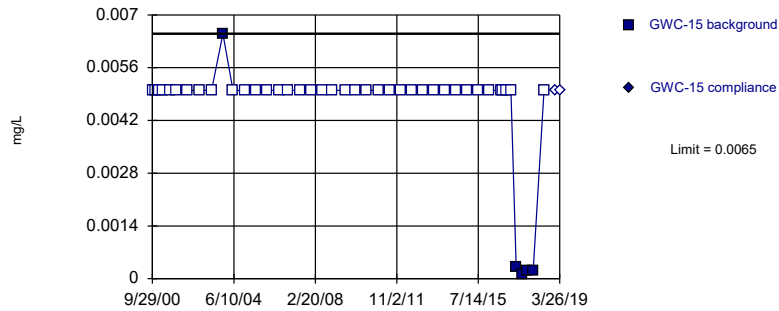


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 62 background values. 95.16% NDs. Well-constituent pair annual alpha = 0.001001. Individual comparison alpha = 0.0005007 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

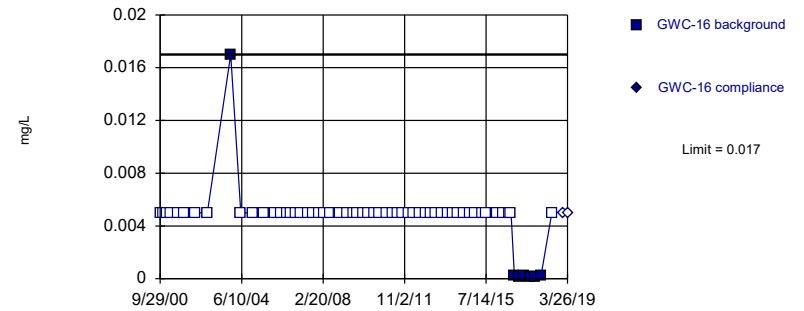


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 88.37% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

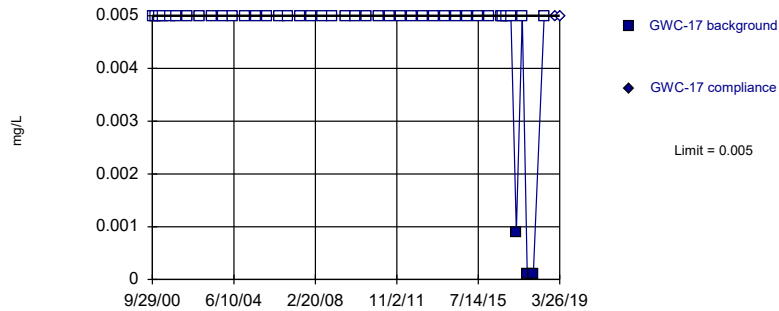


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 62 background values. 88.71% NDs. Well-constituent pair annual alpha = 0.001001. Individual comparison alpha = 0.0005007 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

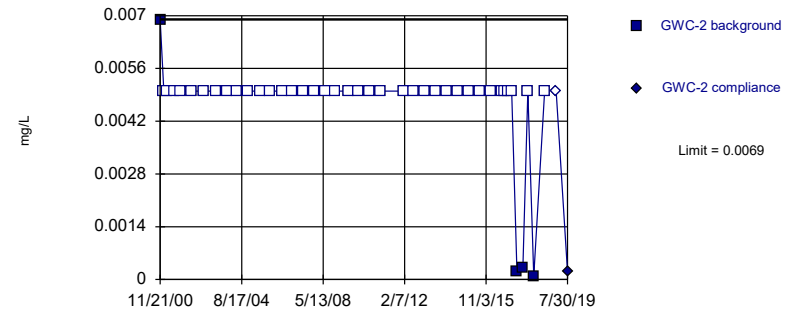


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 93.02% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

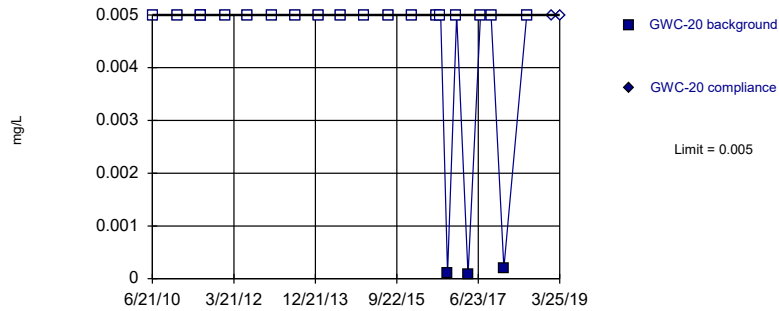


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 90.24% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

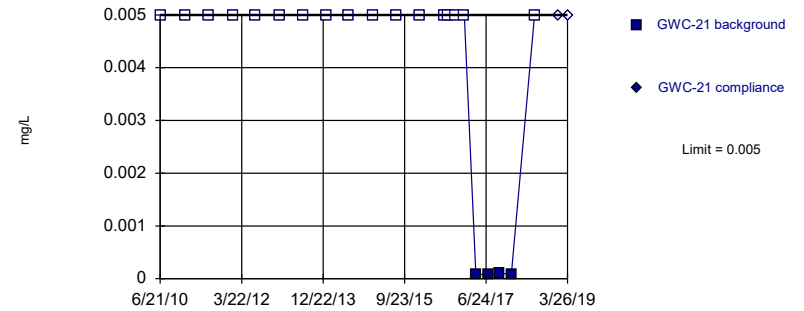


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 22 background values. 86.36% NDs. Well-constituent pair annual alpha = 0.007401. Individual comparison alpha = 0.003707 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:15 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

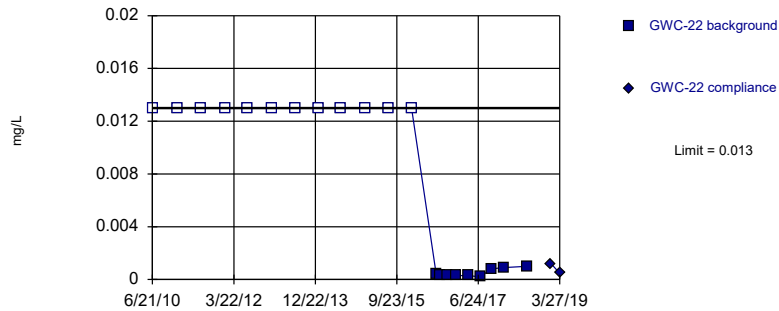


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 80.95% NDs. Well-constituent pair annual alpha = 0.007982. Individual comparison alpha = 0.003999 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

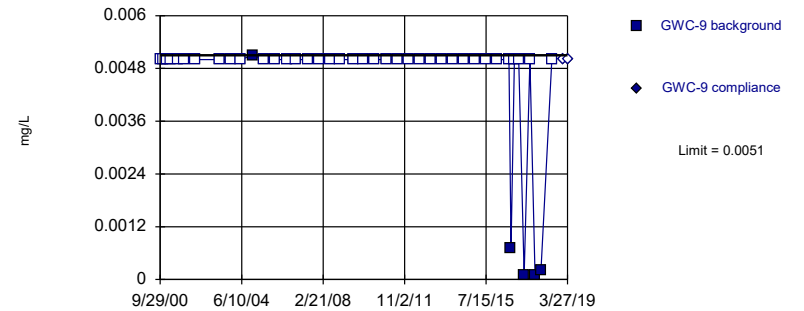


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 57.14% NDs. Well-constituent pair annual alpha = 0.007982. Individual comparison alpha = 0.003999 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

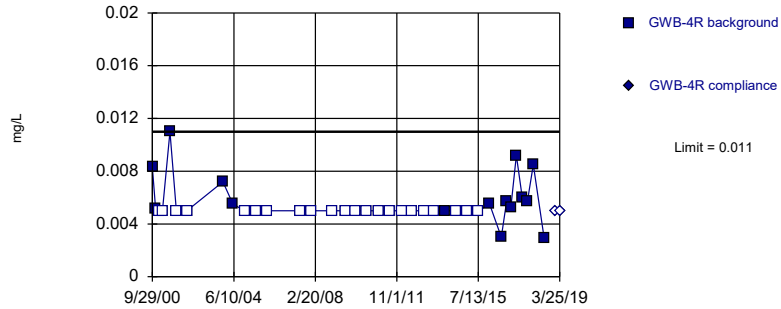


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 42 background values. 88.1% NDs. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

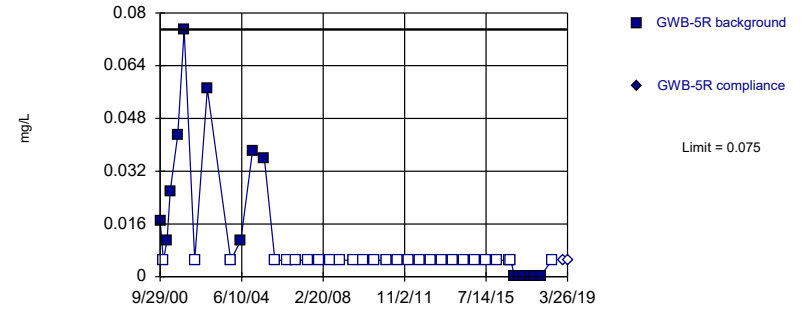


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 37 background values. 59.46% NDs. Well-constituent pair annual alpha = 0.002721. Individual comparison alpha = 0.001361 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

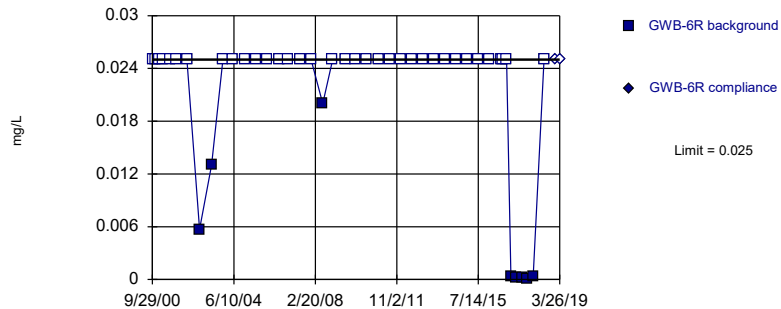


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 42 background values. 64.29% NDs. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Lead Intrawell Non-parametric

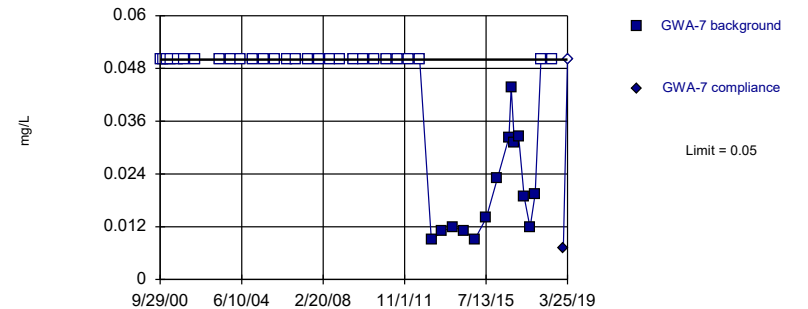


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 81.4% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

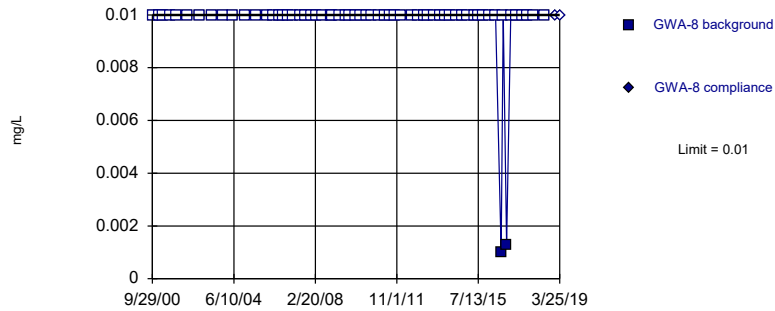


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 42 background values. 66.67% NDs. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

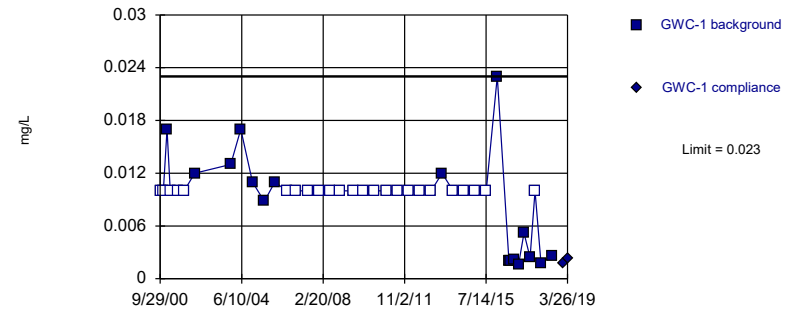


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 62 background values. 96.77% NDs. Well-constituent pair annual alpha = 0.001001. Individual comparison alpha = 0.0005007 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

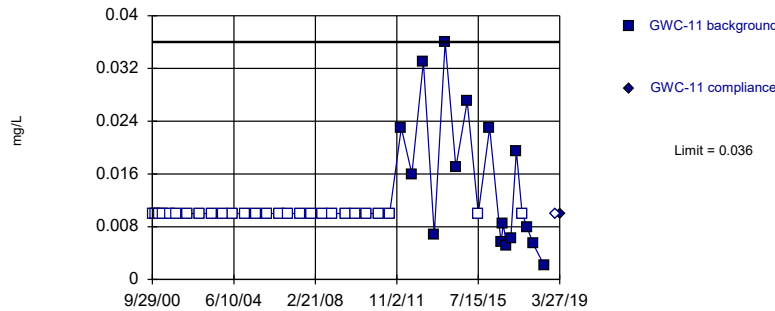


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 58.54% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

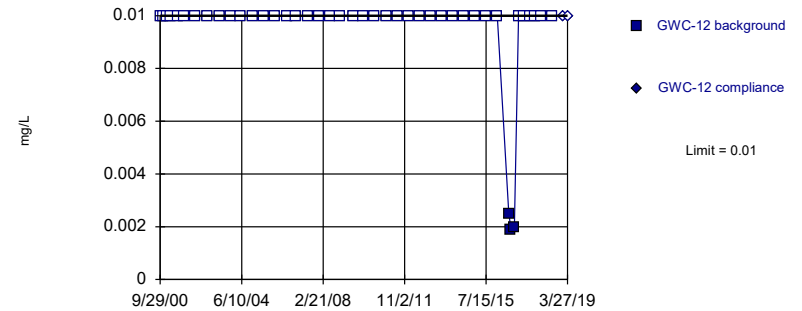


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 62.79% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

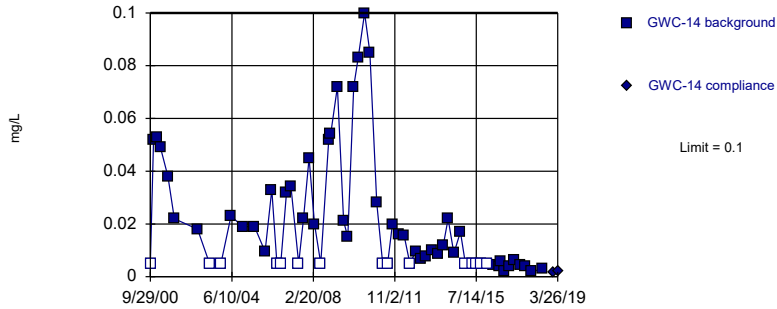


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 93.02% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

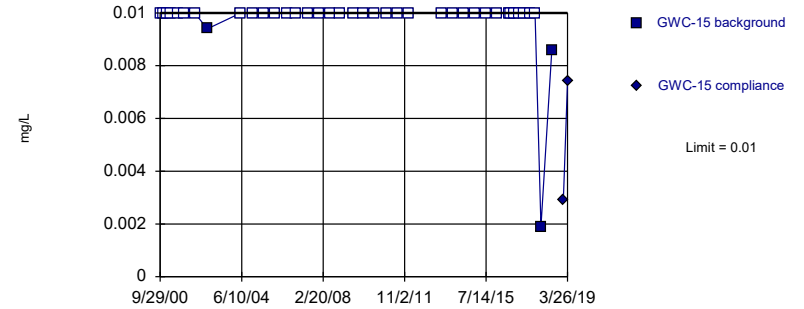


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 63 background values. 23.81% NDs. Well-constituent pair annual alpha = 0.0009737. Individual comparison alpha = 0.000487 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

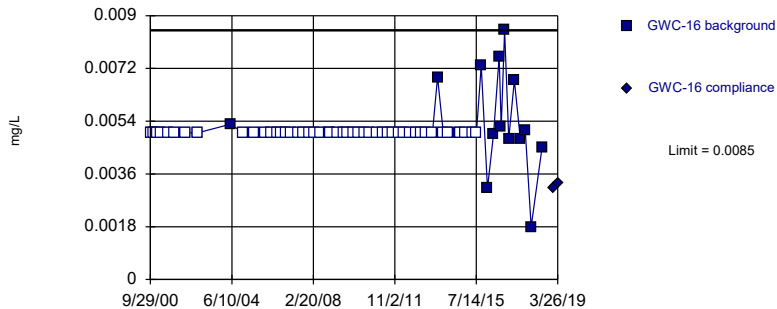


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 39 background values. 92.31% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

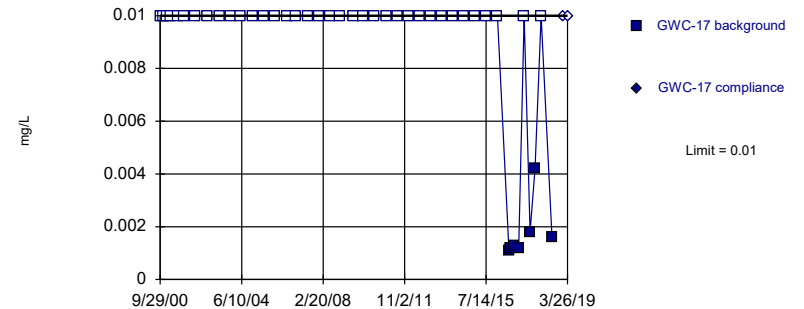


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 62 background values. 75.81% NDs. Well-constituent pair annual alpha = 0.001001. Individual comparison alpha = 0.0005007 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

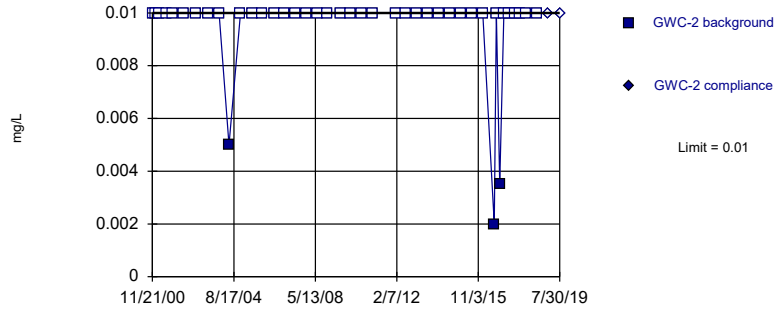


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 83.72% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium
Intrawell Non-parametric

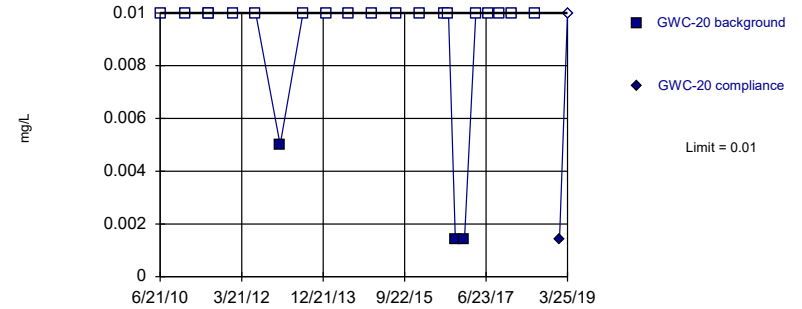


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 92.68% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium
Intrawell Non-parametric

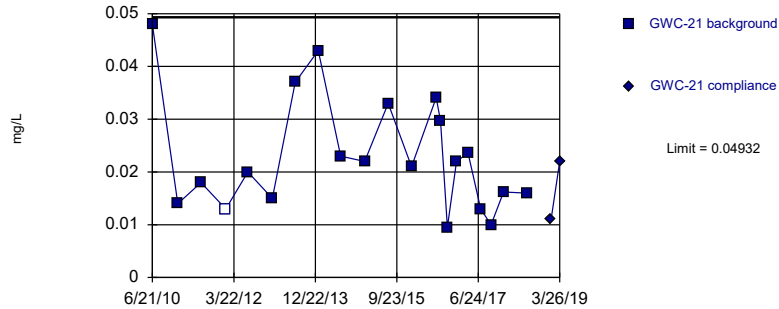


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 22 background values. 86.36% NDs. Well-constituent pair annual alpha = 0.007401. Individual comparison alpha = 0.003707 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium
Intrawell Parametric

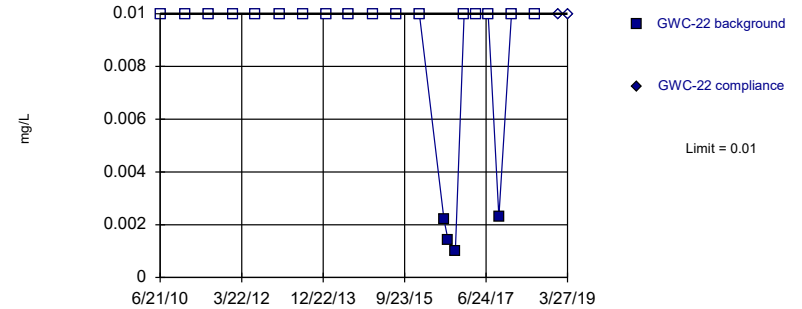


Background Data Summary: Mean=0.02291, Std. Dev.=0.01077, n=21, 4.762% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9134, critical = 0.873. Kappa = 2.452 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium
Intrawell Non-parametric

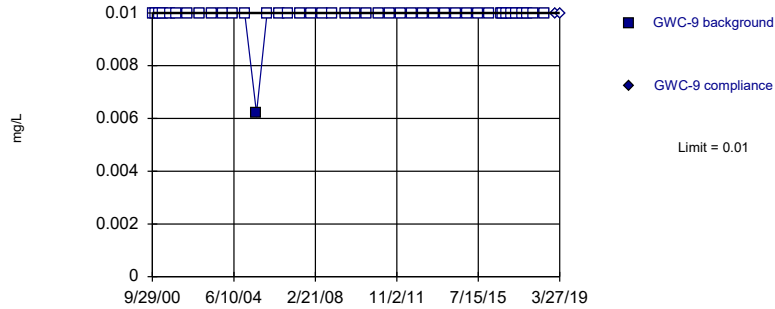


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 80.95% NDs. Well-constituent pair annual alpha = 0.007982. Individual comparison alpha = 0.003999 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

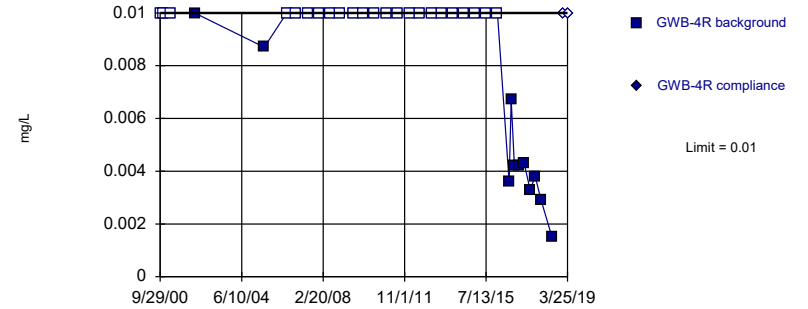


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 97.67% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:16 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

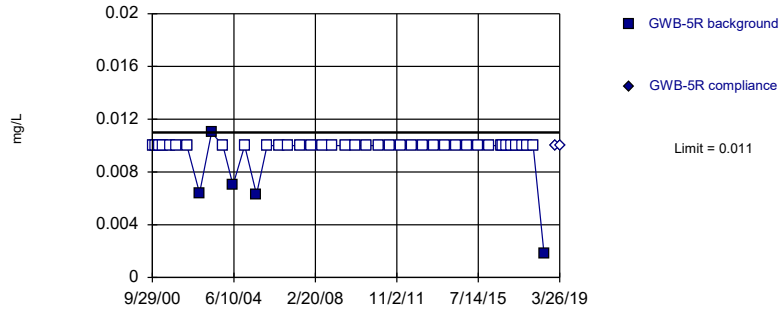


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 67.65% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

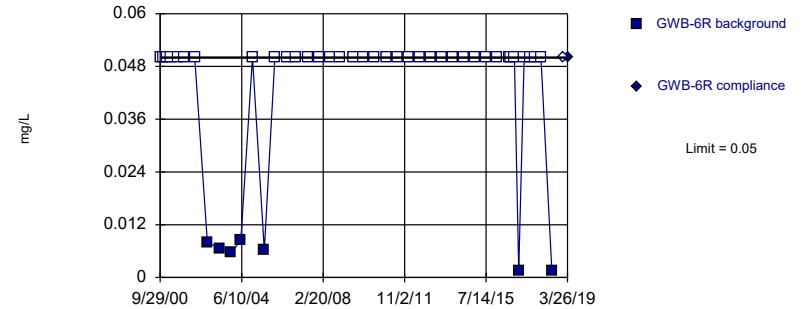


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 88.37% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Selenium Intrawell Non-parametric

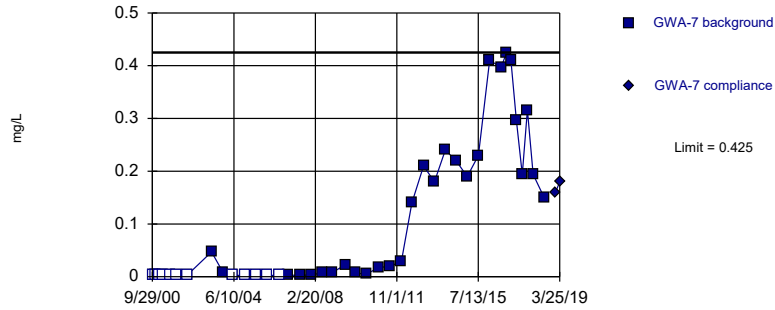


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 83.72% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Non-parametric

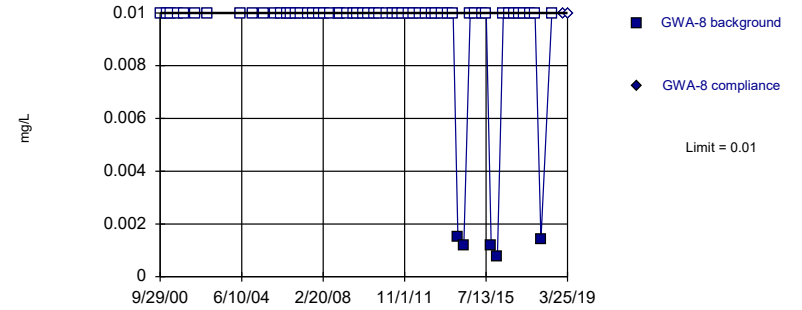


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 41 background values. 29.27% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Non-parametric

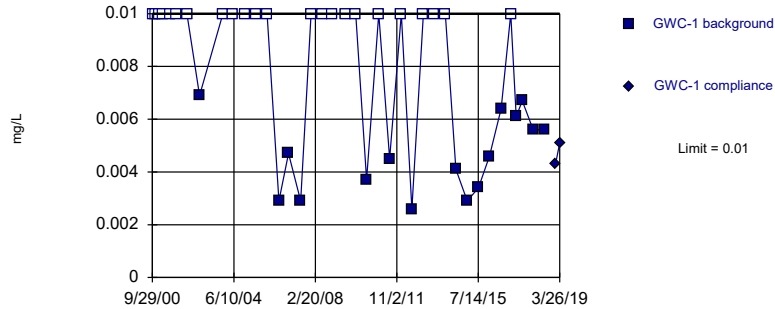


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 60 background values. 91.67% NDs. Well-constituent pair annual alpha = 0.001056. Individual comparison alpha = 0.0005281 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Non-parametric

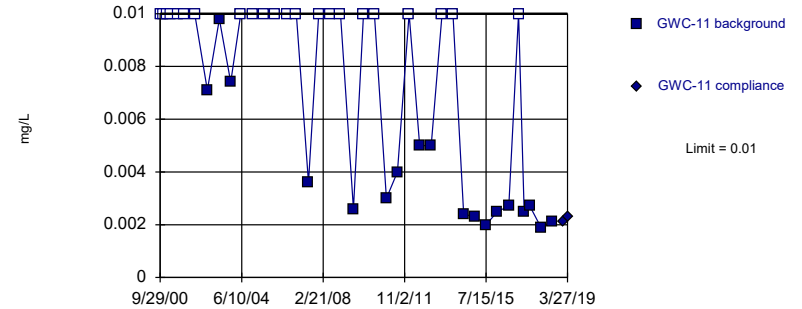


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 39 background values. 58.97% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Non-parametric

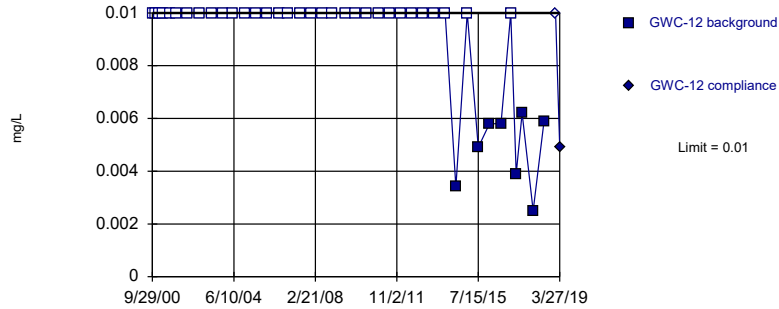


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 55% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Non-parametric

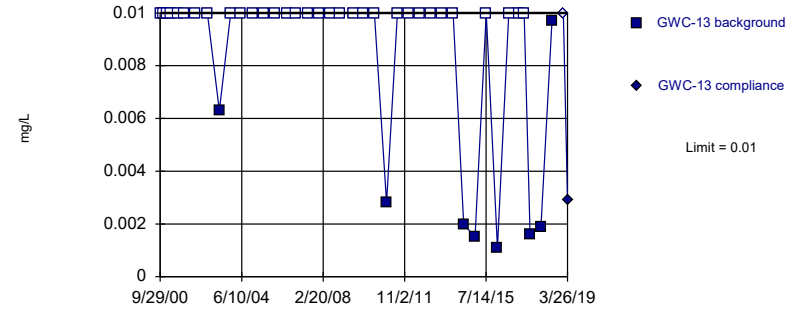


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 80% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Non-parametric

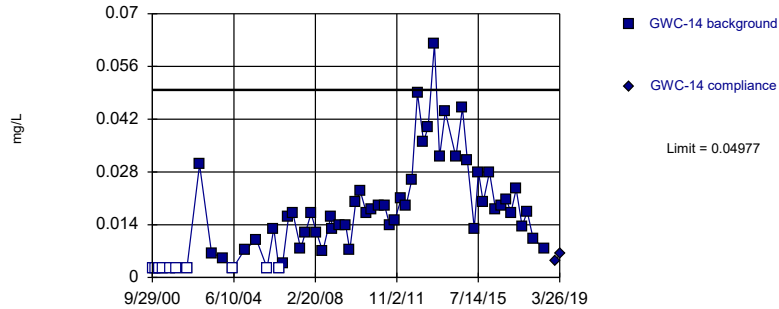


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 80% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Parametric

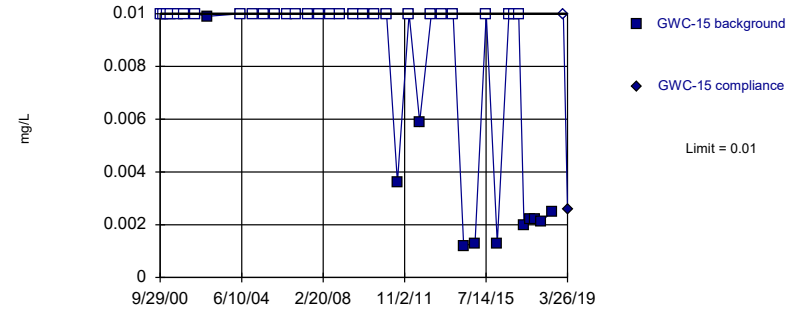


Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.1122, Std. Dev.=0.0513, n=62, 16.13% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9649, critical = 0.947. Kappa = 2.162 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Non-parametric

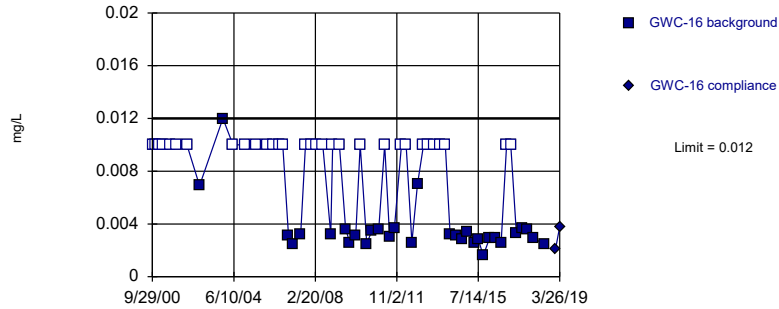


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 72.5% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Non-parametric

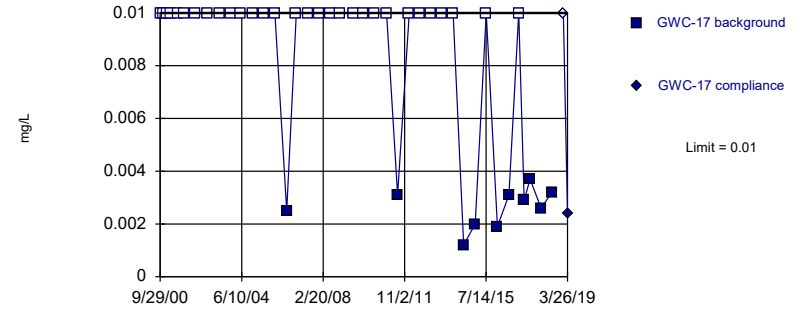


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 62 background values. 50% NDs. Well-constituent pair annual alpha = 0.001001. Individual comparison alpha = 0.0005007 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Non-parametric

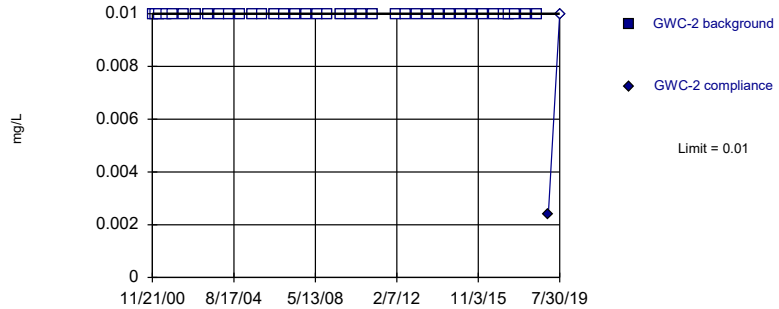


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 75% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Non-parametric

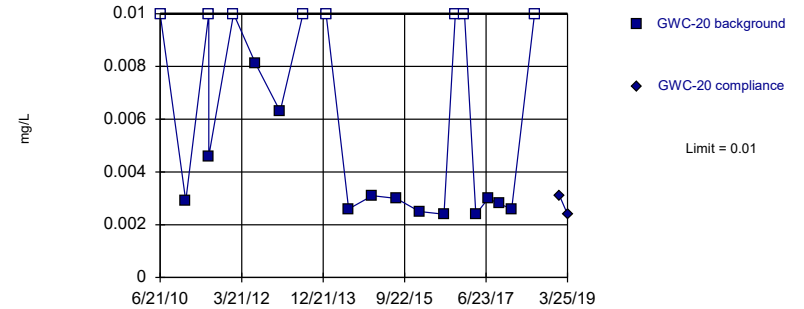


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 38) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Non-parametric

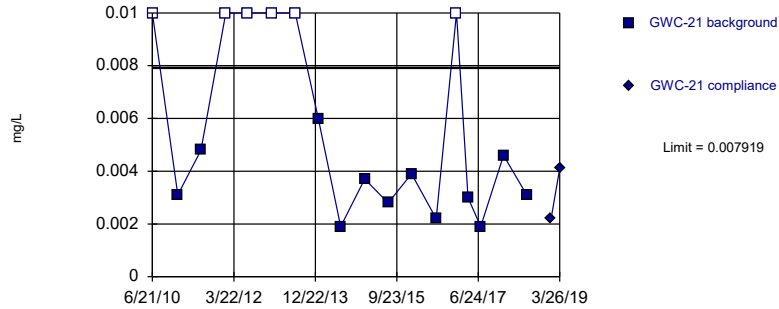


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 21 background values. 38.1% NDs. Well-constituent pair annual alpha = 0.007982. Individual comparison alpha = 0.003999 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Parametric

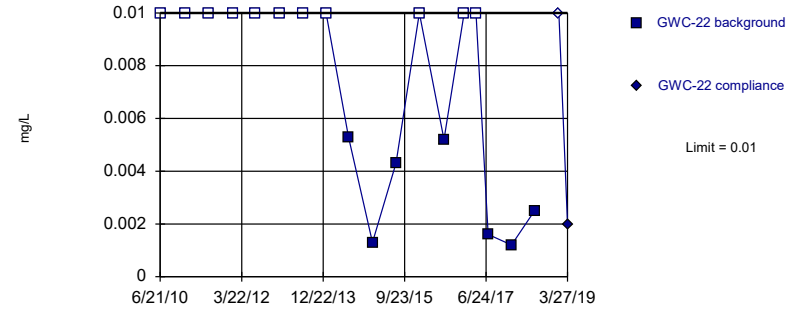


Background Data Summary (based on natural log transformation) (after Kaplan-Meier Adjustment): Mean=-5.764, Std. Dev.=0.3646, n=18, 33.33% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8708, critical = 0.858. Kappa = 2.538 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Non-parametric

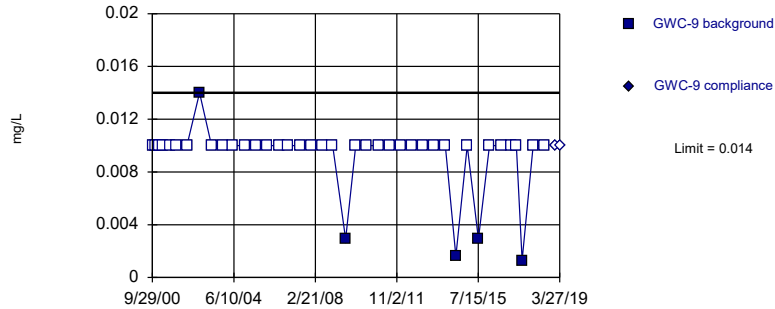


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 18 background values. 61.11% NDs. Well-constituent pair annual alpha = 0.01072. Individual comparison alpha = 0.005373 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Non-parametric

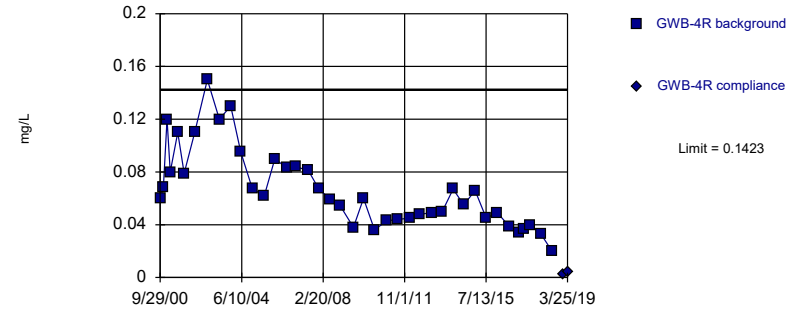


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 87.5% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:17 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium
Intrawell Parametric

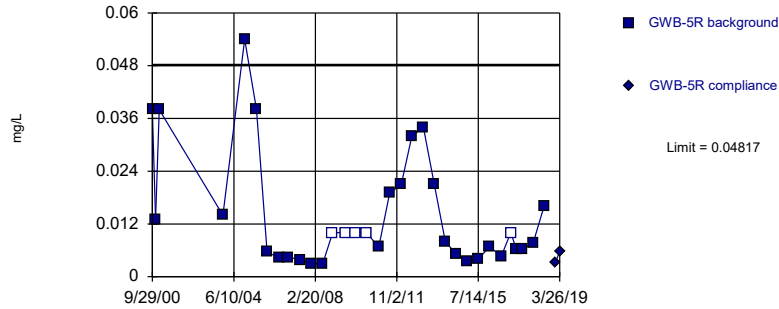


Background Data Summary (based on square root transformation): Mean=0.2522, Std. Dev.=0.05587, n=40. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9631, critical = 0.919. Kappa = 2.238 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Parametric

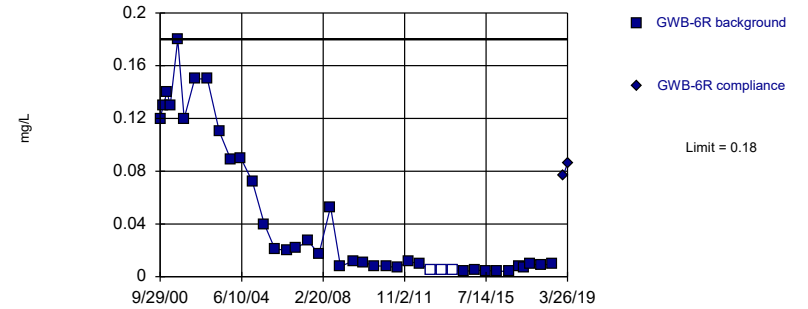


Background Data Summary (based on natural log transformation) (after Kaplan-Meier Adjustment): Mean=-4.848, Std. Dev.=0.7947, n=33, 15.15% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9378, critical = 0.906. Kappa = 2.284 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Vanadium Intrawell Non-parametric

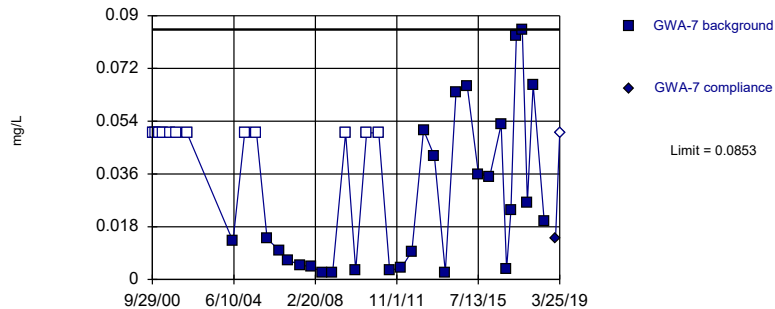


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 40 background values. 7.5% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc Intrawell Non-parametric

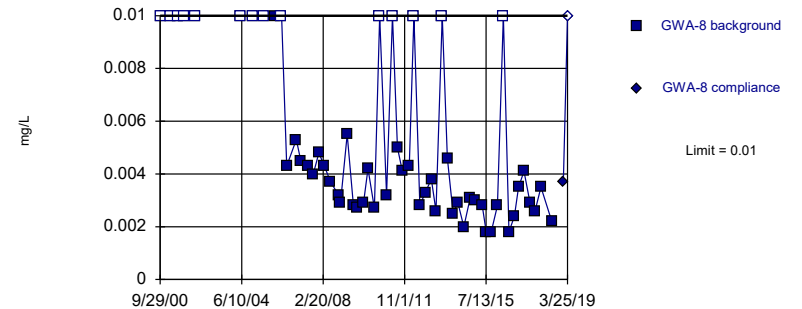


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 39 background values. 30.77% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc Intrawell Non-parametric

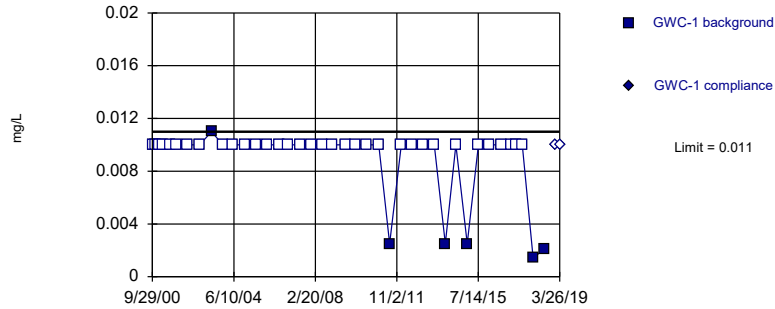


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 57 background values. 24.56% NDs. Well-constituent pair annual alpha = 0.001191. Individual comparison alpha = 0.0005955 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

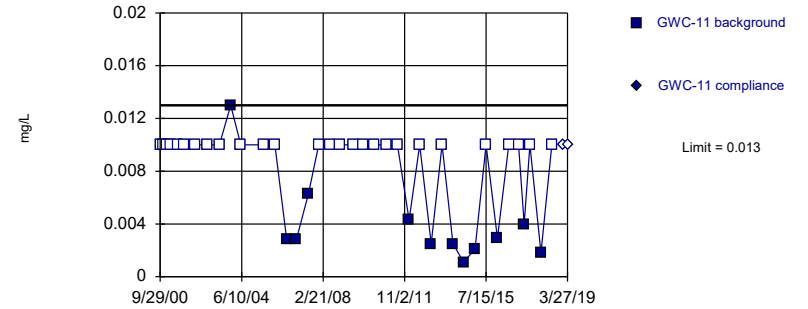


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 40 background values. 85% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

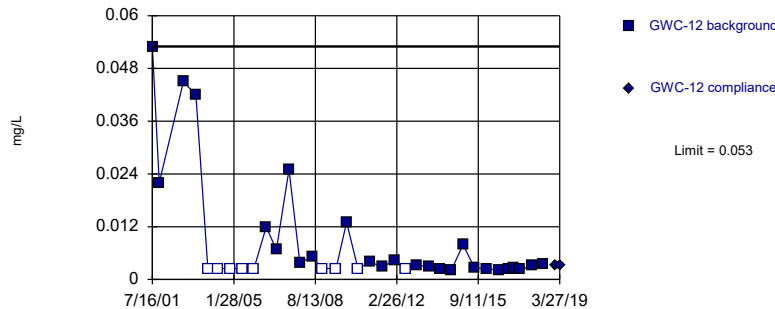


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 39 background values. 69.23% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

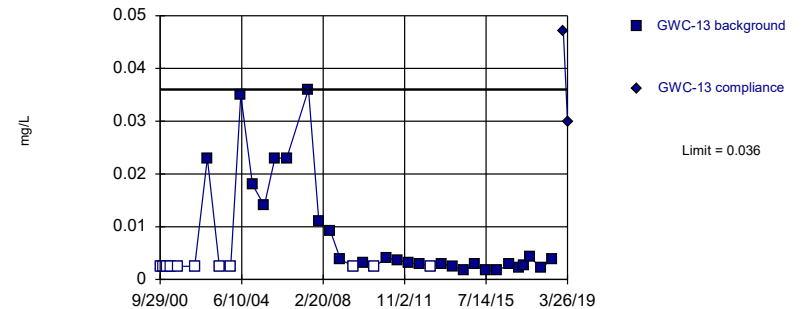


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 35 background values. 25.71% NDs. Well-constituent pair annual alpha = 0.002991. Individual comparison alpha = 0.001497 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

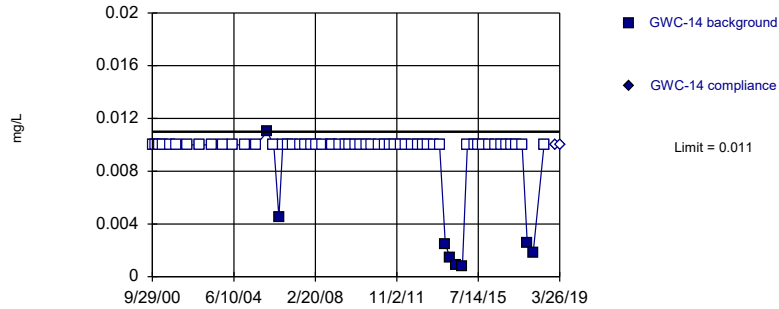


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 38 background values. 28.95% NDs. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc Intrawell Non-parametric

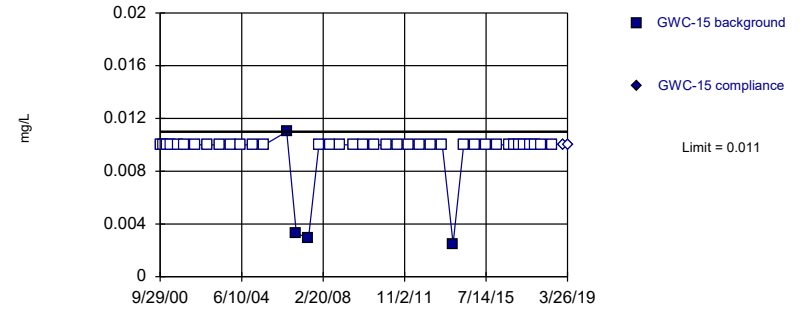


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 63 background values. 87.3% NDs. Well-constituent pair annual alpha = 0.0009737. Individual comparison alpha = 0.000487 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc Intrawell Non-parametric

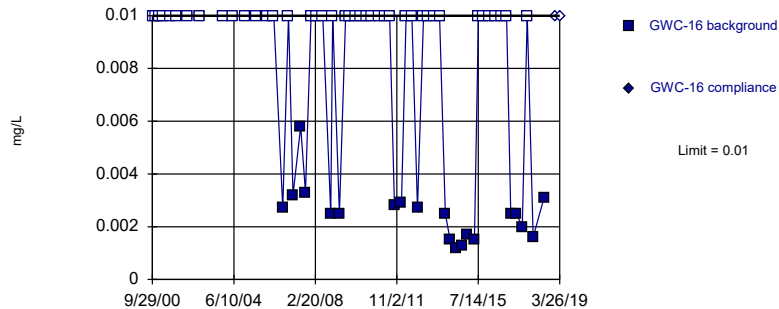


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 90.24% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc Intrawell Non-parametric

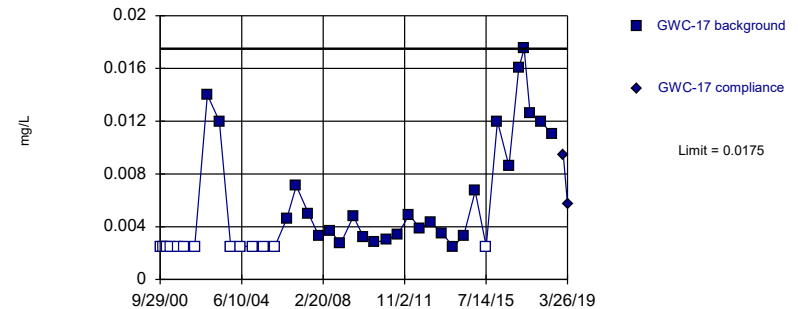


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 61 background values. 67.21% NDs. Well-constituent pair annual alpha = 0.001029. Individual comparison alpha = 0.0005144 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc Intrawell Non-parametric

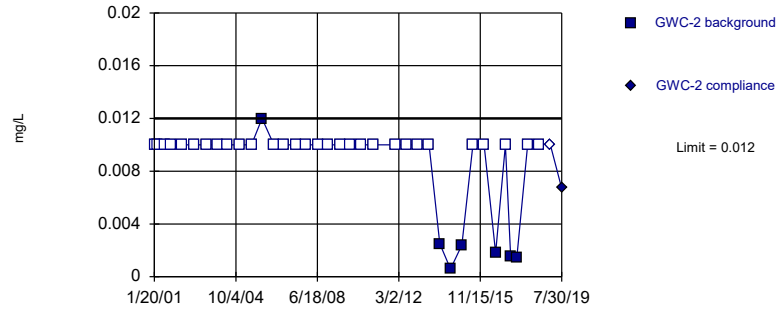


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 40 background values. 32.5% NDs. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

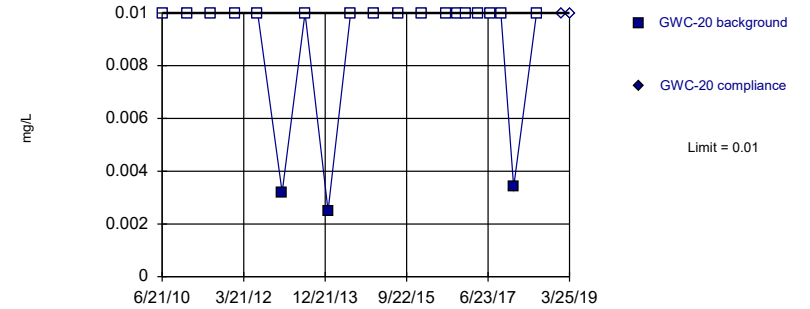


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 37 background values. 81.08% NDs. Well-constituent pair annual alpha = 0.002721. Individual comparison alpha = 0.001361 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

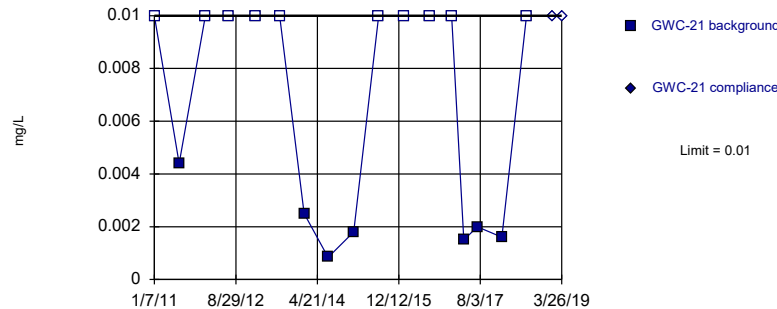


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 20 background values. 85% NDs. Well-constituent pair annual alpha = 0.008564. Individual comparison alpha = 0.004291 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

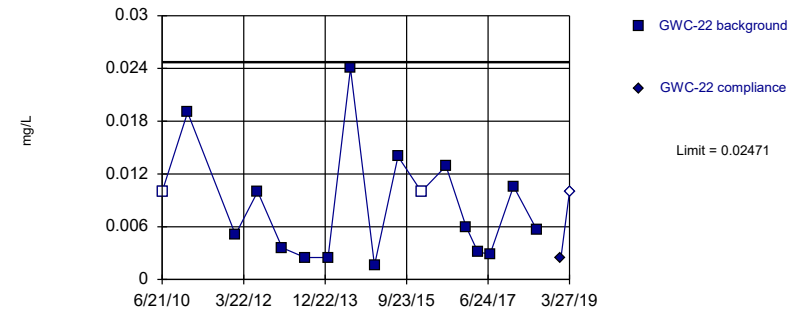


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 58.82% NDs. Well-constituent pair annual alpha = 0.011179. Individual comparison alpha = 0.005914 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Parametric

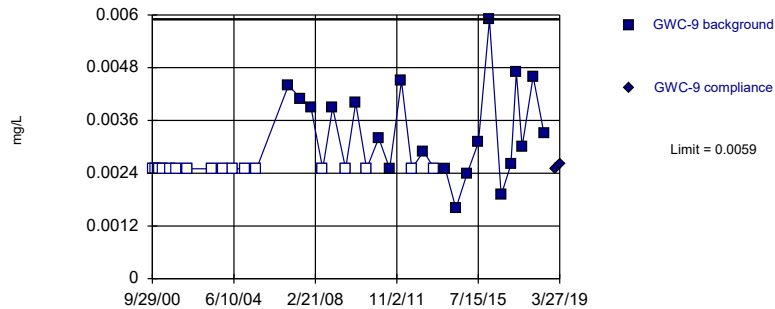


Background Data Summary: Mean=0.008441, Std. Dev.=0.00633, n=17, 11.76% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8837, critical = 0.851. Kappa = 2.571 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

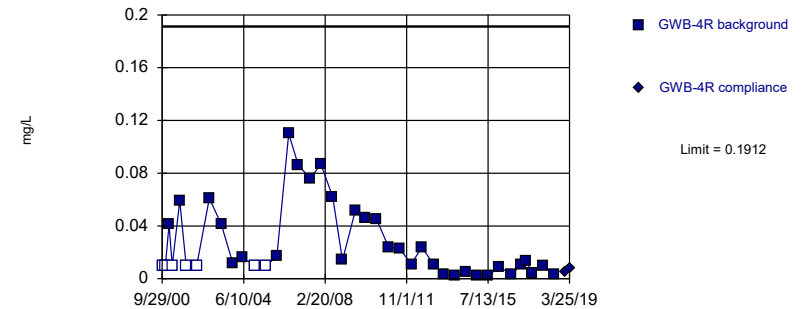


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 37 background values. 45.95% NDs. Well-constituent pair annual alpha = 0.002721. Individual comparison alpha = 0.001361 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:18 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Parametric

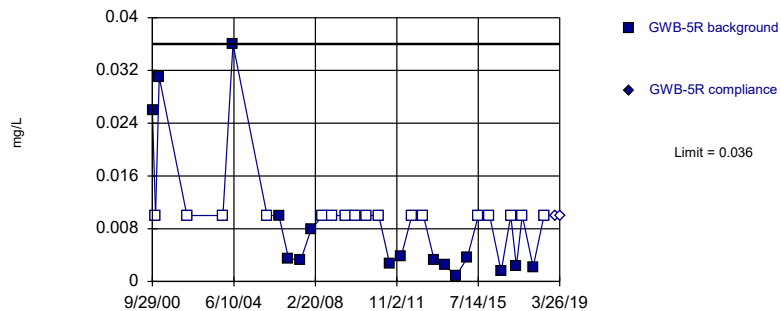


Background Data Summary (based on natural log transformation) (after Kaplan-Meier Adjustment): Mean=4.471, Std. Dev.=1.259, n=40, 17.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.936, critical = 0.919. Kappa = 2.238 (c=8, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004115.

Prediction Limit Analysis Run 8/13/2019 5:19 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric

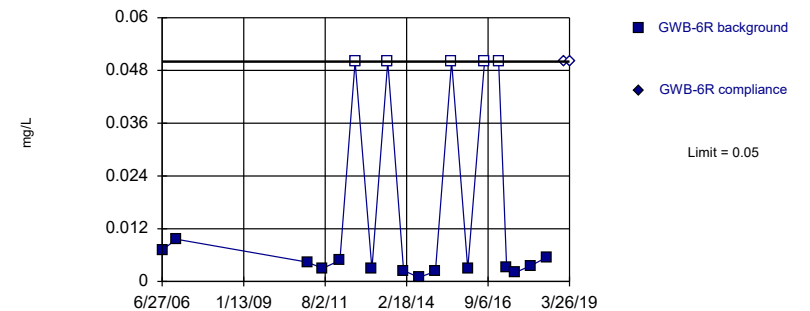


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 33 background values. 51.52% NDs. Well-constituent pair annual alpha = 0.003399. Individual comparison alpha = 0.001701 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:19 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Within Limit

Zinc
Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 19 background values. 26.32% NDs. Well-constituent pair annual alpha = 0.009641. Individual comparison alpha = 0.004832 (1 of 2).

Prediction Limit Analysis Run 8/13/2019 5:19 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Prediction Limit

Constituent: Antimony Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7	GWA-7	GWC-11	GWC-11	GWC-13	GWC-13	GWC-14	GWC-14
9/29/2000	<0.015		<0.003		<0.003		<0.003	
11/21/2000	<0.015		<0.003		<0.003		<0.003	
1/20/2001	<0.015		<0.003		<0.003		<0.003	
3/14/2001	<0.015		<0.003		<0.003		<0.003	
7/16/2001	<0.015		<0.003		<0.003		<0.003	
11/1/2001	<0.015		<0.003		<0.003		<0.003	
4/25/2002	<0.015		<0.003		<0.003		<0.003	
11/20/2002			<0.003		<0.003		<0.003	
6/6/2003	<0.015		<0.003		<0.003		<0.003	
12/12/2003	<0.015		<0.003		<0.003		<0.003	
5/26/2004	<0.015		<0.003		<0.003		<0.003	
12/7/2004	<0.015		<0.003		<0.003		<0.003	
6/21/2005	<0.015		<0.003		<0.003		<0.003	
12/12/2005	<0.015		<0.003		<0.003		<0.003	
4/4/2006							<0.003	
6/27/2006	<0.015		<0.003		<0.003		<0.003	
8/30/2006							<0.003	
12/4/2006	<0.015		<0.003		<0.003		<0.003	
2/15/2007							<0.003	
6/23/2007	<0.015		<0.003		<0.003		<0.003	
9/11/2007							<0.003	
12/11/2007	<0.015		<0.003		<0.003		<0.003	
3/11/2008							<0.003	
6/23/2008	<0.015		<0.003		<0.003			
6/24/2008							<0.003	
11/3/2008							<0.003	
12/4/2008	<0.015		<0.003		<0.003		<0.003	
3/25/2009							<0.003	
7/7/2009	<0.015							
7/8/2009			<0.003		<0.003		<0.003	
9/14/2009							<0.003	
12/20/2009	<0.015						<0.003	
12/21/2009			<0.003		<0.003			
3/4/2010							<0.003	
6/20/2010	<0.015		<0.003		<0.003		<0.003	
9/14/2010							<0.003	
1/6/2011			<0.003		<0.003			
1/7/2011	<0.015						<0.003	
4/15/2011							<0.003	
7/7/2011	<0.015		<0.003		<0.003		<0.003	
9/25/2011							<0.003	
1/17/2012	<0.015		<0.003		<0.003		<0.003	
4/4/2012							<0.003	
7/9/2012	<0.015		<0.003		<0.003		<0.003	
10/9/2012							<0.003	
1/17/2013			<0.003		<0.003			
1/18/2013	<0.015						<0.003	
4/5/2013							<0.003	
7/16/2013			<0.003		<0.003			
7/17/2013	<0.015						<0.003	
10/11/2013							0.005	
1/13/2014	<0.015		<0.003		<0.003			

Prediction Limit

Constituent: Antimony Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7	GWA-7	GWC-11	GWC-11	GWC-13	GWC-13	GWC-14	GWC-14
1/14/2014							<0.003	
4/3/2014							<0.003	
7/8/2014			<0.003		<0.003			
7/9/2014	0.0022 (J)						<0.003	
10/24/2014							<0.003	
1/13/2015	<0.015		<0.003		<0.003			
1/14/2015							<0.003	
5/10/2015							<0.003	
7/16/2015	0.0028 (J)		<0.003		<0.003			
7/17/2015							<0.003	
10/6/2015							<0.003	
1/17/2016							<0.003	
1/18/2016	<0.015				<0.003			
1/19/2016			<0.003					
4/26/2016							<0.003	
7/26/2016			0.0005 (J)		0.0006 (J)			
7/27/2016	<0.015						<0.003	
8/31/2016			<0.003		<0.003			
9/1/2016	0.0017 (J)						<0.003	
10/25/2016	<0.015						<0.003	
10/26/2016			<0.003		<0.003			
1/4/2017			<0.003					
1/5/2017					<0.003		<0.003	
1/6/2017	0.0009 (J)							
4/4/2017							<0.003	
4/6/2017	<0.015		0.0006 (J)		<0.003			
7/11/2017			0.0009 (J)				<0.003	
7/12/2017					<0.003			
7/13/2017	0.0013 (J)							
10/2/2017							<0.003	
10/3/2017			<0.003					
10/4/2017	0.0008 (J)				<0.003			
1/9/2018	<0.015						<0.003	
1/10/2018					<0.003			
1/11/2018			0.0007 (J)					
7/9/2018							<0.003	
7/11/2018			<0.003		<0.003			
1/16/2019						<0.003		<0.003
1/17/2019				<0.003				
3/25/2019		<0.015						
3/26/2019						<0.003		<0.003
3/27/2019				<0.003				

Prediction Limit

Constituent: Antimony Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-16	GWC-16	GWC-20	GWC-20	GWC-9	GWC-9	GWB-4R	GWB-4R
9/29/2000	<0.003				<0.003		<0.003	
11/21/2000	<0.003				<0.003		<0.003	
1/20/2001	<0.003				<0.003		<0.003	
3/14/2001	<0.003				<0.003		<0.003	
7/16/2001	<0.003				<0.003		<0.003	
11/1/2001	<0.003				<0.003		<0.003	
4/25/2002	<0.003				<0.003		<0.003	
11/20/2002	<0.003				<0.003		<0.003	
6/6/2003	<0.003				<0.003		<0.003	
12/12/2003	<0.003				<0.003		<0.003	
5/26/2004	<0.003				<0.003		<0.003	
12/7/2004	<0.003				<0.003		<0.003	
6/21/2005	<0.003				<0.003		<0.003	
12/12/2005	<0.003				<0.003		<0.003	
4/4/2006	<0.003							
6/27/2006	<0.003				<0.003		<0.003	
8/30/2006	<0.003							
12/4/2006	0.006				<0.003		<0.003	
2/15/2007	<0.003							
6/23/2007	<0.003				<0.003		<0.003	
9/11/2007	<0.003							
12/11/2007	<0.003				<0.003		<0.003	
3/11/2008	<0.003							
6/23/2008					<0.003			
6/24/2008	<0.003						<0.003	
11/3/2008	<0.003							
12/4/2008					<0.003			
12/5/2008	<0.003						<0.003	
3/25/2009	<0.003							
7/7/2009							<0.003	
7/8/2009	<0.003				<0.003			
9/14/2009	<0.003							
12/20/2009	<0.003							
12/21/2009					<0.003		<0.003	
3/4/2010	<0.003							
6/20/2010					<0.003			
6/21/2010	<0.003		<0.003				<0.003	
9/14/2010	<0.003							
1/7/2011	<0.003		<0.003		<0.003		<0.003	
4/15/2011	<0.003							
7/7/2011	<0.003		<0.003					
7/8/2011			<0.003		<0.003		<0.003	
9/25/2011	<0.003							
1/18/2012	<0.003		<0.003		<0.003		<0.003	
4/4/2012	<0.003							
7/10/2012	<0.003		<0.003		<0.003		<0.003	
10/9/2012	<0.003							
1/18/2013	<0.003		<0.003		<0.003		<0.003	
4/5/2013	<0.003							
7/17/2013	<0.003		<0.003		<0.003		<0.003	
10/11/2013	<0.003							
1/14/2014	<0.003		<0.003		<0.003		<0.003	

Prediction Limit

Constituent: Antimony Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-16	GWC-16	GWC-20	GWC-20	GWC-9	GWC-9	GWB-4R	GWB-4R
4/3/2014	<0.003							
7/9/2014	<0.003				<0.003		0.002 (J)	
7/10/2014			<0.003					
10/24/2014	<0.003							
1/12/2015			<0.003				<0.003	
1/14/2015	<0.003				<0.003			
5/11/2015	<0.003							
7/16/2015	<0.003						0.0021 (J)	
7/17/2015					<0.003			
7/18/2015			<0.003					
10/6/2015	<0.003							
1/17/2016	<0.003		<0.003					
1/18/2016					<0.003		<0.003	
4/26/2016	<0.003							
7/28/2016	<0.003		0.0019 (J)		<0.003			
7/29/2016							0.0003 (J)	
8/31/2016					<0.003			
9/1/2016	<0.003		<0.003				<0.003	
10/25/2016	<0.003		<0.003					
10/26/2016							<0.003	
10/27/2016					0.0016 (J)			
1/4/2017	<0.003		<0.003					
1/6/2017					<0.003		<0.003	
4/4/2017			<0.003				<0.003	
4/5/2017	<0.003							
4/6/2017					<0.003			
7/11/2017			<0.003					
7/12/2017	<0.003				<0.003		<0.003	
10/2/2017			<0.003					
10/3/2017	<0.003							
10/4/2017					<0.003		<0.003	
1/10/2018	<0.003		<0.003					
1/11/2018					<0.003		<0.003	
7/9/2018			<0.003					
7/10/2018	<0.003							
7/11/2018					<0.003		<0.003	
1/16/2019								<0.003
1/17/2019		<0.003						
1/18/2019						<0.003		
1/21/2019				<0.003				
3/25/2019				<0.003				<0.003
3/26/2019		<0.003						
3/27/2019						<0.003		

Prediction Limit

Constituent: Arsenic Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7	GWA-7	GWA-8	GWA-8	GWC-1	GWC-1	GWC-12	GWC-12
9/29/2000	<0.005		<0.005		<0.005		<0.005	
11/21/2000	<0.005				<0.005		<0.005	
1/20/2001	<0.005		<0.005		<0.005		<0.005	
3/14/2001	<0.005		<0.005		<0.005		<0.005	
7/16/2001	<0.005		<0.005		<0.005		<0.005	
11/1/2001	<0.005		<0.005		<0.005		<0.005	
4/25/2002	<0.005		<0.005		<0.005		<0.005	
11/20/2002			<0.005		<0.005		<0.005	
6/6/2003	0.02		<0.005				<0.005	
12/12/2003	<0.005		<0.005		<0.005		<0.005	
5/26/2004	<0.005		<0.005		<0.005		<0.005	
12/7/2004	<0.005		<0.005		<0.005		<0.005	
6/21/2005	<0.005		<0.005		<0.005		<0.005	
12/12/2005	<0.005		<0.005		<0.005		<0.005	
4/4/2006			<0.005					
6/27/2006	<0.005		<0.005		<0.005		<0.005	
8/30/2006			<0.005					
12/4/2006	<0.005		<0.005		<0.005		<0.005	
2/15/2007			<0.005					
6/23/2007	<0.005		<0.005		<0.005		<0.005	
9/11/2007			<0.005					
12/11/2007	<0.005		<0.005		<0.005		<0.005	
3/11/2008			<0.005					
6/23/2008	<0.005		<0.005				<0.005	
6/24/2008					<0.005			
11/3/2008			<0.005					
12/4/2008	<0.005		<0.005				<0.005	
12/5/2008					<0.005			
3/25/2009			<0.005					
7/7/2009	<0.005		<0.005		<0.005			
7/8/2009							<0.005	
9/14/2009			<0.005					
12/20/2009	<0.005		<0.005		<0.005			
12/21/2009							<0.005	
3/4/2010			<0.005					
6/20/2010	<0.005		<0.005		<0.005		<0.005	
9/14/2010			<0.005					
1/6/2011					<0.005			
1/7/2011	<0.005		<0.005				<0.005	
4/15/2011			<0.005					
7/7/2011	<0.005		<0.005		<0.005		<0.005	
9/25/2011			<0.005					
1/17/2012	<0.005		<0.005		0.0071		<0.005	
4/4/2012			<0.005					
7/9/2012	0.0052						<0.005	
7/10/2012			<0.005					
10/9/2012			<0.005					
1/17/2013							<0.005	
1/18/2013	0.0087		<0.005					
4/5/2013			<0.005					
7/16/2013					<0.005		<0.005	
7/17/2013	0.0084		<0.005					

Prediction Limit

Constituent: Arsenic Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-13	GWC-13	GWC-14	GWC-14	GWC-17	GWC-17
9/29/2000	<0.005		<0.005		<0.005	
11/21/2000	<0.005		<0.005		<0.005	
1/20/2001	<0.005		<0.005		<0.005	
3/14/2001	<0.005		<0.005		<0.005	
7/16/2001	<0.005		<0.005		<0.005	
11/1/2001	<0.005		<0.005		<0.005	
4/25/2002	<0.005		<0.005		<0.005	
11/20/2002	<0.005		0.011		<0.005	
6/6/2003	<0.005		<0.005		<0.005	
12/12/2003	0.0064		<0.005		<0.005	
5/26/2004	<0.005		<0.005		<0.005	
12/7/2004	<0.005		<0.005		<0.005	
6/21/2005	<0.005		<0.005		<0.005	
12/12/2005	<0.005		<0.005		<0.005	
4/4/2006			<0.005			
6/27/2006	<0.005		<0.005		<0.005	
8/30/2006			<0.005			
12/4/2006	<0.005		<0.005		<0.005	
2/15/2007			<0.005			
6/23/2007	<0.005		<0.005		<0.005	
9/11/2007			<0.005			
12/11/2007	<0.005		<0.005		<0.005	
3/11/2008			<0.005			
6/23/2008	<0.005					
6/24/2008			<0.005		<0.005	
11/3/2008			<0.005			
12/4/2008	<0.005		<0.005			
12/5/2008					<0.005	
3/25/2009			<0.005			
7/8/2009	<0.005		<0.005		<0.005	
9/14/2009			<0.005			
12/20/2009			<0.005			
12/21/2009	<0.005				<0.005	
3/4/2010			<0.005			
6/20/2010	<0.005		<0.005			
6/21/2010					<0.005	
9/14/2010			<0.005			
1/6/2011	<0.005					
1/7/2011			<0.005		<0.005	
4/15/2011			<0.005			
7/7/2011	<0.005		<0.005			
7/8/2011					<0.005	
9/25/2011			<0.005			
1/17/2012	<0.005		<0.005			
1/18/2012					<0.005	
4/4/2012			<0.005			
7/9/2012	<0.005		<0.005			
7/10/2012					<0.005	
10/9/2012			<0.005			
1/17/2013	<0.005					
1/18/2013			<0.005		<0.005	
4/5/2013			<0.005			

Prediction Limit

Constituent: Arsenic Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-13	GWC-13	GWC-14	GWC-14	GWC-17	GWC-17
7/16/2013	<0.005					
7/17/2013			<0.005		<0.005	
10/11/2013			0.005			
1/13/2014	<0.005					
1/14/2014			<0.005		<0.005	
4/3/2014			<0.005			
7/8/2014	<0.005					
7/9/2014			<0.005		<0.005	
10/24/2014			<0.005			
1/13/2015	<0.005					
1/14/2015			<0.005		<0.005	
5/10/2015			<0.005			
5/11/2015						
7/16/2015	<0.005					
7/17/2015			<0.005			
7/18/2015					<0.005	
10/6/2015			<0.005			
1/17/2016			0.002 (J)			
1/18/2016	<0.005				<0.005	
4/26/2016			0.00183 (J)			
7/26/2016	<0.005					
7/27/2016			0.0021 (J)			
7/28/2016						
7/29/2016					0.0009 (J)	
8/31/2016	<0.005					
9/1/2016			0.0024 (J)		<0.005	
10/25/2016			<0.005			
10/26/2016	<0.005				<0.005	
1/4/2017						
1/5/2017	<0.005		0.0024 (J)		<0.005	
4/4/2017			0.003 (J)			
4/5/2017					0.0011 (J)	
4/6/2017	<0.005					
7/11/2017			0.0019 (J)			
7/12/2017	<0.005					
7/13/2017					0.0016 (J)	
10/2/2017			0.0026 (J)			
10/3/2017						
10/4/2017	<0.005				0.0019 (J)	
1/9/2018			0.0021 (J)			
1/10/2018	0.0006 (J)					
1/11/2018					0.0015 (J)	
7/9/2018			0.0019 (J)			
7/10/2018						
7/11/2018	<0.005				0.00082 (J)	
1/16/2019		<0.005		0.0016 (J)		<0.005
1/17/2019						
3/26/2019		0.00058 (J)		0.0023 (J)		0.0015 (J)

Prediction Limit

Constituent: Arsenic Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-2	GWC-2	GWC-21	GWC-21	GWC-22	GWC-22	GWB-4R	GWB-4R
9/29/2000							<0.005	
11/21/2000	<0.005						<0.005	
1/20/2001	<0.005							
3/14/2001	<0.005						<0.005	
7/16/2001	<0.005						<0.005	
11/1/2001	<0.005						<0.005	
4/25/2002	<0.005						<0.005	
11/20/2002	<0.005							
6/6/2003	<0.005							
12/12/2003	<0.005						0.0058	
5/26/2004	<0.005						0.0068	
12/7/2004	<0.005						0.0066	
6/21/2005	<0.005						<0.005	
12/12/2005	<0.005						<0.005	
6/27/2006	<0.005						<0.005	
12/4/2006	<0.005						<0.005	
6/23/2007	<0.005						<0.005	
12/11/2007	<0.005						<0.005	
6/24/2008	<0.005						0.005	
12/4/2008	<0.005							
12/5/2008							<0.005	
7/7/2009							<0.005	
7/8/2009	<0.005							
12/20/2009	<0.005							
12/21/2009							<0.005	
6/20/2010	<0.005							
6/21/2010					<0.005			
1/6/2011	<0.005							
1/7/2011			<0.005		<0.005		<0.005	
7/8/2011			<0.005		<0.005		<0.005	
1/17/2012	<0.005							
1/18/2012			<0.005		<0.005		<0.005	
7/9/2012	<0.005							
7/10/2012			<0.005		<0.005		0.0052	
1/17/2013	<0.005							
1/18/2013					<0.005		<0.005	
7/17/2013	<0.005		<0.005		<0.005		<0.005	
1/13/2014	<0.005							
1/14/2014					<0.005		<0.005	
7/9/2014	<0.005		<0.005				0.0023 (J)	
7/10/2014					0.0027 (J)			
1/12/2015							0.0028 (J)	
1/13/2015	<0.005							
1/14/2015			<0.005		<0.005			
7/16/2015	<0.005						<0.005	
7/17/2015			<0.005					
7/18/2015					<0.005			
1/17/2016	<0.005							
1/18/2016					<0.005		<0.005	
7/27/2016	<0.005							
7/28/2016			<0.005					
7/29/2016					0.002 (J)		0.0014 (J)	

Prediction Limit

Constituent: Arsenic Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-2	GWC-2	GWC-21	GWC-21	GWC-22	GWC-22	GWB-4R	GWB-4R
8/31/2016	<0.005				0.0017 (J)			
9/1/2016			0.0039 (J)				0.0033 (J)	
10/25/2016			<0.005					
10/26/2016	<0.005				<0.005		0.0016 (J)	
1/4/2017			<0.005		<0.005			
1/5/2017	<0.005							
1/6/2017							<0.005	
4/4/2017	<0.005		0.0031 (J)				0.0021 (J)	
4/6/2017					0.0006 (J)			
7/11/2017					0.0012 (J)			
7/12/2017							0.0015 (J)	
7/13/2017	<0.005		<0.005					
10/3/2017	<0.005		<0.005					
10/4/2017					0.0025 (J)		0.0018 (J)	
1/9/2018			0.0033 (J)					
1/10/2018	0.0006 (J)							
1/11/2018					0.0006 (J)		0.0015 (J)	
7/10/2018	<0.005		0.0027 (J)					
7/11/2018					0.0011 (J)		0.00095 (J)	
1/16/2019								0.0024 (J)
1/17/2019				0.0022 (J)				
1/18/2019						<0.005		
1/21/2019		<0.005						
3/25/2019								0.0029 (J)
3/26/2019				0.0045 (J)				
3/27/2019						<0.005		
7/30/2019		0.00039 (J)						

Prediction Limit

Constituent: Arsenic, Barium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWB-5R	GWB-6R	GWB-6R	GWA-7	GWA-7	GWA-8	GWA-8
9/29/2000	<0.005		<0.025		0.11			
11/21/2000	<0.005		<0.025		0.12			
1/20/2001	<0.005		0.014		0.11			
3/14/2001	<0.005		<0.025		0.11		0.14	
7/16/2001	0.014		<0.025		0.11		0.14	
11/1/2001	0.023		<0.025		0.11		0.14	
4/25/2002	<0.005		<0.025		0.058		0.088	
11/20/2002	0.022		0.014					
6/6/2003			0.014		0.19		0.14	
12/12/2003	<0.005		<0.025		0.1		0.13	
5/26/2004	0.0074		0.0082		0.084		0.09	
12/7/2004	0.017		0.0062		0.094		0.11	
6/21/2005	0.013		<0.025		0.089		0.084	
12/12/2005	<0.005		<0.025		0.089		0.1	
4/4/2006							0.089	
6/27/2006	<0.005		<0.025		0.096		0.1	
8/30/2006							0.12	
12/4/2006	<0.005		<0.025		0.092		0.086	
2/15/2007							0.088	
6/23/2007	<0.005		0.0053		0.08		0.089	
9/11/2007							0.092	
12/11/2007	<0.005		0.0057		0.067		0.077	
3/11/2008							0.082	
6/23/2008					0.056		0.086	
6/24/2008	<0.005		0.012					
11/3/2008							0.088	
12/4/2008					0.054		0.081	
12/5/2008	<0.005		0.0064					
3/25/2009							0.069	
7/7/2009	<0.005		<0.025		0.034		0.078	
9/14/2009							0.079	
12/20/2009					0.034		0.081	
12/21/2009	<0.005		<0.025					
3/4/2010							0.065	
6/20/2010	<0.005		0.017		0.062		0.078	
9/14/2010							0.076	
1/6/2011	<0.005							
1/7/2011			<0.025		0.039		0.074	
4/15/2011							0.065	
7/7/2011	<0.005		<0.025		0.036		0.081	
9/25/2011							0.078	
1/17/2012	<0.005				0.041		0.082	
1/18/2012			<0.025					
4/4/2012							0.0861	
7/9/2012	<0.005				0.15			
7/10/2012			<0.025				0.082	
10/9/2012							0.09	
1/17/2013	<0.005							
1/18/2013			<0.025		0.15		0.083	
4/5/2013							0.078	
7/16/2013	<0.005							
7/17/2013			<0.025		0.13		0.083	

Prediction Limit

Constituent: Arsenic, Barium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWB-5R	GWB-6R	GWB-6R	GWA-7	GWA-7	GWA-8	GWA-8
10/11/2013							0.078	
1/13/2014	<0.005				0.16			
1/14/2014			<0.025				0.081	
4/3/2014							0.077	
7/9/2014	<0.005		<0.025		0.11		0.073	
10/24/2014							0.087	
1/13/2015	<0.005				0.083			
1/14/2015			<0.025				0.079	
5/10/2015							0.076	
7/16/2015	<0.005				0.094			
7/17/2015			<0.025				0.061	
10/6/2015							0.067	
1/18/2016	<0.005		<0.025		0.22		0.068	
4/26/2016							0.0596	
7/27/2016	0.0008 (J)				0.192			
7/28/2016			0.0009 (J)				0.0701	
8/30/2016	<0.005		<0.025				0.0687	
10/24/2016							0.07	
10/25/2016					0.173			
10/26/2016	<0.005		<0.025					
1/3/2017	<0.005						0.061	
1/5/2017			0.0021 (J)					
1/6/2017					0.167			
4/3/2017							0.0612	
4/6/2017	0.0006 (J)		0.0011 (J)		0.136			
7/11/2017							0.0624	
7/12/2017	0.0009 (J)		0.0014 (J)					
7/13/2017					0.0891			
10/2/2017							0.0618	
10/3/2017	0.001 (J)		0.0014 (J)					
10/4/2017					0.113			
1/9/2018			0.0017 (J)		0.0901		0.0574	
1/10/2018	0.0012 (J)							
7/9/2018							0.056	
7/10/2018	0.0016 (J)		0.00063 (J)					
7/11/2018					0.065			
1/16/2019		0.0011 (J)		<0.025		0.062		0.062
3/25/2019						0.054		0.064
3/26/2019		0.0014 (J)		0.0029 (J)				

Prediction Limit

Constituent: Barium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-1	GWC-11	GWC-11	GWC-12	GWC-12	GWC-13	GWC-13
9/29/2000	0.044		0.1		0.075		<0.005	
11/21/2000	0.047		0.082		0.072		0.01	
1/20/2001	0.051		0.083		0.086		<0.005	
3/14/2001	0.048		0.075		0.088		0.01	
7/16/2001	0.054		0.091		0.084		<0.005	
11/1/2001	0.063		0.068		0.13		<0.005	
4/25/2002	0.032		0.066		0.24		<0.005	
6/6/2003	0.046		0.085				0.028	
12/12/2003	0.034		0.072				0.019	
5/26/2004	0.035		0.055				<0.005	
12/7/2004	0.024		0.066				0.009	
6/21/2005	0.039		0.033		0.053		0.0089	
12/12/2005	0.042		0.034		0.1		0.026	
6/27/2006	0.033		0.029		0.098		0.029	
12/4/2006	0.04		0.02		0.068		0.017	
6/23/2007	0.044		0.017		0.042		0.014	
12/11/2007	0.049		0.013		0.04		0.011	
6/23/2008			0.012		0.041		0.018	
6/24/2008	0.038							
12/4/2008			0.011		0.035		0.019	
12/5/2008	0.06							
7/7/2009	0.043							
7/8/2009			0.012		0.036		0.011	
12/20/2009	0.065							
12/21/2009			0.011		0.028		0.01	
6/20/2010	0.095		0.0089		0.025		0.0081	
1/6/2011	0.093		0.014				0.012	
1/7/2011					0.037			
7/7/2011	0.095		0.018		0.039		0.015	
1/17/2012	0.1		0.23		0.045		0.0086	
7/9/2012	0.11		0.17		0.032		0.01	
1/17/2013	0.12		0.2		0.033		0.014	
7/16/2013	0.081		0.11		0.027		0.012	
1/13/2014	0.096		0.083		0.027		0.015	
7/8/2014			0.066		0.037		0.017	
7/9/2014	0.066							
1/13/2015	0.068		0.053		0.023		0.019	
7/16/2015	0.07		0.052		0.03		0.022	
1/17/2016	0.062							
1/18/2016					0.032		0.026	
1/19/2016			0.048					
7/26/2016			0.051				0.0236	
7/27/2016	0.0417				0.0191			
8/30/2016	0.0545							
8/31/2016			0.0565		0.019		0.0273	
10/25/2016	0.0504							
10/26/2016			0.0591		0.0197		0.0238	
1/4/2017	0.0534		0.0598		0.0174			
1/5/2017							0.0218	
4/4/2017	0.0549							
4/5/2017					0.0174			
4/6/2017			0.0813				0.0204	

Prediction Limit

Constituent: Barium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-1	GWC-11	GWC-11	GWC-12	GWC-12	GWC-13	GWC-13
7/10/2017					0.0172			
7/11/2017			0.0302					
7/12/2017	0.0614						0.0161	
10/3/2017	0.0436		0.103					
10/4/2017					0.0162		0.0185	
1/10/2018	0.053						0.0166	
1/11/2018			0.166		0.018			
7/10/2018	0.059							
7/11/2018			0.12		0.014		0.019	
1/16/2019		0.054						0.019
1/17/2019				0.039		0.017		
3/26/2019		0.055						0.026
3/27/2019				0.053		0.017		

Prediction Limit

Constituent: Barium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-14	GWC-14	GWC-15	GWC-15	GWC-16	GWC-16	GWC-17	GWC-17
9/29/2000	0.11		0.028		0.076		0.16	
11/21/2000	0.15		0.035		0.075		0.17	
1/20/2001	0.1		0.032		0.053		0.16	
3/14/2001	0.095		0.036		0.055		0.17	
7/16/2001			0.036		0.041		0.19	
11/1/2001	0.16		0.036		0.045		0.18	
4/25/2002	0.054		0.045		0.055		0.15	
6/6/2003	0.063						0.13	
12/12/2003	0.041						0.18	
5/26/2004	0.059		0.034		0.055		0.17	
12/7/2004	0.076		0.042		0.072		0.19	
6/21/2005	0.042		0.039		0.061		0.18	
12/12/2005	0.048		0.043		0.047		0.17	
4/4/2006	0.05				0.042			
6/27/2006	0.036		0.031		0.042		0.17	
8/30/2006	0.059				0.05			
12/4/2006	0.062		0.043		0.044		0.21	
2/15/2007	0.079				0.041			
6/23/2007	0.03		0.031		0.044		0.17	
9/11/2007	0.053				0.04			
12/11/2007	0.075		0.044		0.0035		0.18	
3/11/2008	0.052				0.034			
6/24/2008	0.039		0.057		0.042		0.14	
11/3/2008	0.082				0.049			
12/4/2008	0.079							
12/5/2008			0.041		0.05		0.19	
3/25/2009	0.093				0.052			
7/8/2009	0.039		0.058		0.046		0.2	
9/14/2009	0.061				0.048			
12/20/2009	0.088		0.062		0.062			
12/21/2009							0.23	
3/4/2010	0.077				0.058			
6/20/2010	0.075		0.03					
6/21/2010					0.041		0.25	
9/14/2010	0.093				0.036			
1/7/2011	0.13		0.049		0.054		0.21	
4/15/2011	0.086				0.049			
7/7/2011	0.051		0.05		0.063			
7/8/2011							0.13	
9/25/2011	0.056				0.037			
1/17/2012	0.052		0.044					
1/18/2012					0.034		0.26	
4/4/2012	0.0519				0.0446			
7/9/2012	0.048		0.045					
7/10/2012					0.033		0.19	
10/9/2012	0.065				0.041			
1/18/2013	0.045		0.049		0.036		0.17	
4/5/2013	0.047				0.036			
7/17/2013	0.032		0.039		0.054		0.18	
10/11/2013	0.028				0.052			
1/13/2014			0.038					
1/14/2014	0.036				0.051		0.18	

Prediction Limit

Constituent: Barium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-14	GWC-14	GWC-15	GWC-15	GWC-16	GWC-16	GWC-17	GWC-17
4/3/2014	0.038				0.047			
7/9/2014	0.03		0.031		0.08		0.16	
10/24/2014	0.025				0.072			
1/13/2015			0.041					
1/14/2015	0.04				0.047		0.16	
5/10/2015	0.026							
5/11/2015					0.053			
7/16/2015			0.041		0.059			
7/17/2015	0.029							
7/18/2015							0.012	
10/6/2015	0.03				0.053			
1/17/2016	0.038		0.048		0.056			
1/18/2016							0.13	
4/26/2016	0.025				0.0721			
7/27/2016	0.0248		0.0487					
7/28/2016					0.0534			
7/29/2016							0.181	
9/1/2016	0.0346		0.0403		0.0445		0.203	
10/25/2016	0.0248		0.0329		0.0464			
10/26/2016							0.177	
1/4/2017					0.0379			
1/5/2017	0.0245		0.0392				0.142	
4/3/2017			0.0439					
4/4/2017	0.0342							
4/5/2017					0.0534		0.106	
7/11/2017	0.0276		0.051					
7/12/2017					0.0944			
7/13/2017							0.0686	
10/2/2017	0.0274		0.047					
10/4/2017							0.0589	
1/9/2018	0.0222		0.0431					
1/10/2018					0.0603			
1/11/2018							0.0412	
7/9/2018	0.026							
7/10/2018			0.047					
7/11/2018							0.049	
1/16/2019		0.028						0.063
1/17/2019				0.042		0.13		
3/26/2019		0.034		0.047		0.14		0.025

Prediction Limit

Constituent: Barium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-2	GWC-2	GWC-20	GWC-20	GWC-21	GWC-21	GWC-22	GWC-22
1/4/2017			0.0999		0.0617		0.0975	
1/5/2017	0.0526							
4/4/2017	0.0503		0.136		0.0761			
4/6/2017							0.064	
7/11/2017			0.145				0.0778	
7/13/2017	0.0529				0.0428			
10/2/2017			0.148					
10/3/2017	0.057				0.0376			
10/4/2017							0.156	
1/9/2018					0.0704			
1/10/2018	0.0527		0.0788					
1/11/2018							0.0702	
7/9/2018			0.087					
7/10/2018	0.054				0.061			
7/11/2018							0.12	
1/17/2019						0.061		
1/18/2019								0.052
1/21/2019		0.05		0.069				
3/25/2019				0.085				
3/26/2019						0.084		
3/27/2019								0.057
7/30/2019		0.052						

Prediction Limit

Constituent: Barium, Chromium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWB-6R	GWB-6R	GWA-7	GWA-7
9/29/2000	0.16		0.22		0.16		<0.0013	
11/21/2000	0.16		0.13		0.21		<0.0013	
1/20/2001	0.21		0.19		0.23		<0.0013	
3/14/2001	0.18		0.27		0.22		<0.0013	
7/16/2001	0.18		0.37		0.22		<0.0013	
11/1/2001	0.15				0.23		<0.0013	
4/25/2002	0.16		0.19		0.15		<0.0013	
6/6/2003	0.29				0.13		0.037	
12/12/2003	0.18		0.054		0.034		0.0044	
5/26/2004	0.16		0.18		0.13		<0.0013	
12/7/2004	0.16		0.24		0.13		<0.0013	
6/21/2005	0.15		0.2		0.07		<0.0013	
12/12/2005	0.15		0.074		0.04		<0.0013	
6/27/2006	0.19		0.075		0.041		<0.0013	
12/4/2006	0.26		0.092		0.048		0.0015	
6/23/2007	0.24		0.089		0.12		<0.0013	
12/11/2007	0.21		0.072		0.12		0.0016	
6/23/2008							0.0019	
6/24/2008	0.13		0.049		0.17			
12/4/2008							<0.0013	
12/5/2008	0.12		0.067		0.093			
7/7/2009	0.17		0.04		0.06		0.0037	
12/20/2009							0.0016	
12/21/2009	0.2		0.044		0.11			
6/20/2010			0.036		0.11		<0.0013	
6/21/2010	0.22							
1/6/2011			0.075					
1/7/2011	0.12				0.025		0.0033	
7/7/2011			0.13		0.025		0.0044	
7/8/2011	0.15							
1/17/2012			0.21				0.0038	
1/18/2012	0.15				0.03			
7/9/2012			0.2				0.022	
7/10/2012	0.14				0.028			
1/17/2013			0.19					
1/18/2013	0.15				0.058		0.034	
7/16/2013			0.076					
7/17/2013	0.14				0.086		0.032	
1/13/2014			0.14				0.04	
1/14/2014	0.16				0.1			
7/9/2014	0.12		0.12		0.082		0.036	
1/12/2015	0.13							
1/13/2015			0.13				0.03	
1/14/2015					0.094			
7/16/2015	0.11		0.12				0.039	
7/17/2015					0.11			
1/18/2016	0.095		0.12		0.11		0.068	
7/27/2016			0.112				0.05	
7/28/2016					0.105			
7/29/2016	0.0883							
8/30/2016			0.135		0.106			
9/1/2016	0.123							

Prediction Limit

Constituent: Barium, Chromium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWB-6R	GWB-6R	GWA-7	GWA-7
10/25/2016							0.0519	
10/26/2016	0.0863		0.103		0.107			
1/3/2017			0.118					
1/5/2017					0.107			
1/6/2017	0.0758						0.0536	
4/4/2017	0.091							
4/6/2017			0.162		0.111		0.0447 (J)	
7/12/2017	0.0941		0.157		0.106			
7/13/2017							0.0269	
10/3/2017			0.127		0.105			
10/4/2017	0.0994						0.0378	
1/9/2018					0.0969		0.0283 (J)	
1/10/2018			0.158					
1/11/2018	0.088							
7/10/2018			0.31		0.087			
7/11/2018	0.071						0.018 (J)	
1/16/2019		0.083		0.054		0.013 (J)		0.018 (J)
3/25/2019		0.077						0.017 (J)
3/26/2019				0.057		0.012 (J)		

Prediction Limit

Constituent: Chromium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-8	GWA-8	GWC-1	GWC-1	GWC-11	GWC-11	GWC-12	GWC-12
9/29/2000	<0.01		<0.0013		<0.01		<0.01	
11/21/2000			<0.0013		<0.01		<0.01	
1/20/2001	<0.01		<0.0013		<0.01		<0.01	
3/14/2001	<0.01		<0.0013		<0.01		<0.01	
7/16/2001	<0.01		<0.0013		<0.01		<0.01	
11/1/2001	<0.01		<0.0013		<0.01		<0.01	
4/25/2002	<0.01		<0.0013		<0.01		<0.01	
11/20/2002			<0.0013		0.006		0.002	
6/6/2003	0.014				0.0082		<0.01	
12/12/2003	0.011		<0.0013		0.0023		<0.01	
5/26/2004	<0.01		<0.0013		<0.01		<0.01	
12/7/2004	<0.01		<0.0013		<0.01		<0.01	
6/21/2005	<0.01		<0.0013		<0.01		<0.01	
12/12/2005	<0.01				<0.01		<0.01	
4/4/2006	<0.01							
6/27/2006	<0.01		<0.0013		<0.01		<0.01	
8/30/2006	<0.01							
12/4/2006	<0.01		<0.0013		0.0021		0.0032	
2/15/2007	<0.01							
6/23/2007	<0.01		<0.0013		0.0017		<0.01	
9/11/2007	<0.01							
12/11/2007	<0.01		<0.0013		<0.01		<0.01	
3/11/2008	<0.01							
6/23/2008	<0.01				<0.01		0.0016	
6/24/2008			<0.0013					
11/3/2008	<0.01							
12/4/2008	<0.01				<0.01		<0.01	
12/5/2008			<0.0013					
3/25/2009	<0.01							
7/7/2009	<0.01		0.0013					
7/8/2009					<0.01		<0.01	
9/14/2009	<0.01							
12/20/2009	<0.01		<0.0013					
12/21/2009					<0.01		<0.01	
3/4/2010	<0.01							
6/20/2010	<0.01		<0.0013		<0.01		<0.01	
9/14/2010	<0.01							
1/6/2011			<0.0013		<0.01			
1/7/2011	<0.01						<0.01	
4/15/2011	<0.01							
7/7/2011	<0.01		<0.0013		0.0023		<0.01	
1/17/2012	<0.01		<0.0013		<0.01		<0.01	
4/4/2012	<0.01							
7/9/2012			<0.0013		0.0017		<0.01	
7/10/2012	<0.01							
10/9/2012	<0.01							
1/17/2013			<0.0013		<0.01		<0.01	
1/18/2013	<0.01							
4/5/2013	<0.01							
7/16/2013			<0.0013		<0.01		<0.01	
7/17/2013	<0.01							
10/11/2013	<0.01							

Prediction Limit

Constituent: Chromium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-8	GWA-8	GWC-1	GWC-1	GWC-11	GWC-11	GWC-12	GWC-12
1/13/2014			<0.0013		<0.01		<0.01	
1/14/2014	<0.01							
4/3/2014	<0.01							
7/8/2014					<0.01		<0.01	
7/9/2014	<0.01		0.0011 (J)					
10/24/2014	<0.01							
1/13/2015			<0.0013		<0.01		<0.01	
1/14/2015	<0.01							
5/10/2015	<0.01							
7/16/2015			0.0011 (J)		<0.01		0.001 (J)	
7/17/2015	<0.01							
10/6/2015	<0.01							
1/17/2016			<0.0013					
1/18/2016	<0.01						<0.01	
1/19/2016					<0.01			
4/26/2016	<0.01							
7/26/2016					0.0005 (J)			
7/27/2016			0.0016 (J)				0.0014 (J)	
7/28/2016	<0.01							
8/30/2016	<0.01		0.0015 (J)					
8/31/2016					0.001 (J)		0.0012 (J)	
10/24/2016	<0.01							
10/25/2016			0.0018 (J)					
10/26/2016					<0.01		0.0012 (J)	
1/3/2017	<0.01							
1/4/2017			0.0021 (J)		<0.01		0.0012 (J)	
4/3/2017	0.0004 (J)							
4/4/2017			0.002 (J)					
4/5/2017							0.0013 (J)	
4/6/2017					0.0007 (J)			
7/10/2017							0.0014 (J)	
7/11/2017	0.0006 (J)				0.0006 (J)			
7/12/2017			0.0021 (J)					
10/2/2017	<0.01							
10/3/2017			0.0014 (J)		0.0007 (J)			
10/4/2017							0.0011 (J)	
1/9/2018	<0.01							
1/10/2018			0.0017 (J)					
1/11/2018					0.0098 (J)		0.001 (J)	
7/9/2018	<0.01							
7/10/2018			0.0021 (J)					
7/11/2018					<0.01		<0.01	
1/16/2019		<0.01		0.0021 (J)				
1/17/2019						<0.01		0.0028 (J)
3/25/2019		<0.01						
3/26/2019				0.0018 (J)				
3/27/2019						<0.01		<0.01

Prediction Limit

Constituent: Chromium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-13	GWC-13	GWC-14	GWC-14	GWC-15	GWC-15	GWC-16	GWC-16
9/29/2000	<0.01		<0.01		<0.01		<0.01	
11/21/2000	<0.01		<0.01		<0.01		<0.01	
1/20/2001	<0.01		<0.01		<0.01		<0.01	
3/14/2001	<0.01		<0.01		<0.01		<0.01	
7/16/2001	<0.01		<0.01		<0.01		<0.01	
11/1/2001	<0.01		<0.01		<0.01		<0.01	
4/25/2002	<0.01		<0.01		<0.01		<0.01	
11/20/2002	<0.01		0.014		0.0058		0.0041	
6/6/2003	0.003		<0.01		0.0068			
12/12/2003	<0.01		<0.01		0.0041		0.0059	
5/26/2004	<0.01		<0.01		<0.01		<0.01	
12/7/2004	<0.01		<0.01		0.0026		<0.01	
6/21/2005	<0.01		<0.01		<0.01		<0.01	
12/12/2005	<0.01		<0.01		<0.01		<0.01	
4/4/2006			<0.01				<0.01	
6/27/2006	<0.01		<0.01		0.0013		<0.01	
8/30/2006			<0.01				<0.01	
12/4/2006	0.0017				<0.01			
2/15/2007			<0.01				<0.01	
6/23/2007	<0.01		<0.01		<0.01		0.0016	
9/11/2007			<0.01				<0.01	
12/11/2007	<0.01		<0.01		<0.01		<0.01	
3/11/2008			<0.01				<0.01	
6/23/2008	<0.01							
6/24/2008			<0.01		0.0014		<0.01	
11/3/2008			<0.01				0.0025	
12/4/2008	<0.01		<0.01					
12/5/2008					<0.01		<0.01	
3/25/2009			<0.01				<0.01	
7/8/2009	<0.01		<0.01		<0.01		<0.01	
9/14/2009			<0.01				<0.01	
12/20/2009			<0.01		<0.01		<0.01	
12/21/2009	<0.01							
3/4/2010			<0.01				<0.01	
6/20/2010	<0.01		<0.01		<0.01			
6/21/2010							<0.01	
9/14/2010			<0.01				<0.01	
1/6/2011	<0.01							
1/7/2011			0.0016		<0.01		0.0018	
4/15/2011							<0.01	
7/7/2011	0.0019		<0.01		<0.01		<0.01	
9/25/2011			0.0013				<0.01	
1/17/2012	<0.01		<0.01		<0.01			
1/18/2012							<0.01	
4/4/2012			<0.01				<0.01	
7/9/2012	<0.01		<0.01		<0.01			
7/10/2012							<0.01	
10/9/2012			0.0019				0.0018	
1/17/2013	<0.01							
1/18/2013			0.0017		<0.01		<0.01	
4/5/2013			0.0019				<0.01	
7/16/2013	<0.01							

Prediction Limit

Constituent: Chromium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-13	GWC-13	GWC-14	GWC-14	GWC-15	GWC-15	GWC-16	GWC-16
7/17/2013			0.0017		<0.01		<0.01	
10/11/2013			0.0013				<0.01	
1/13/2014	<0.01				<0.01			
1/14/2014			0.001				<0.01	
4/3/2014							<0.01	
7/8/2014	<0.01							
7/9/2014			0.0012 (J)		<0.01		<0.01	
10/24/2014			<0.01				<0.01	
1/13/2015	<0.01				<0.01			
1/14/2015			0.0013				<0.01	
5/10/2015			<0.01					
5/11/2015							<0.01	
7/16/2015	<0.01				<0.01		<0.01	
7/17/2015			0.001 (J)					
10/6/2015			<0.01				<0.01	
1/17/2016			0.0012 (J)		<0.01		<0.01	
1/18/2016	<0.01							
4/26/2016			<0.01				<0.01	
7/26/2016	<0.01							
7/27/2016			0.0008 (J)		0.0007 (J)			
7/28/2016							0.0006 (J)	
8/31/2016	0.0011 (J)							
9/1/2016			0.0015 (J)		0.0011 (J)		0.0011 (J)	
10/25/2016			<0.01		<0.01		<0.01	
10/26/2016	<0.01							
1/4/2017							<0.01	
1/5/2017	<0.01		0.001 (J)		<0.01			
4/3/2017					0.0015 (J)			
4/4/2017			0.001 (J)					
4/5/2017							0.001 (J)	
4/6/2017	0.0011 (J)							
7/11/2017			0.0008 (J)		0.0013 (J)			
7/12/2017	0.0007 (J)						0.0011 (J)	
10/2/2017			0.0009 (J)		0.0013 (J)			
10/3/2017							0.0009 (J)	
10/4/2017	0.0008 (J)							
1/9/2018			0.0006 (J)		0.0012 (J)			
1/10/2018	0.0007 (J)						0.0007 (J)	
7/9/2018			<0.01					
7/10/2018					<0.01		<0.01	
7/11/2018	0.0019 (J)							
1/16/2019		<0.01		<0.01				
1/17/2019						<0.01		0.01 (J)
3/26/2019		<0.01		<0.01		<0.01		<0.01

Prediction Limit

Constituent: Chromium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-17	GWC-2	GWC-2	GWC-20	GWC-20	GWC-21	GWC-21
9/29/2000	<0.01							
11/21/2000	<0.01		<0.01					
1/20/2001	<0.01		<0.01					
3/14/2001	<0.01		<0.01					
7/16/2001	<0.01		<0.01					
11/1/2001	<0.01		<0.01					
4/25/2002	<0.01		<0.01					
11/20/2002	<0.01		<0.01					
6/6/2003	<0.01		<0.01					
12/12/2003			<0.01					
5/26/2004	<0.01		<0.01					
12/7/2004	0.0021		<0.01					
6/21/2005	<0.01		<0.01					
12/12/2005	<0.01		<0.01					
6/27/2006	<0.01		<0.01					
12/4/2006	<0.01		<0.01					
6/23/2007	<0.01		<0.01					
12/11/2007	<0.01		<0.01					
6/24/2008	<0.01		<0.01					
12/4/2008			<0.01					
12/5/2008	<0.01							
7/8/2009	<0.01		<0.01					
12/20/2009			<0.01					
12/21/2009	<0.01							
6/20/2010			<0.01					
6/21/2010	<0.01				<0.01		0.0019	
1/6/2011			<0.01					
1/7/2011	<0.01				0.0018		0.0017	
7/7/2011					<0.01			
7/8/2011	0.0013				0.0019		0.0023	
1/17/2012			<0.01					
1/18/2012	<0.01				<0.01		<0.01	
7/9/2012			<0.01					
7/10/2012	<0.01				0.0013		<0.01	
1/17/2013			<0.01					
1/18/2013	<0.01				0.0015		<0.01	
7/17/2013	<0.01		<0.01		<0.01		0.0019	
1/13/2014			<0.01					
1/14/2014	<0.01				0		<0.01	
7/9/2014	<0.01		<0.01				<0.01	
7/10/2014					<0.01			
1/12/2015					<0.01			
1/13/2015			<0.01					
1/14/2015	<0.01						<0.01	
7/16/2015			<0.01					
7/17/2015							<0.01	
7/18/2015	<0.01				<0.01			
1/17/2016			<0.01		<0.01		<0.01	
1/18/2016	<0.01							
7/27/2016			0.0008 (J)					
7/28/2016					0.0007 (J)		0.0005 (J)	
7/29/2016	0.0009 (J)							

Prediction Limit

Constituent: Chromium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-17	GWC-2	GWC-2	GWC-20	GWC-20	GWC-21	GWC-21
8/31/2016			<0.01					
9/1/2016	0.0011 (J)				<0.01		<0.01	
10/25/2016					<0.01		<0.01	
10/26/2016	<0.01		0.001 (J)					
1/4/2017					<0.01		<0.01	
1/5/2017	0.0012 (J)		<0.01					
4/4/2017			0.0008 (J)		0.0011 (J)		0.0008 (J)	
4/5/2017	0.0015 (J)							
7/11/2017					0.0009 (J)			
7/13/2017	0.0012 (J)		0.0006 (J)				0.0006 (J)	
10/2/2017					0.0009 (J)			
10/3/2017			<0.01				0.0005 (J)	
10/4/2017	0.0055 (J)							
1/9/2018							0.0007 (J)	
1/10/2018			<0.01		0.0008 (J)			
1/11/2018	0.0009 (J)							
7/9/2018					<0.01			
7/10/2018			<0.01				<0.01	
7/11/2018	<0.01							
1/16/2019		<0.01						
1/17/2019								0.01
1/21/2019				<0.01		<0.01		
3/25/2019						<0.01		
3/26/2019		<0.01						<0.01
7/30/2019				0.00065 (J)				

Prediction Limit

Constituent: Chromium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-22	GWC-22	GWC-9	GWC-9	GWB-4R	GWB-4R	GWB-5R	GWB-5R
9/29/2000			<0.01		0.021		0.03	
11/21/2000			<0.01		0.017		<0.01	
1/20/2001			<0.01		0.03		0.028	
3/14/2001			<0.01		0.019			
7/16/2001			<0.01		0.029			
11/1/2001			<0.01		0.021			
4/25/2002			<0.01		0.03		0.021	
11/20/2002			0.014		0.038			
6/6/2003			<0.01		0.028			
12/12/2003			<0.01		0.027		<0.01	
5/26/2004			<0.01		0.021		0.012	
12/7/2004			0.0039		0.016		0.019	
6/21/2005			0.002		0.015		0.02	
12/12/2005			<0.01		0.022		<0.01	
6/27/2006			<0.01		0.027		0.0015	
12/4/2006			0.0019		0.025		0.0034	
6/23/2007			0.0015		0.023		<0.01	
12/11/2007			<0.01		0.018		<0.01	
6/23/2008			0.0015					
6/24/2008					0.022		<0.01	
12/4/2008			<0.01					
12/5/2008					0.023		0.0016	
7/7/2009					0.012		<0.01	
7/8/2009			<0.01					
12/21/2009			<0.01		0.019		<0.01	
6/20/2010			0.0015				<0.01	
6/21/2010	<0.01				0.01			
1/6/2011							0.0017	
1/7/2011	<0.01		<0.01		0.023			
7/7/2011							0.008	
7/8/2011	<0.01		<0.01		0.017			
1/17/2012							0.0082	
1/18/2012	<0.01		<0.01		0.0114			
7/9/2012							0.01	
7/10/2012	<0.01		<0.01		0.014			
1/17/2013							0.01	
1/18/2013	<0.01		<0.01		0.015			
7/16/2013							0.0061	
7/17/2013	<0.01		<0.01		0.011			
1/13/2014							0.002	
1/14/2014	<0.01		<0.01		0.019			
7/9/2014			0.0011 (J)		0.012		<0.01	
7/10/2014	<0.01							
1/12/2015					0.016			
1/13/2015							<0.01	
1/14/2015	<0.01		<0.01					
7/16/2015					0.0084		<0.01	
7/17/2015			0.0013					
7/18/2015	<0.01							
1/18/2016	<0.01		<0.01		0.014		<0.01	
7/27/2016							0.0006 (J)	
7/28/2016			0.0011 (J)					

Prediction Limit

Constituent: Chromium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-22	GWC-22	GWC-9	GWC-9	GWB-4R	GWB-4R	GWB-5R	GWB-5R
7/29/2016	0.0007 (J)				0.0077 (J)			
8/30/2016							<0.01	
8/31/2016	<0.01		0.0024 (J)					
9/1/2016					0.015			
10/26/2016	<0.01				0.0106		<0.01	
10/27/2016			<0.01					
1/3/2017							0.001 (J)	
1/4/2017	<0.01							
1/6/2017			<0.01		0.0098 (J)			
4/4/2017					0.0101			
4/6/2017	0.0006 (J)		0.0019 (J)				0.0013 (J)	
7/11/2017	0.0005 (J)							
7/12/2017			0.0011 (J)		0.0096 (J)		0.0011 (J)	
10/3/2017							0.0012 (J)	
10/4/2017	0.0006 (J)		0.0011 (J)		0.0097 (J)			
1/10/2018							0.0016 (J)	
1/11/2018	<0.01		0.001 (J)		0.0109			
7/10/2018							0.0055 (J)	
7/11/2018	<0.01		<0.01		0.0055 (J)			
1/16/2019						0.0024 (J)		<0.01
1/18/2019		<0.01		<0.01				
3/25/2019						0.002 (J)		
3/26/2019								0.072
3/27/2019		<0.01		<0.01				

Prediction Limit

Constituent: Chromium, Lead Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-6R	GWB-6R	GWA-7	GWA-7	GWA-8	GWA-8	GWC-1	GWC-1
9/29/2000	0.016		<0.025		<0.005		<0.005	
11/21/2000	0.023		<0.025				<0.005	
1/20/2001	0.025		<0.025		<0.005		<0.005	
3/14/2001	0.021		<0.025		<0.005		<0.005	
7/16/2001	0.019		<0.025		<0.005		<0.005	
11/1/2001	0.022		<0.025		<0.005		<0.005	
4/25/2002	0.019		<0.025		<0.005		<0.005	
11/20/2002	0.024				<0.005		<0.005	
6/6/2003	0.021						<0.005	
12/12/2003	0.0066		0.008		0.0095		<0.005	
5/26/2004	0.013		<0.025		<0.005		<0.005	
12/7/2004	0.013		<0.025		<0.005		<0.005	
6/21/2005	0.0067		<0.025		<0.005		<0.005	
12/12/2005	0.0033		<0.025		<0.005		<0.005	
4/4/2006					<0.005			
6/27/2006	0.0047		<0.025		<0.005		<0.005	
8/30/2006					<0.005			
12/4/2006	0.0084		<0.025		<0.005		<0.005	
2/15/2007					<0.005			
6/23/2007	0.01		<0.025		<0.005		<0.005	
9/11/2007					<0.005			
12/11/2007	0.0049		<0.025		<0.005		<0.005	
3/11/2008					<0.005			
6/23/2008			<0.025		<0.005			
6/24/2008							<0.005	
11/3/2008					<0.005			
12/4/2008			<0.025		<0.005			
12/5/2008	0.009						<0.005	
3/25/2009					<0.005			
7/7/2009	0.0044		<0.025		<0.005		<0.005	
9/14/2009					<0.005			
12/20/2009			<0.025		<0.005		<0.005	
12/21/2009	0.0055							
3/4/2010					<0.005			
6/20/2010	0.002		<0.025		<0.005		<0.005	
9/14/2010					<0.005			
1/6/2011							<0.005	
1/7/2011	0.0039		<0.025		<0.005			
4/15/2011					<0.005			
7/7/2011	0.0031		<0.025		<0.005		<0.005	
9/25/2011					<0.005			
1/17/2012			<0.025		<0.005		<0.005	
1/18/2012	0.0023							
4/4/2012					<0.005			
7/9/2012			<0.025				<0.005	
7/10/2012	0.0022				<0.005			
10/9/2012					<0.005			
1/17/2013							<0.005	
1/18/2013	<0.0013		<0.025		<0.005			
4/5/2013					<0.005			
7/16/2013							<0.005	
7/17/2013	<0.0013		<0.025		<0.005			

Prediction Limit

Constituent: Chromium, Lead Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-6R	GWB-6R	GWA-7	GWA-7	GWA-8	GWA-8	GWC-1	GWC-1
10/11/2013					<0.005			
1/13/2014			0.013				<0.005	
1/14/2014	0.0013				<0.005			
4/3/2014					<0.005			
7/9/2014	<0.0013		0.0076 (J)		<0.005		<0.005	
10/24/2014					<0.005			
1/13/2015			0.0057 (J)				<0.005	
1/14/2015	0.0015				<0.005			
5/10/2015					<0.005			
7/16/2015			0.009 (J)				<0.005	
7/17/2015	0.0011 (J)				<0.005			
10/6/2015					<0.005			
1/17/2016							<0.005	
1/18/2016	0.0011 (J)		0.0094 (J)		<0.005			
4/26/2016					<0.005			
7/27/2016			0.0058				<0.005	
7/28/2016	0.001 (J)				<0.005			
8/30/2016	0.0013 (J)				<0.005		<0.005	
10/24/2016					<0.005			
10/25/2016			0.0003 (J)				<0.005	
10/26/2016	0.0014 (J)							
1/3/2017					0.0001 (J)			
1/4/2017							<0.005	
1/5/2017	0.002 (J)							
1/6/2017			0.006					
4/3/2017					0.0002 (J)			
4/4/2017							<0.005	
4/6/2017	0.0034 (J)		0.0109					
7/11/2017					0.0001 (J)			
7/12/2017	0.0024 (J)						<0.005	
7/13/2017			0.007					
10/2/2017					0.0001 (J)			
10/3/2017	0.0022 (J)						<0.005	
10/4/2017			0.0042 (J)					
1/9/2018	0.0019 (J)		0.0098		0.0001 (J)			
1/10/2018							0.0001 (J)	
7/9/2018					<0.005			
7/10/2018	0.0023 (J)						<0.005	
7/11/2018			0.0028 (J)					
1/16/2019		0.018 (J)		<0.025		<0.005		<0.005
3/25/2019				0.0019 (J)		<0.005		
3/26/2019		0.017 (J)						<0.005

Prediction Limit

Constituent: Lead Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-11	GWC-12	GWC-12	GWC-13	GWC-13	GWC-14	GWC-14
9/29/2000	<0.013		<0.005		<0.005		<0.005	
11/21/2000	<0.013		<0.005		<0.005		<0.005	
1/20/2001	<0.013		<0.005		<0.005		<0.005	
3/14/2001	<0.013		<0.005		<0.005		<0.005	
7/16/2001	<0.013		<0.005		<0.005		<0.005	
11/1/2001	<0.013		<0.005		<0.005		<0.005	
4/25/2002	<0.013		<0.005		<0.005		<0.005	
11/20/2002	<0.013		<0.005		<0.005		<0.005	
6/6/2003	0.0068		<0.005		0.0078		<0.005	
12/12/2003	<0.013		<0.005		0.0055		<0.005	
5/26/2004	<0.013		<0.005		<0.005		<0.005	
12/7/2004	<0.013		<0.005		<0.005		<0.005	
6/21/2005	<0.013		<0.005		<0.005		<0.005	
12/12/2005	<0.013		<0.005		<0.005		<0.005	
4/4/2006							<0.005	
6/27/2006	<0.013		<0.005		<0.005		<0.005	
8/30/2006							<0.005	
12/4/2006	<0.013		<0.005		<0.005		<0.005	
2/15/2007							<0.005	
6/23/2007	<0.013		<0.005		<0.005		<0.005	
9/11/2007							<0.005	
12/11/2007	<0.013		<0.005		<0.005		<0.005	
3/11/2008							<0.005	
6/23/2008	<0.013		<0.005		<0.005		<0.005	
6/24/2008							<0.005	
11/3/2008							<0.005	
12/4/2008	<0.013		<0.005		<0.005		<0.005	
3/25/2009							<0.005	
7/8/2009	<0.013		<0.005		<0.005		<0.005	
9/14/2009							<0.005	
12/20/2009							<0.005	
12/21/2009	<0.013		<0.005		<0.005		<0.005	
3/4/2010							<0.005	
6/20/2010	<0.013		<0.005		<0.005		<0.005	
9/14/2010							<0.005	
1/6/2011	<0.013				<0.005		<0.005	
1/7/2011			<0.005				<0.005	
4/15/2011							<0.005	
7/7/2011	<0.013		<0.005		<0.005		<0.005	
9/25/2011							<0.005	
1/17/2012	<0.013		<0.005		<0.005		<0.005	
4/4/2012							<0.005	
7/9/2012	<0.013		<0.005		<0.005		<0.005	
10/9/2012							<0.005	
1/17/2013	<0.013		<0.005		<0.005		<0.005	
1/18/2013							<0.005	
4/5/2013							<0.005	
7/16/2013	<0.013		<0.005		<0.005		<0.005	
7/17/2013							<0.005	
10/11/2013							<0.005	
1/13/2014	<0.013		0.004		<0.005		<0.005	
1/14/2014							<0.005	

Prediction Limit

Constituent: Lead Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-11	GWC-11	GWC-12	GWC-12	GWC-13	GWC-13	GWC-14	GWC-14
4/3/2014							<0.005	
7/8/2014	<0.013		<0.005		<0.005			
7/9/2014							<0.005	
10/24/2014							<0.005	
1/13/2015	<0.013		<0.005		<0.005			
1/14/2015							<0.005	
5/10/2015							<0.005	
7/16/2015	<0.013		0.0044 (J)		<0.005			
7/17/2015							<0.005	
1/17/2016							<0.005	
1/18/2016			0.0034 (J)		<0.005			
1/19/2016	<0.013							
4/26/2016							<0.005	
7/26/2016	0.0001 (J)				<0.005			
7/27/2016			0.0001 (J)				<0.005	
8/31/2016	0.0002 (J)		0.0001 (J)		<0.005			
9/1/2016							<0.005	
10/25/2016							<0.005	
10/26/2016	0.0001 (J)		0.0001 (J)		<0.005			
1/4/2017	0.0002 (J)		<0.005					
1/5/2017					0.0002 (J)		<0.005	
4/4/2017							0.0001 (J)	
4/5/2017			0.0003 (J)					
4/6/2017	0.0003 (J)				0.0005 (J)			
7/10/2017			0.0003 (J)					
7/11/2017	0.0002 (J)						8E-05 (J)	
7/12/2017					0.0005 (J)			
10/2/2017							0.0001 (J)	
10/3/2017	0.0003 (J)							
10/4/2017			0.0001 (J)		0.0007 (J)			
1/9/2018							<0.005	
1/10/2018					0.0009 (J)			
1/11/2018	0.0003 (J)		0.0002 (J)					
7/9/2018							<0.005	
7/11/2018			<0.005		0.0015 (J)			
1/16/2019						0.00061 (J)		<0.005
1/17/2019		0.00028 (J)		<0.005				
3/26/2019						<0.005		<0.005
3/27/2019		0.00029 (J)		<0.005				

Prediction Limit

Constituent: Lead Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-15	GWC-15	GWC-16	GWC-16	GWC-17	GWC-17	GWC-2	GWC-2
9/29/2000	<0.005		<0.005		<0.005			
11/21/2000	<0.005		<0.005		<0.005		0.0069	
1/20/2001	<0.005		<0.005		<0.005		<0.005	
3/14/2001	<0.005		<0.005		<0.005		<0.005	
7/16/2001	<0.005		<0.005		<0.005		<0.005	
11/1/2001	<0.005		<0.005		<0.005		<0.005	
4/25/2002	<0.005		<0.005		<0.005		<0.005	
11/20/2002	<0.005		<0.005		<0.005		<0.005	
6/6/2003	<0.005				<0.005		<0.005	
12/12/2003	0.0065		0.017		<0.005		<0.005	
5/26/2004	<0.005		<0.005		<0.005		<0.005	
12/7/2004	<0.005		<0.005		<0.005		<0.005	
6/21/2005	<0.005		<0.005		<0.005		<0.005	
12/12/2005	<0.005		<0.005		<0.005		<0.005	
4/4/2006			<0.005					
6/27/2006	<0.005		<0.005		<0.005		<0.005	
8/30/2006			<0.005					
12/4/2006	<0.005		<0.005		<0.005		<0.005	
2/15/2007			<0.005					
6/23/2007	<0.005		<0.005		<0.005		<0.005	
9/11/2007			<0.005					
12/11/2007	<0.005		<0.005		<0.005		<0.005	
3/11/2008			<0.005					
6/24/2008	<0.005		<0.005		<0.005		<0.005	
11/3/2008			<0.005					
12/4/2008							<0.005	
12/5/2008	<0.005		<0.005		<0.005			
3/25/2009			<0.005					
7/8/2009	<0.005		<0.005		<0.005		<0.005	
9/14/2009			<0.005					
12/20/2009	<0.005		<0.005				<0.005	
12/21/2009					<0.005			
3/4/2010			<0.005					
6/20/2010	<0.005						<0.005	
6/21/2010			<0.005		<0.005			
9/14/2010			<0.005					
1/6/2011							<0.005	
1/7/2011	<0.005		<0.005		<0.005			
4/15/2011			<0.005					
7/7/2011	<0.005		<0.005					
7/8/2011					<0.005			
9/25/2011			<0.005					
1/17/2012	<0.005						<0.005	
1/18/2012			<0.005		<0.005			
4/4/2012			<0.005					
7/9/2012	<0.005						<0.005	
7/10/2012			<0.005		<0.005			
10/9/2012			<0.005					
1/17/2013							<0.005	
1/18/2013	<0.005		<0.005		<0.005			
4/5/2013			<0.005					
7/17/2013	<0.005		<0.005		<0.005		<0.005	

Prediction Limit

Constituent: Lead Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-20	GWC-20	GWC-21	GWC-21	GWC-22	GWC-22	GWC-9	GWC-9
9/29/2000							<0.005	
11/21/2000							<0.005	
1/20/2001							<0.005	
3/14/2001							<0.005	
7/16/2001							<0.005	
11/1/2001							<0.005	
4/25/2002							<0.005	
6/6/2003							<0.005	
12/12/2003							<0.005	
5/26/2004							<0.005	
12/7/2004							0.0051	
6/21/2005							<0.005	
12/12/2005							<0.005	
6/27/2006							<0.005	
12/4/2006							<0.005	
6/23/2007							<0.005	
12/11/2007							<0.005	
6/23/2008							<0.005	
12/4/2008							<0.005	
7/8/2009							<0.005	
12/21/2009							<0.005	
6/20/2010							<0.005	
6/21/2010	<0.005		<0.005		<0.013			
1/7/2011	<0.005		<0.005		<0.013		<0.005	
7/7/2011	<0.005							
7/8/2011	<0.005		<0.005		<0.013		<0.005	
1/18/2012	<0.005		<0.005		<0.013		<0.005	
7/10/2012	<0.005		<0.005		<0.013		<0.005	
1/18/2013	<0.005		<0.005		<0.013		<0.005	
7/17/2013	<0.005		<0.005		<0.013		<0.005	
1/14/2014	<0.005		<0.005		<0.013		<0.005	
7/9/2014			<0.005				<0.005	
7/10/2014	<0.005				<0.013			
1/12/2015	<0.005							
1/14/2015			<0.005		<0.013		<0.005	
7/17/2015			<0.005				<0.005	
7/18/2015	<0.005				<0.013			
1/17/2016	<0.005		<0.005					
1/18/2016					<0.013		<0.005	
7/28/2016	<0.005		<0.005				<0.005	
7/29/2016					0.0004 (J)			
8/31/2016					0.0003 (J)		0.0007 (J)	
9/1/2016	<0.005		<0.005					
10/25/2016	0.0001 (J)		<0.005					
10/26/2016					0.0003 (J)			
10/27/2016							<0.005	
1/4/2017	<0.005		<0.005		0.0003 (J)			
1/6/2017							<0.005	
4/4/2017	7E-05 (J)		9E-05 (J)					
4/6/2017					0.0003 (J)		0.0001 (J)	
7/11/2017	<0.005				0.0002 (J)			
7/12/2017							<0.005	

Prediction Limit

Constituent: Lead Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-20	GWC-20	GWC-21	GWC-21	GWC-22	GWC-22	GWC-9	GWC-9
7/13/2017			7E-05 (J)					
10/2/2017	<0.005							
10/3/2017			0.0001 (J)					
10/4/2017					0.0008 (J)		9E-05 (J)	
1/9/2018			9E-05 (J)					
1/10/2018	0.0002 (J)							
1/11/2018					0.0009 (J)		0.0002 (J)	
7/9/2018	<0.005							
7/10/2018			<0.005					
7/11/2018					0.001 (J)		<0.005	
1/17/2019				<0.005				
1/18/2019						0.0012 (J)		<0.005
1/21/2019		<0.005						
3/25/2019		<0.005						
3/26/2019				<0.005				
3/27/2019						0.00047 (J)		<0.005

Prediction Limit

Constituent: Lead, Selenium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWB-6R	GWB-6R	GWA-7	GWA-7
9/29/2000	0.0083		0.017		<0.025		<0.05	
11/21/2000	0.0052		<0.005		<0.025		<0.05	
1/20/2001	<0.005		0.011		<0.025		<0.05	
3/14/2001	<0.005		0.026		<0.025		<0.05	
7/16/2001	0.011		0.043		<0.025		<0.05	
11/1/2001	<0.005		0.075		<0.025		<0.05	
4/25/2002	<0.005		<0.005		<0.025		<0.05	
11/20/2002			0.057		0.0057 (J)			
6/6/2003					0.013		<0.05	
12/12/2003	0.0072		<0.005		<0.025		<0.05	
5/26/2004	0.0055		0.011		<0.025		<0.05	
12/7/2004	<0.005		0.038		<0.025		<0.05	
6/21/2005	<0.005		0.036		<0.025		<0.05	
12/12/2005	<0.005		<0.005		<0.025		<0.05	
6/27/2006			<0.005		<0.025		<0.05	
12/4/2006			<0.005		<0.025		<0.05	
6/23/2007	<0.005		<0.005		<0.025		<0.05	
12/11/2007	<0.005		<0.005		<0.025		<0.05	
6/23/2008							<0.05	
6/24/2008			<0.005		0.02			
12/4/2008							<0.05	
12/5/2008	<0.005		<0.005		<0.025			
7/7/2009	<0.005		<0.005		<0.025		<0.05	
12/20/2009							<0.05	
12/21/2009	<0.005		<0.005		<0.025			
6/20/2010			<0.005		<0.025		<0.05	
6/21/2010	<0.005							
1/6/2011			<0.005					
1/7/2011	<0.005				<0.025		<0.05	
7/7/2011			<0.005		<0.025		<0.05	
7/8/2011	<0.005							
1/17/2012			<0.005				<0.05	
1/18/2012	<0.005				<0.025			
7/9/2012			<0.005				<0.05	
7/10/2012	<0.005				<0.025			
1/17/2013			<0.005					
1/18/2013	<0.005				<0.025		0.009	
7/16/2013			<0.005					
7/17/2013	<0.005				<0.025		0.011	
1/13/2014			<0.005				0.012	
1/14/2014	0.005				<0.025			
7/9/2014	<0.005		<0.005		<0.025		0.011	
1/12/2015	<0.005							
1/13/2015			<0.005				0.0092	
1/14/2015					<0.025			
7/16/2015	<0.005		<0.005				0.014	
7/17/2015					<0.025			
1/18/2016	0.0055 (J)		<0.005		<0.025		0.023	
7/27/2016			<0.005				0.0323	
7/28/2016					<0.025			
7/29/2016	0.003 (J)							
8/30/2016			<0.005		<0.025			

Prediction Limit

Constituent: Lead, Selenium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWB-6R	GWB-6R	GWA-7	GWA-7
9/1/2016							0.0438	
10/25/2016							0.031	
10/26/2016	0.0057		0.0002 (J)		<0.025			
1/3/2017			0.0001 (J)					
1/5/2017					0.0003 (J)			
1/6/2017	0.0053						0.0324	
4/4/2017	0.0092							
4/6/2017			0.0003 (J)		0.0002 (J)		0.0188 (J)	
7/12/2017	0.006		0.0002 (J)		0.0002 (J)			
7/13/2017							0.0118	
10/3/2017			0.0002 (J)		0.0001 (J)			
10/4/2017	0.0057						0.0195	
1/9/2018					0.0003 (J)		<0.05	
1/10/2018			0.0003 (J)					
1/11/2018	0.0085							
7/10/2018			<0.005		<0.025			
7/11/2018	0.0029 (J)						<0.05	
1/16/2019		<0.005		<0.005		<0.025		0.0071 (J)
3/25/2019		<0.005						<0.05
3/26/2019				<0.005		<0.025		

Prediction Limit

Constituent: Selenium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-8	GWA-8	GWC-1	GWC-1	GWC-11	GWC-11	GWC-12	GWC-12
9/29/2000	<0.01		<0.01		<0.01		<0.01	
11/21/2000			<0.01		<0.01		<0.01	
1/20/2001	<0.01		0.017		<0.01		<0.01	
3/14/2001	<0.01		<0.01		<0.01		<0.01	
7/16/2001	<0.01		<0.01		<0.01		<0.01	
11/1/2001	<0.01		<0.01		<0.01		<0.01	
4/25/2002	<0.01		0.012		<0.01		<0.01	
11/20/2002	<0.01				<0.01		<0.01	
6/6/2003	<0.01				<0.01		<0.01	
12/12/2003	<0.01		0.013		<0.01		<0.01	
5/26/2004	<0.01		0.017		<0.01		<0.01	
12/7/2004	<0.01		0.011		<0.01		<0.01	
6/21/2005	<0.01		0.0088		<0.01		<0.01	
12/12/2005	<0.01		0.011		<0.01		<0.01	
4/4/2006	<0.01							
6/27/2006	<0.01		<0.01		<0.01		<0.01	
8/30/2006	<0.01							
12/4/2006	<0.01		<0.01		<0.01		<0.01	
2/15/2007	<0.01							
6/23/2007	<0.01		<0.01		<0.01		<0.01	
9/11/2007	<0.01							
12/11/2007	<0.01		<0.01		<0.01		<0.01	
3/11/2008	<0.01							
6/23/2008	<0.01				<0.01		<0.01	
6/24/2008			<0.01					
11/3/2008	<0.01							
12/4/2008	<0.01				<0.01		<0.01	
12/5/2008			<0.01					
3/25/2009	<0.01							
7/7/2009	<0.01		<0.01					
7/8/2009					<0.01		<0.01	
9/14/2009	<0.01							
12/20/2009	<0.01		<0.01					
12/21/2009					<0.01		<0.01	
3/4/2010	<0.01							
6/20/2010	<0.01		<0.01		<0.01		<0.01	
9/14/2010	<0.01							
1/6/2011			<0.01		<0.01			
1/7/2011	<0.01						<0.01	
4/15/2011	<0.01							
7/7/2011	<0.01		<0.01		<0.01		<0.01	
9/25/2011	<0.01							
1/17/2012	<0.01		<0.01		0.023		<0.01	
7/9/2012			<0.01		0.016		<0.01	
7/10/2012	<0.01							
10/9/2012	<0.01							
1/17/2013			<0.01		0.033		<0.01	
1/18/2013	<0.01							
4/5/2013	<0.01							
7/16/2013			0.012		0.0068		<0.01	
7/17/2013	<0.01							
10/11/2013	<0.01							

Prediction Limit

Constituent: Selenium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-8	GWA-8	GWC-1	GWC-1	GWC-11	GWC-11	GWC-12	GWC-12
1/13/2014			<0.01		0.036		<0.01	
1/14/2014	<0.01							
4/3/2014	<0.01							
7/8/2014					0.017		<0.01	
7/9/2014	<0.01		<0.01					
10/24/2014	<0.01							
1/13/2015			<0.01		0.027		<0.01	
1/14/2015	<0.01							
5/10/2015	<0.01							
7/16/2015			<0.01		<0.01		<0.01	
7/17/2015	<0.01							
10/6/2015	<0.01							
1/17/2016			0.023					
1/18/2016	<0.01						<0.01	
1/19/2016					0.023			
4/26/2016	<0.01							
7/26/2016					0.0056 (J)			
7/27/2016			0.002 (J)				0.0025 (J)	
7/28/2016	0.001 (J)							
8/30/2016	<0.01		0.002 (J)					
8/31/2016					0.0084 (J)		0.0019 (J)	
10/24/2016	0.0013 (J)							
10/25/2016			0.0022 (J)					
10/26/2016					0.0052 (J)		0.002 (J)	
1/3/2017	<0.01							
1/4/2017			0.0016 (J)		0.0062 (J)		<0.01	
4/3/2017	<0.01							
4/4/2017			0.0052 (J)					
4/5/2017							<0.01	
4/6/2017					0.0195			
7/10/2017							<0.01	
7/11/2017	<0.01				<0.01			
7/12/2017			0.0024 (J)					
10/2/2017	<0.01							
10/3/2017			<0.01		0.0079 (J)			
10/4/2017							<0.01	
1/9/2018	<0.01							
1/10/2018			0.0018 (J)					
1/11/2018					0.0054 (J)		<0.01	
7/9/2018	<0.01							
7/10/2018			0.0026 (J)					
7/11/2018					0.0022 (J)		<0.01	
1/16/2019		<0.01		0.0018 (J)				
1/17/2019						<0.01		<0.01
3/25/2019		<0.01						
3/26/2019				0.0023 (J)				
3/27/2019						0.01 (J)		<0.01

Prediction Limit

Constituent: Selenium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-14	GWC-14	GWC-15	GWC-15	GWC-16	GWC-16	GWC-17	GWC-17
9/29/2000	<0.005		<0.01		<0.005		<0.01	
11/21/2000	0.052		<0.01		<0.005		<0.01	
1/20/2001	0.053		<0.01		<0.005		<0.01	
3/14/2001	0.049		<0.01		<0.005		<0.01	
7/16/2001	0.038		<0.01		<0.005		<0.01	
11/1/2001	0.022		<0.01		<0.005		<0.01	
4/25/2002			<0.01		<0.005		<0.01	
11/20/2002	0.018		0.0094		<0.005		<0.01	
6/6/2003	<0.005						<0.01	
12/12/2003	<0.005						<0.01	
5/26/2004	0.023		<0.01		0.0053		<0.01	
12/7/2004	0.019		<0.01		<0.005		<0.01	
6/21/2005	0.019		<0.01		<0.005		<0.01	
12/12/2005	0.0095		<0.01		<0.005		<0.01	
4/4/2006	0.033				<0.005			
6/27/2006	<0.005		<0.01		<0.005		<0.01	
8/30/2006	<0.005				<0.005			
12/4/2006	0.032		<0.01		<0.005		<0.01	
2/15/2007	0.034				<0.005			
6/23/2007	<0.005		<0.01		<0.005		<0.01	
9/11/2007	0.022				<0.005			
12/11/2007	0.045		<0.01		<0.005		<0.01	
3/11/2008	0.02				<0.005			
6/24/2008	<0.005		<0.01		<0.005		<0.01	
11/3/2008	0.052				<0.005			
12/4/2008	0.054							
12/5/2008			<0.01		<0.005		<0.01	
3/25/2009	0.072				<0.005			
7/8/2009	0.021		<0.01		<0.005		<0.01	
9/14/2009	0.015				<0.005			
12/20/2009	0.072		<0.01		<0.005			
12/21/2009							<0.01	
3/4/2010	0.083				<0.005			
6/20/2010	0.1		<0.01					
6/21/2010					<0.005		<0.01	
9/14/2010	0.085				<0.005			
1/7/2011	0.028		<0.01		<0.005		<0.01	
4/15/2011	<0.005				<0.005			
7/7/2011	<0.005		<0.01		<0.005			
7/8/2011							<0.01	
9/25/2011	0.02				<0.005			
1/17/2012	0.016		<0.01					
1/18/2012					<0.005		<0.01	
4/4/2012	0.0156				<0.005			
7/9/2012	<0.005							
7/10/2012					<0.005		<0.01	
10/9/2012	0.0094				<0.005			
1/18/2013	0.0067				<0.005		<0.01	
4/5/2013	0.0077				<0.005			
7/17/2013	0.01		<0.01		<0.005		<0.01	
10/11/2013	0.0087				0.0069			
1/13/2014			<0.01					

Prediction Limit

Constituent: Selenium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-14	GWC-14	GWC-15	GWC-15	GWC-16	GWC-16	GWC-17	GWC-17
1/14/2014	0.012				<0.005		<0.01	
4/3/2014	0.022				<0.005			
7/9/2014	0.0089		<0.01		0.005		<0.01	
10/24/2014	0.017				<0.005			
1/13/2015			<0.01					
1/14/2015	<0.005				<0.005		<0.01	
5/10/2015	<0.005							
5/11/2015					<0.005			
7/16/2015			<0.01		<0.005			
7/17/2015	<0.005							
7/18/2015							<0.01	
10/6/2015	<0.005				0.0073			
1/17/2016	<0.005		<0.01		0.0031 (J)			
1/18/2016							<0.01	
4/26/2016	0.00428 (J)				0.00497 (J)			
7/27/2016	0.0038 (J)		<0.01					
7/28/2016					0.0076 (J)			
7/29/2016							0.0011 (J)	
9/1/2016	0.0056 (J)		<0.01		0.0052 (J)		0.0012 (J)	
10/25/2016	0.0023 (J)		<0.01		0.0085 (J)			
10/26/2016							0.0013 (J)	
1/4/2017					0.0048 (J)			
1/5/2017	0.0038 (J)		<0.01				0.0012 (J)	
4/3/2017			<0.01					
4/4/2017	0.0064 (J)							
4/5/2017					0.0068 (J)		<0.01	
7/11/2017	0.0044 (J)		<0.01					
7/12/2017					0.0048 (J)			
7/13/2017							0.0018 (J)	
10/2/2017	0.004 (J)		<0.01					
10/3/2017					0.0051 (J)			
10/4/2017							0.0042 (J)	
1/9/2018	0.0019 (J)		0.0019 (J)					
1/10/2018					0.0018 (J)			
1/11/2018							<0.01	
7/9/2018	0.0029 (J)							
7/10/2018			0.0086 (J)		0.0045 (J)			
7/11/2018							0.0016 (J)	
1/16/2019		0.0016 (J)						<0.01
1/17/2019				0.0029 (J)		0.0031 (J)		
3/26/2019		0.0022 (J)		0.0074 (J)		0.0033 (J)		<0.01

Prediction Limit

Constituent: Selenium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-2	GWC-2	GWC-20	GWC-20	GWC-21	GWC-21	GWC-22	GWC-22
11/21/2000	<0.01							
1/20/2001	<0.01							
3/14/2001	<0.01							
7/16/2001	<0.01							
11/1/2001	<0.01							
4/25/2002	<0.01							
11/20/2002	<0.01							
6/6/2003	<0.01							
12/12/2003	<0.01							
5/26/2004	0.005							
12/7/2004	<0.01							
6/21/2005	<0.01							
12/12/2005	<0.01							
6/27/2006	<0.01							
12/4/2006	<0.01							
6/23/2007	<0.01							
12/11/2007	<0.01							
6/24/2008	<0.01							
12/4/2008	<0.01							
7/8/2009	<0.01							
12/20/2009	<0.01							
6/20/2010	<0.01							
6/21/2010			<0.01		0.048		<0.01	
1/6/2011	<0.01							
1/7/2011			<0.01		0.014		<0.01	
7/7/2011			<0.01					
7/8/2011			<0.01		0.018		<0.01	
1/17/2012	<0.01							
1/18/2012			<0.01		<0.013		<0.01	
7/9/2012	<0.01							
7/10/2012			<0.01		0.02		<0.01	
1/17/2013	<0.01							
1/18/2013			0.005		0.015		<0.01	
7/17/2013	<0.01		<0.01		0.037		<0.01	
1/13/2014	<0.01							
1/14/2014			<0.01		0.043		<0.01	
7/9/2014	<0.01				0.023			
7/10/2014			<0.01				<0.01	
1/12/2015			<0.01					
1/13/2015	<0.01							
1/14/2015					0.022		<0.01	
7/16/2015	<0.01							
7/17/2015					0.033			
7/18/2015			<0.01				<0.01	
1/17/2016	<0.01		<0.01		0.021			
1/18/2016							<0.01	
7/27/2016	0.002 (J)							
7/28/2016			<0.01		0.0341			
7/29/2016							0.0022 (J)	
8/31/2016	<0.01						0.0014 (J)	
9/1/2016			<0.01		0.0297			
10/25/2016			0.0014 (J)		0.0095 (J)			

Prediction Limit

Constituent: Selenium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-2	GWC-2	GWC-20	GWC-20	GWC-21	GWC-21	GWC-22	GWC-22
10/26/2016	0.0035 (J)						0.001 (J)	
1/4/2017			0.0014 (J)		0.022		<0.01	
1/5/2017	<0.01							
4/4/2017	<0.01		<0.01		0.0236			
4/6/2017							<0.01	
7/11/2017			<0.01				<0.01	
7/13/2017	<0.01				0.013			
10/2/2017			<0.01					
10/3/2017	<0.01				0.01 (J)			
10/4/2017							0.0023 (J)	
1/9/2018					0.0162			
1/10/2018	<0.01		<0.01					
1/11/2018							<0.01	
7/9/2018			<0.01					
7/10/2018	<0.01				0.016			
7/11/2018							<0.01	
1/17/2019						0.011		
1/18/2019								<0.01
1/21/2019		<0.01		0.0014 (J)				
3/25/2019				<0.01				
3/26/2019						0.022		
3/27/2019								<0.01
7/30/2019		<0.01						

Prediction Limit

Constituent: Selenium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWC-9	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWB-6R	GWB-6R
9/29/2000	<0.01		<0.01		<0.01		<0.05	
11/21/2000	<0.01		<0.01		<0.01		<0.05	
1/20/2001	<0.01				<0.01		<0.05	
3/14/2001	<0.01		<0.01		<0.01		<0.05	
7/16/2001	<0.01				<0.01		<0.05	
11/1/2001	<0.01				<0.01		<0.05	
4/25/2002	<0.01		0.01		<0.01		<0.05	
11/20/2002	<0.01				0.0064		0.008	
6/6/2003	<0.01				0.011		0.0066	
12/12/2003	<0.01				<0.01		0.0056	
5/26/2004	<0.01				0.007		0.0084	
12/7/2004	<0.01				<0.01		<0.05	
6/21/2005	0.0062		0.0087		0.0063		0.0062	
12/12/2005	<0.01				<0.01		<0.05	
6/27/2006	<0.01		<0.01		<0.01		<0.05	
12/4/2006	<0.01		<0.01		<0.01		<0.05	
6/23/2007	<0.01		<0.01		<0.01		<0.05	
12/11/2007	<0.01		<0.01		<0.01		<0.05	
6/23/2008	<0.01							
6/24/2008			<0.01		<0.01		<0.05	
12/4/2008	<0.01							
12/5/2008			<0.01		<0.01		<0.05	
7/7/2009			<0.01		<0.01		<0.05	
7/8/2009	<0.01							
12/21/2009	<0.01		<0.01		<0.01		<0.05	
6/20/2010	<0.01				<0.01		<0.05	
6/21/2010			<0.01					
1/6/2011					<0.01			
1/7/2011	<0.01		<0.01				<0.05	
7/7/2011					<0.01		<0.05	
7/8/2011	<0.01		<0.01					
1/17/2012					<0.01			
1/18/2012	<0.01		<0.01				<0.05	
7/9/2012					<0.01			
7/10/2012	<0.01		<0.01				<0.05	
1/17/2013					<0.01			
1/18/2013	<0.01		<0.01				<0.05	
7/16/2013					<0.01			
7/17/2013	<0.01		<0.01				<0.05	
1/13/2014					<0.01			
1/14/2014	<0.01		<0.01				<0.05	
7/9/2014	<0.01		<0.01		<0.01		<0.05	
1/12/2015			<0.01					
1/13/2015					<0.01			
1/14/2015	<0.01						<0.05	
7/16/2015			<0.01		<0.01			
7/17/2015	<0.01						<0.05	
1/18/2016	<0.01		<0.01		<0.01		<0.05	
7/27/2016					<0.01			
7/28/2016	<0.01						<0.05	
7/29/2016			0.0036 (J)					
8/30/2016					<0.01		<0.05	

Prediction Limit

Constituent: Selenium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWC-9	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWB-6R	GWB-6R
8/31/2016	<0.01							
9/1/2016			0.0067 (J)					
10/26/2016			0.0042 (J)		<0.01		<0.05	
10/27/2016	<0.01				<0.01			
1/3/2017								
1/5/2017							0.0014 (J)	
1/6/2017	<0.01		0.0042 (J)					
4/4/2017			0.0043 (J)					
4/6/2017	<0.01				<0.01		<0.05	
7/12/2017	<0.01		0.0033 (J)		<0.01		<0.05	
10/3/2017					<0.01		<0.05	
10/4/2017	<0.01		0.0038 (J)					
1/9/2018							<0.05	
1/10/2018					<0.01			
1/11/2018	<0.01		0.0029 (J)					
7/10/2018					0.0018 (J)		0.0016 (J)	
7/11/2018	<0.01		0.0015 (J)					
1/16/2019				<0.01		<0.01		<0.05
1/18/2019		<0.01						
3/25/2019				<0.01				
3/26/2019						<0.01		0.05 (J)
3/27/2019		<0.01						

Prediction Limit

Constituent: Vanadium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWA-7	GWA-7	GWA-8	GWA-8	GWC-1	GWC-1	GWC-11	GWC-11
9/29/2000	<0.0025		<0.01		<0.01		<0.01	
11/21/2000	<0.0025				<0.01		<0.01	
1/20/2001	<0.0025		<0.01		<0.01		<0.01	
3/14/2001	<0.0025		<0.01		<0.01		<0.01	
7/16/2001	<0.0025		<0.01		<0.01		<0.01	
11/1/2001	<0.0025		<0.01		<0.01		<0.01	
4/25/2002	<0.0025		<0.01		<0.01		<0.01	
11/20/2002			<0.01		0.0069		0.0071	
6/6/2003	0.047						0.0098	
12/12/2003	0.0086				<0.01		0.0074	
5/26/2004	<0.0025		<0.01		<0.01		<0.01	
12/7/2004	<0.0025		<0.01		<0.01		<0.01	
6/21/2005	<0.0025		<0.01		<0.01		<0.01	
12/12/2005	<0.0025		<0.01		<0.01		<0.01	
4/4/2006			<0.01					
6/27/2006	<0.0025		<0.01		0.0029		<0.01	
8/30/2006			<0.01					
12/4/2006	0.0027		<0.01		0.0047		<0.01	
2/15/2007			<0.01					
6/23/2007	0.0027		<0.01		0.0029		0.0036	
9/11/2007			<0.01					
12/11/2007	0.0033		<0.01		<0.01		<0.01	
3/11/2008			<0.01					
6/23/2008	0.0074		<0.01				<0.01	
6/24/2008					<0.01			
11/3/2008			<0.01					
12/4/2008	0.0084		<0.01				<0.01	
12/5/2008					<0.01			
3/25/2009			<0.01					
7/7/2009	0.023		<0.01		<0.01			
7/8/2009							0.0026	
9/14/2009			<0.01					
12/20/2009	0.007		<0.01		<0.01			
12/21/2009							<0.01	
3/4/2010			<0.01					
6/20/2010	0.0047		<0.01		0.0037		<0.01	
9/14/2010			<0.01					
1/6/2011					<0.01		0.003	
1/7/2011	0.018		<0.01					
4/15/2011			<0.01					
7/7/2011	0.019		<0.01		0.0045		0.004	
9/25/2011			<0.01					
1/17/2012	0.0298		<0.01		<0.01		<0.01	
4/4/2012			<0.01					
7/9/2012	0.14				0.0026		0.005	
7/10/2012			<0.01					
10/9/2012			<0.01					
1/17/2013					<0.01		0.005	
1/18/2013	0.21		<0.01					
4/5/2013			<0.01					
7/16/2013					<0.01		<0.01	
7/17/2013	0.18		<0.01					

Prediction Limit

Constituent: Vanadium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-12	GWC-12	GWC-13	GWC-13	GWC-14	GWC-14	GWC-15	GWC-15
9/29/2000	<0.01		<0.01		<0.0025		<0.01	
11/21/2000	<0.01		<0.01		<0.0025		<0.01	
1/20/2001	<0.01		<0.01		<0.0025		<0.01	
3/14/2001	<0.01		<0.01		<0.0025		<0.01	
7/16/2001	<0.01		<0.01		<0.0025		<0.01	
11/1/2001	<0.01		<0.01		<0.0025		<0.01	
4/25/2002	<0.01		<0.01		<0.0025		<0.01	
11/20/2002	<0.01		<0.01		0.03		0.0099	
6/6/2003	<0.01		0.0063		0.0065			
12/12/2003	<0.01		<0.01		0.0052			
5/26/2004	<0.01		<0.01		<0.0025		<0.01	
12/7/2004	<0.01		<0.01		0.0074		<0.01	
6/21/2005	<0.01		<0.01		0.01		<0.01	
12/12/2005	<0.01		<0.01		<0.0025		<0.01	
4/4/2006					0.013			
6/27/2006	<0.01		<0.01		<0.0025		<0.01	
8/30/2006					0.0039			
12/4/2006	<0.01		<0.01		0.016		<0.01	
2/15/2007					0.017			
6/23/2007	<0.01		<0.01		0.0076		<0.01	
9/11/2007					0.012			
12/11/2007	<0.01		<0.01		0.017		<0.01	
3/11/2008					0.012			
6/23/2008	<0.01		<0.01					
6/24/2008					0.0069		<0.01	
11/3/2008					0.016			
12/4/2008	<0.01		<0.01		0.013			
12/5/2008							<0.01	
3/25/2009					0.014			
7/8/2009	<0.01		<0.01		0.014		<0.01	
9/14/2009					0.0072			
12/20/2009					0.02		<0.01	
12/21/2009	<0.01		<0.01					
3/4/2010					0.023			
6/20/2010	<0.01		<0.01		0.017		<0.01	
9/14/2010					0.018			
1/6/2011			0.0028					
1/7/2011	<0.01				0.019		<0.01	
4/15/2011					0.019			
7/7/2011	<0.01		<0.01		0.014		0.0036	
9/25/2011					0.015			
1/17/2012	<0.01		<0.01		0.021		<0.01	
4/4/2012					0.0191			
7/9/2012	<0.01		<0.01		0.026		0.0059	
10/9/2012					0.049			
1/17/2013	<0.01		<0.01					
1/18/2013					0.036		<0.01	
4/5/2013					0.04			
7/16/2013	<0.01		<0.01					
7/17/2013					0.062		<0.01	
10/11/2013					0.032			
1/13/2014	<0.01		<0.01				<0.01	

Prediction Limit

Constituent: Vanadium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-12	GWC-12	GWC-13	GWC-13	GWC-14	GWC-14	GWC-15	GWC-15
1/14/2014					0.044			
7/8/2014	0.0034 (J)		0.002 (J)					
7/9/2014					0.032		0.0012 (J)	
10/24/2014					0.045			
1/13/2015	<0.01		0.0015 (J)				0.0013 (J)	
1/14/2015					0.031			
5/10/2015					0.013			
7/16/2015	0.0049 (J)		<0.01				<0.01	
7/17/2015					0.028			
10/6/2015					0.02			
1/17/2016					0.028		0.0013 (J)	
1/18/2016	0.0058		0.0011 (J)					
4/26/2016					0.0181			
7/26/2016			<0.01					
7/27/2016	0.0058 (J)				0.0189		<0.01	
10/25/2016					0.0206		<0.01	
1/4/2017	<0.01							
1/5/2017			<0.01		0.0172		<0.01	
4/3/2017							0.002 (J)	
4/4/2017					0.0235			
4/5/2017	0.0039 (J)							
4/6/2017			<0.01					
7/10/2017	0.0062 (J)							
7/11/2017					0.0136		0.0022 (J)	
7/12/2017			0.0016 (J)					
10/2/2017					0.0175		0.0022 (J)	
1/9/2018					0.0103		0.0021 (J)	
1/10/2018			0.0019 (J)					
1/11/2018	0.0025 (J)							
7/9/2018					0.0078 (J)			
7/10/2018							0.0025 (J)	
7/11/2018	0.0059 (J)		0.0097 (J)					
1/16/2019				<0.01		0.0043 (J)		
1/17/2019		<0.01						<0.01
3/26/2019				0.0029 (J)		0.0063 (J)		0.0026 (J)
3/27/2019		0.0049 (J)						

Prediction Limit

Constituent: Vanadium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-16	GWC-16	GWC-17	GWC-17	GWC-2	GWC-2	GWC-20	GWC-20
9/29/2000	<0.01		<0.01					
11/21/2000	<0.01		<0.01		<0.01			
1/20/2001	<0.01		<0.01		<0.01			
3/14/2001	<0.01		<0.01		<0.01			
7/16/2001	<0.01		<0.01		<0.01			
11/1/2001	<0.01		<0.01		<0.01			
4/25/2002	<0.01		<0.01		<0.01			
11/20/2002	0.0069		<0.01		<0.01			
6/6/2003			<0.01		<0.01			
12/12/2003	0.012		<0.01		<0.01			
5/26/2004	<0.01		<0.01		<0.01			
12/7/2004	<0.01		<0.01		<0.01			
6/21/2005	<0.01		<0.01		<0.01			
12/12/2005	<0.01		<0.01		<0.01			
4/4/2006	<0.01							
6/27/2006	<0.01		0.0025		<0.01			
8/30/2006	<0.01							
12/4/2006	0.0031		<0.01		<0.01			
2/15/2007	0.0025							
6/23/2007	0.0032		<0.01		<0.01			
9/11/2007	<0.01							
12/11/2007	<0.01		<0.01		<0.01			
3/11/2008	<0.01							
6/24/2008	<0.01		<0.01		<0.01			
11/3/2008	0.0032							
12/4/2008					<0.01			
12/5/2008	<0.01		<0.01					
3/25/2009	<0.01							
7/8/2009	0.0036		<0.01		<0.01			
9/14/2009	0.0026							
12/20/2009	0.0031				<0.01			
12/21/2009			<0.01					
3/4/2010	<0.01							
6/20/2010					<0.01			
6/21/2010	0.0025		<0.01				<0.01	
9/14/2010	0.0035							
1/6/2011					<0.01			
1/7/2011	0.0036		<0.01				0.0029	
4/15/2011	<0.01							
7/7/2011	0.003						<0.01	
7/8/2011			0.0031				0.0046	
9/25/2011	0.0037							
1/17/2012					<0.01			
1/18/2012	<0.01		<0.01				<0.01	
4/4/2012	<0.01							
7/9/2012					<0.01			
7/10/2012	0.0026		<0.01				0.0081	
10/9/2012	0.007							
1/17/2013					<0.01			
1/18/2013	<0.01		<0.01				0.0063	
4/5/2013	<0.01							
7/17/2013	<0.01		<0.01		<0.01		<0.01	

Prediction Limit

Constituent: Vanadium Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-16	GWC-16	GWC-17	GWC-17	GWC-2	GWC-2	GWC-20	GWC-20
10/11/2013	<0.01							
1/13/2014					<0.01			
1/14/2014	<0.01		<0.01				<0.01	
4/3/2014	0.0032 (J)							
7/9/2014	0.0031 (J)		0.0012 (J)		<0.01			
7/10/2014							0.0026 (J)	
10/24/2014	0.0028 (J)							
1/12/2015							0.0031 (J)	
1/13/2015					<0.01			
1/14/2015	0.0034 (J)		0.002 (J)					
5/11/2015	0.0026 (J)							
7/16/2015	0.0028 (J)				<0.01			
7/18/2015			<0.01				0.003 (J)	
10/6/2015	0.0016 (J)							
1/17/2016	0.0029 (J)				<0.01		0.0025 (J)	
1/18/2016			0.0019 (J)					
4/26/2016	0.00296 (J)							
7/27/2016					<0.01			
7/28/2016	0.0026 (J)						0.0024 (J)	
7/29/2016			0.0031 (J)					
10/25/2016	<0.01						<0.01	
1/4/2017	<0.01						<0.01	
1/5/2017			<0.01		<0.01			
4/4/2017					<0.01		0.0024 (J)	
4/5/2017	0.0033 (J)		0.0029 (J)					
7/11/2017							0.003 (J)	
7/12/2017	0.0037 (J)							
7/13/2017			0.0037 (J)		<0.01			
10/2/2017							0.0028 (J)	
10/3/2017	0.0036 (J)							
1/10/2018	0.0029 (J)				<0.01		0.0026 (J)	
1/11/2018			0.0026 (J)					
7/9/2018							<0.01	
7/10/2018	0.0025 (J)				<0.01			
7/11/2018			0.0032 (J)					
1/16/2019				<0.01				
1/17/2019		0.0021 (J)						
1/21/2019						0.0024 (J)		0.0031 (J)
3/25/2019								0.0024 (J)
3/26/2019		0.0038 (J)		0.0024 (J)				
7/30/2019					<0.01			

Prediction Limit

Constituent: Vanadium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-21	GWC-21	GWC-22	GWC-22	GWC-9	GWC-9	GWB-4R	GWB-4R
9/29/2000					<0.01		0.06	
11/21/2000					<0.01		0.068	
1/20/2001					<0.01		0.12	
3/14/2001					<0.01		0.08	
7/16/2001					<0.01		0.11	
11/1/2001					<0.01		0.079	
4/25/2002					<0.01		0.11	
11/20/2002					0.014		0.15	
6/6/2003					<0.01		0.12	
12/12/2003					<0.01		0.13	
5/26/2004					<0.01		0.095	
12/7/2004					<0.01		0.067	
6/21/2005					<0.01		0.062	
12/12/2005					<0.01		0.09	
6/27/2006					<0.01		0.083	
12/4/2006					<0.01		0.084	
6/23/2007					<0.01		0.081	
12/11/2007					<0.01		0.067	
6/23/2008					<0.01			
6/24/2008							0.059	
12/4/2008					<0.01			
12/5/2008							0.054	
7/7/2009							0.038	
7/8/2009					0.0029			
12/21/2009					<0.01		0.06	
6/20/2010					<0.01			
6/21/2010	<0.01		<0.01				0.036	
1/7/2011	0.0031		<0.01		<0.01		0.043	
7/8/2011	0.0048		<0.01		<0.01		0.044	
1/18/2012	<0.01		<0.01		<0.01		0.045	
7/10/2012	<0.01		<0.01		<0.01		0.048	
1/18/2013	<0.01		<0.01		<0.01		0.049	
7/17/2013	<0.01		<0.01		<0.01		0.05	
1/14/2014	0.006		<0.01		<0.01		0.067	
7/9/2014	0.0019 (J)				0.0016 (J)		0.055	
7/10/2014			0.0053					
1/12/2015							0.066	
1/14/2015	0.0037 (J)		0.0013 (J)		<0.01			
7/16/2015							0.045	
7/17/2015	0.0028 (J)				0.0029 (J)			
7/18/2015			0.0043 (J)					
1/17/2016	0.0039 (J)							
1/18/2016			<0.01		<0.01		0.049	
7/28/2016	0.0022 (J)				<0.01			
7/29/2016			0.0052 (J)				0.0388	
1/4/2017	<0.01		<0.01					
1/6/2017					<0.01		0.0341	
4/4/2017	0.003 (J)						0.0371	
4/6/2017			<0.01		<0.01			
7/11/2017			0.0016 (J)					
7/12/2017					0.0013 (J)		0.0399	
7/13/2017	0.0019 (J)							

Prediction Limit

Constituent: Vanadium Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-21	GWC-21	GWC-22	GWC-22	GWC-9	GWC-9	GWB-4R	GWB-4R
1/9/2018	0.0046 (J)							
1/11/2018			0.0012 (J)		<0.01		0.0327	
7/10/2018	0.0031 (J)							
7/11/2018			0.0025 (J)		<0.01		0.02	
1/16/2019								0.0022 (J)
1/17/2019		0.0022 (J)						
1/18/2019				<0.01		<0.01		
3/25/2019								0.004 (J)
3/26/2019		0.0041 (J)						
3/27/2019				0.002 (J)		<0.01		

Prediction Limit

Constituent: Vanadium, Zinc Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-5R	GWB-5R	GWB-6R	GWB-6R	GWA-7	GWA-7	GWA-8	GWA-8
1/13/2014	0.008				0.0025			
1/14/2014			<0.005				0.0025	
4/3/2014							0.0029	
7/9/2014	0.0052		0.0039 (J)		0.064		0.002 (J)	
10/24/2014							0.0031	
1/13/2015	0.0036 (J)				0.066			
1/14/2015			0.005				0.003	
5/10/2015							0.0028	
7/16/2015	0.004 (J)				0.036			
7/17/2015			0.0045 (J)				0.0018 (J)	
10/6/2015							0.0018 (J)	
1/18/2016	0.0069		0.0044 (J)		0.035		0.0028	
4/26/2016							<0.01	
7/27/2016	0.0046 (J)				0.0529			
7/28/2016			0.0038 (J)				0.0018 (J)	
10/24/2016							0.0024 (J)	
10/25/2016					0.0035 (J)			
1/3/2017	<0.01						0.0035 (J)	
1/5/2017			0.0077 (J)					
1/6/2017					0.0235			
4/3/2017							0.0041 (J)	
4/6/2017	0.0063 (J)		0.0069 (J)		0.0829			
7/11/2017							0.0029 (J)	
7/12/2017	0.0064 (J)		0.0098 (J)					
7/13/2017					0.0853			
10/2/2017							0.0026 (J)	
10/4/2017					0.0263			
1/9/2018			0.0086 (J)		0.0665		0.0035 (J)	
1/10/2018	0.0077 (J)							
7/9/2018							0.0022 (J)	
7/10/2018	0.016		0.0098 (J)					
7/11/2018					0.02 (J)			
1/16/2019		0.0033 (J)		0.077		0.014 (J)		0.0037 (J)
3/25/2019						<0.05		<0.01
3/26/2019		0.0058 (J)		0.086				

Prediction Limit

Constituent: Zinc Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-1	GWC-11	GWC-11	GWC-12	GWC-12	GWC-13	GWC-13
9/29/2000	<0.01		<0.01				<0.0025	
11/21/2000	<0.01		<0.01				<0.0025	
1/20/2001	<0.01		<0.01				<0.0025	
3/14/2001	<0.01		<0.01				<0.0025	
7/16/2001	<0.01		<0.01		0.053		<0.0025	
11/1/2001	<0.01		<0.01		0.022			
4/25/2002	<0.01		<0.01				<0.0025	
11/20/2002	<0.01		<0.01		0.045		0.023	
6/6/2003	0.011		<0.01		0.042		<0.0025	
12/12/2003	<0.01		0.013		<0.0025		<0.0025	
5/26/2004	<0.01		<0.01		<0.0025		0.035	
12/7/2004	<0.01				<0.0025		0.018	
6/21/2005	<0.01		<0.01		<0.0025		0.014	
12/12/2005	<0.01		<0.01		<0.0025		0.023	
6/27/2006	<0.01		0.0028		0.012		0.023	
12/4/2006	<0.01		0.0028		0.0067			
6/23/2007	<0.01		0.0063		0.025		0.036	
12/11/2007	<0.01		<0.01		0.0038		0.011	
6/23/2008			<0.01		0.0051		0.0091	
6/24/2008	<0.01							
12/4/2008			<0.01		<0.0025		0.0038	
12/5/2008	<0.01							
7/7/2009	<0.01							
7/8/2009			<0.01		<0.0025		<0.0025	
12/20/2009	<0.01							
12/21/2009			<0.01		0.013		0.0032	
6/20/2010	<0.01		<0.01		<0.0025		<0.0025	
1/6/2011	<0.01		<0.01				0.004	
1/7/2011					0.004			
7/7/2011	0.0025		<0.01		0.0028		0.0037	
1/17/2012	<0.01		0.0043		0.0043		0.0031	
7/9/2012	<0.01		<0.01		<0.0025		0.003	
1/17/2013	<0.01		0.0025		0.0033		<0.0025	
7/16/2013	<0.01		<0.01		0.0028		0.0029	
1/13/2014	0.0025		0.0025		0.0025		0.0025	
7/8/2014			0.0011 (J)		0.002 (J)		0.0018 (J)	
7/9/2014	<0.01							
1/13/2015	0.0025		0.0021 (J)		0.0079		0.0028	
7/16/2015	<0.01		<0.01		0.0026		0.0018 (J)	
1/17/2016	<0.01							
1/18/2016					0.0025		0.0017 (J)	
1/19/2016			0.0029					
7/26/2016			<0.01				0.0028 (J)	
7/27/2016	<0.01				0.0021 (J)			
1/4/2017	<0.01		<0.01		0.0025 (J)			
1/5/2017							0.0021 (J)	
4/4/2017	<0.01							
4/5/2017					0.0026 (J)			
4/6/2017			0.004 (J)				0.0027 (J)	
7/10/2017					0.0023 (J)			
7/11/2017			<0.01					
7/12/2017	<0.01						0.0043 (J)	

Prediction Limit

Constituent: Zinc Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-1	GWC-11	GWC-11	GWC-12	GWC-12	GWC-13	GWC-13
1/10/2018	0.0014 (J)						0.0021 (J)	
1/11/2018			0.0018 (J)		0.0031 (J)			
7/10/2018	0.0021 (J)							
7/11/2018			<0.01		0.0036 (J)		0.0039 (J)	
1/16/2019		<0.01						0.047
1/17/2019				<0.01		0.0032 (J)		
3/26/2019		<0.01						0.03
3/27/2019				<0.01		0.0031 (J)		

Prediction Limit

Constituent: Zinc Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-14	GWC-14	GWC-15	GWC-15	GWC-16	GWC-16	GWC-17	GWC-17
9/29/2000	<0.01		<0.01		<0.01		<0.0025	
11/21/2000	<0.01		<0.01		<0.01		<0.0025	
1/20/2001	<0.01		<0.01		<0.01		<0.0025	
3/14/2001	<0.01		<0.01		<0.01		<0.0025	
7/16/2001	<0.01		<0.01		<0.01		<0.0025	
11/1/2001	<0.01		<0.01		<0.01		<0.0025	
4/25/2002	<0.01		<0.01		<0.01		<0.0025	
11/20/2002	<0.01		<0.01		<0.01		0.014	
6/6/2003	<0.01		<0.01				0.012	
12/12/2003	<0.01		<0.01		<0.01		<0.0025	
5/26/2004	<0.01		<0.01		<0.01		<0.0025	
12/7/2004	<0.01		<0.01		<0.01		<0.0025	
6/21/2005	<0.01		<0.01		<0.01		<0.0025	
12/12/2005	0.011				<0.01		<0.0025	
4/4/2006	<0.01				<0.01			
6/27/2006	0.0045		0.011				0.0046	
8/30/2006	<0.01				0.0027			
12/4/2006	<0.01		0.0033		<0.01		0.0071	
2/15/2007	<0.01				0.0032			
6/23/2007	<0.01		0.0029		0.0058		0.005	
9/11/2007	<0.01				0.0033			
12/11/2007	<0.01		<0.01		<0.01		0.0033	
3/11/2008	<0.01				<0.01			
6/24/2008	<0.01		<0.01		<0.01		0.0037	
11/3/2008	<0.01				0.0025			
12/4/2008	<0.01							
12/5/2008			<0.01		<0.01		0.0027	
3/25/2009	<0.01				0.0025			
7/8/2009	<0.01		<0.01		<0.01		0.0048	
9/14/2009	<0.01				<0.01			
12/20/2009	<0.01		<0.01		<0.01			
12/21/2009							0.0032	
3/4/2010	<0.01				<0.01			
6/20/2010	<0.01		<0.01					
6/21/2010					<0.01		0.0028	
9/14/2010	<0.01				<0.01			
1/7/2011	<0.01		<0.01		<0.01		0.003	
4/15/2011	<0.01				<0.01			
7/7/2011	<0.01		<0.01		<0.01			
7/8/2011							0.0034	
9/25/2011	<0.01				0.0028			
1/17/2012	<0.01		<0.01					
1/18/2012					0.0029		0.0049	
4/4/2012	<0.01				<0.01			
7/9/2012	<0.01		<0.01					
7/10/2012					<0.01		0.0039	
10/9/2012	<0.01				0.0027			
1/18/2013	<0.01		<0.01		<0.01		0.0043	
4/5/2013	<0.01				<0.01			
7/17/2013	<0.01		<0.01		<0.01		0.0035	
10/11/2013	<0.01				<0.01			
1/13/2014			0.0025					

Prediction Limit

Constituent: Zinc Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-14	GWC-14	GWC-15	GWC-15	GWC-16	GWC-16	GWC-17	GWC-17
1/14/2014	0.0025				0.0025		0.0025	
4/3/2014	0.0014 (J)				0.0015 (J)			
7/9/2014	0.00086 (J)		<0.01		0.0012 (J)		0.0033	
10/24/2014	0.00083 (J)				0.0013 (J)			
1/13/2015			<0.01					
1/14/2015	<0.01				0.0017 (J)		0.0067	
5/10/2015	<0.01							
5/11/2015					0.0015 (J)			
7/16/2015			<0.01		<0.01			
7/17/2015	<0.01							
7/18/2015							<0.0025	
10/6/2015	<0.01				<0.01			
1/17/2016	<0.01		<0.01		<0.01			
1/18/2016							0.012	
4/26/2016	<0.01				<0.01			
7/27/2016	<0.01		<0.01					
7/28/2016					<0.01			
7/29/2016							0.0086 (J)	
10/25/2016	<0.01		<0.01		<0.01			
1/4/2017					0.0025 (J)			
1/5/2017	<0.01		<0.01				0.016	
4/3/2017			<0.01					
4/4/2017	<0.01							
4/5/2017					0.0025 (J)		0.0175	
7/11/2017	<0.01		<0.01					
7/12/2017					0.002 (J)			
7/13/2017							0.0126	
10/2/2017	0.0026 (J)		<0.01					
10/3/2017					<0.01			
1/9/2018	0.0018 (J)		<0.01					
1/10/2018					0.0016 (J)			
1/11/2018							0.012	
7/9/2018	<0.01							
7/10/2018			<0.01		0.0031 (J)			
7/11/2018							0.011	
1/16/2019		<0.01						0.0094 (J)
1/17/2019				<0.01		<0.01		
3/26/2019		<0.01		<0.01		<0.01		0.0057 (J)

Prediction Limit

Constituent: Zinc Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-2	GWC-2	GWC-20	GWC-20	GWC-21	GWC-21	GWC-22	GWC-22
1/20/2001	<0.01							
3/14/2001	<0.01							
7/16/2001	<0.01							
11/1/2001	<0.01							
4/25/2002	<0.01							
11/20/2002	<0.01							
6/6/2003	<0.01							
12/12/2003	<0.01							
5/26/2004	<0.01							
12/7/2004	<0.01							
6/21/2005	<0.01							
12/12/2005	0.012							
6/27/2006	<0.01							
12/4/2006	<0.01							
6/23/2007	<0.01							
12/11/2007	<0.01							
6/24/2008	<0.01							
12/4/2008	<0.01							
7/8/2009	<0.01							
12/20/2009	<0.01							
6/20/2010	<0.01							
6/21/2010			<0.01				<0.01	
1/6/2011	<0.01							
1/7/2011			<0.01		<0.01		0.019	
7/7/2011			<0.01					
7/8/2011					0.0044			
1/17/2012	<0.01							
1/18/2012			<0.01		<0.01		0.0051	
7/9/2012	<0.01							
7/10/2012			<0.01		<0.01		0.01	
1/17/2013	<0.01							
1/18/2013			0.0032		<0.01		0.0036	
7/17/2013	<0.01		<0.01		<0.01		0.0025	
1/13/2014	0.0025							
1/14/2014			0.0025		0.0025		0.0025	
7/9/2014	0.00058 (J)				0.00084 (J)			
7/10/2014			<0.01				0.024	
1/12/2015			<0.01					
1/13/2015	0.0024 (J)							
1/14/2015					0.0018 (J)		0.0016 (J)	
7/16/2015	<0.01							
7/17/2015					<0.01			
7/18/2015			<0.01				0.014	
1/17/2016	<0.01		<0.01		<0.01			
1/18/2016							<0.01	
7/27/2016	0.0018 (J)							
7/28/2016			<0.01		<0.01			
7/29/2016							0.0129	
10/25/2016			<0.01					
1/4/2017			<0.01		<0.01		0.006 (J)	
1/5/2017	<0.01							
4/4/2017	0.0015 (J)		<0.01		0.0015 (J)			

Prediction Limit

Constituent: Zinc Analysis Run 8/13/2019 5:28 PM View: Intrawell Prediction Limit
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-2	GWC-2	GWC-20	GWC-20	GWC-21	GWC-21	GWC-22	GWC-22
4/6/2017							0.0031 (J)	
7/11/2017			<0.01				0.0029 (J)	
7/13/2017	0.0014 (J)				0.002 (J)			
10/2/2017			<0.01					
1/9/2018					0.0016 (J)			
1/10/2018	<0.01		0.0034 (J)					
1/11/2018							0.0106	
7/9/2018			<0.01					
7/10/2018	<0.01				<0.01			
7/11/2018							0.0057 (J)	
1/17/2019						<0.01		
1/18/2019								0.0024 (J)
1/21/2019		<0.01		<0.01				
3/25/2019				<0.01				
3/26/2019						<0.01		
3/27/2019								<0.01
7/30/2019		0.0067 (J)						

Prediction Limit

Constituent: Zinc Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWC-9	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWB-6R	GWB-6R
9/29/2000	<0.0025		<0.01		0.026			
11/21/2000	<0.0025		<0.01		<0.01			
1/20/2001	<0.0025		0.041		0.031			
3/14/2001	<0.0025		<0.01					
7/16/2001	<0.0025		0.059					
11/1/2001	<0.0025		<0.01					
4/25/2002	<0.0025		<0.01		<0.01			
11/20/2002			0.061					
6/6/2003	<0.0025		0.041					
12/12/2003	<0.0025		0.012		<0.01			
5/26/2004	<0.0025		0.016		0.036			
12/7/2004	<0.0025		<0.01					
6/21/2005	<0.0025		<0.01					
12/12/2005			0.017		<0.01			
6/27/2006			0.11		0.01		0.0071	
12/4/2006	0.0044		0.086		0.0035		0.0096	
6/23/2007	0.0041		0.076		0.0032			
12/11/2007	0.0039		0.087		0.0079			
6/23/2008	<0.0025							
6/24/2008			0.062		<0.01			
12/4/2008	0.0039							
12/5/2008			0.014		<0.01			
7/7/2009			0.052		<0.01			
7/8/2009	<0.0025							
12/21/2009	0.004		0.046		<0.01			
6/20/2010	<0.0025				<0.01			
6/21/2010			0.045					
1/6/2011					<0.01			
1/7/2011	0.0032		0.024				0.0044	
7/7/2011					0.0027		0.003	
7/8/2011	0.0025		0.023					
1/17/2012					0.0039			
1/18/2012	0.0045		0.011				0.0048	
7/9/2012					<0.01			
7/10/2012	<0.0025		0.024				<0.05	
1/17/2013					<0.01			
1/18/2013	0.0029		0.011				0.0028	
7/16/2013					0.0032			
7/17/2013	<0.0025		0.0029				<0.05	
1/13/2014					0.0025			
1/14/2014	0.0025		0.0025				0.0025	
7/9/2014	0.0016 (J)		0.0051		0.00076 (J)		0.00093 (J)	
1/12/2015			0.0023 (J)					
1/13/2015					0.0036			
1/14/2015	0.0024 (J)						0.0023 (J)	
7/16/2015			0.0021 (J)		<0.01			
7/17/2015	0.0031						<0.05	
1/18/2016	0.0059		0.0092		<0.01		0.0029	
7/27/2016					0.0015 (J)			
7/28/2016	0.0019 (J)						<0.05	
7/29/2016			0.003 (J)					
1/3/2017					<0.01			

Prediction Limit

Constituent: Zinc Analysis Run 8/13/2019 5:28 PM View: IntraWell Prediction Limit
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWC-9	GWB-4R	GWB-4R	GWB-5R	GWB-5R	GWB-6R	GWB-6R
1/5/2017							<0.05	
1/6/2017	0.0026 (J)		0.0104					
4/4/2017			0.0132					
4/6/2017	0.0047 (J)				0.0023 (J)		0.0032 (J)	
7/12/2017	0.003 (J)		0.0046 (J)		<0.01		0.002 (J)	
1/9/2018							0.0036 (J)	
1/10/2018					0.0022 (J)			
1/11/2018	0.0046 (J)		0.0095 (J)					
7/10/2018					<0.01		0.0055 (J)	
7/11/2018	0.0033 (J)		0.0028 (J)					
1/16/2019				0.0052 (J)		<0.01		<0.05
1/18/2019		0.0025 (J)						
3/25/2019				0.0078 (J)				
3/26/2019						<0.01		<0.05
3/27/2019		0.0026 (J)						

Trend Test Significant Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 8/13/2019, 5:53 PM

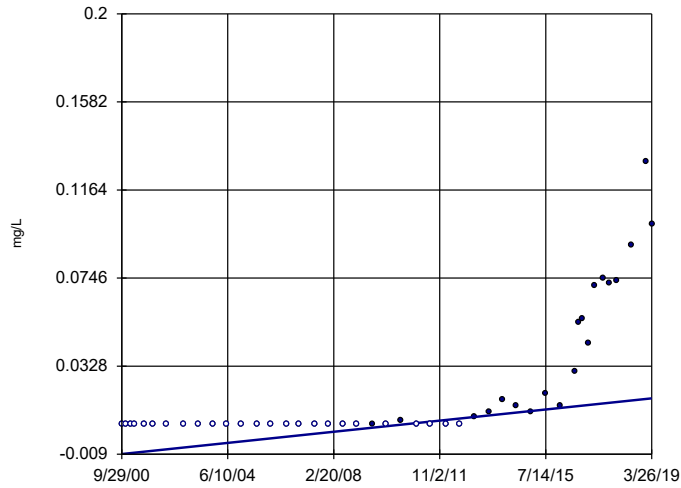
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	GWC-15	0.001427	6.993	2.33	Yes	45	55.56	n/a	0.02	NP
Arsenic (mg/L)	GWC-16	-0.001387	-3.113	-2.33	Yes	64	0	n/a	0.02	NP
Arsenic (mg/L)	GWC-20	0.02343	96	95	Yes	24	4.167	n/a	0.02	NP
Barium (mg/L)	GWC-9	0.01004	5.971	2.33	Yes	44	0	n/a	0.02	NP
Boron (mg/L)	GWC-16	2.473	37	27	Yes	10	0	n/a	0.02	NP
Calcium (mg/L)	GWC-1	7.182	29	27	Yes	10	0	n/a	0.02	NP
Calcium (mg/L)	GWC-12	-16.3	-43	-27	Yes	10	0	n/a	0.02	NP
Calcium (mg/L)	GWC-16	49.45	29	27	Yes	10	0	n/a	0.02	NP
Chromium (mg/L)	GWB-5R	-0.0003463	-252	-201	Yes	40	40	n/a	0.02	NP
Sulfate (mg/L)	GWC-12	-200.2	-29	-27	Yes	10	0	n/a	0.02	NP

Trend Test All Results

Grumman Road Landfill Client: Southern Company Data: Grumman Road Printed 8/13/2019, 5:53 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	GWC-15	0.001427	6.993	2.33	Yes	45	55.56	n/a	0.02	NP
Arsenic (mg/L)	GWC-16	-0.001387	-3.113	-2.33	Yes	64	0	n/a	0.02	NP
Arsenic (mg/L)	GWC-20	0.02343	96	95	Yes	24	4.167	n/a	0.02	NP
Barium (mg/L)	GWC-16	0.0004432	1.27	2.33	No	61	0	n/a	0.02	NP
Barium (mg/L)	GWC-9	0.01004	5.971	2.33	Yes	44	0	n/a	0.02	NP
Boron (mg/L)	GWC-13	-0.03399	-13	-27	No	10	0	n/a	0.02	NP
Boron (mg/L)	GWC-16	2.473	37	27	Yes	10	0	n/a	0.02	NP
Boron (mg/L)	GWB-6R	1.733	21	27	No	10	0	n/a	0.02	NP
Calcium (mg/L)	GWC-1	7.182	29	27	Yes	10	0	n/a	0.02	NP
Calcium (mg/L)	GWC-12	-16.3	-43	-27	Yes	10	0	n/a	0.02	NP
Calcium (mg/L)	GWC-14	-10.27	-13	-27	No	10	0	n/a	0.02	NP
Calcium (mg/L)	GWC-15	5.391	12	27	No	10	0	n/a	0.02	NP
Calcium (mg/L)	GWC-16	49.45	29	27	Yes	10	0	n/a	0.02	NP
Calcium (mg/L)	GWC-17	18.25	9	27	No	10	0	n/a	0.02	NP
Calcium (mg/L)	GWC-20	-1.55	-3	-27	No	10	0	n/a	0.02	NP
Calcium (mg/L)	GWC-21	9.654	10	27	No	10	0	n/a	0.02	NP
Calcium (mg/L)	GWB-4R	4.193	17	27	No	10	0	n/a	0.02	NP
Calcium (mg/L)	GWB-5R	7.25	20	27	No	10	0	n/a	0.02	NP
Chloride (mg/L)	GWC-17	3.16	2	27	No	10	0	n/a	0.02	NP
Chromium (mg/L)	GWB-5R	-0.0003463	-252	-201	Yes	40	40	n/a	0.02	NP
Fluoride (mg/L)	GWC-17	0.257	15	27	No	10	0	n/a	0.02	NP
pH (SU)	GWC-12	-0.0441	-16	-27	No	10	0	n/a	0.02	NP
pH (SU)	GWC-15	0.1169	19	23	No	9	0	n/a	0.02	NP
Sulfate (mg/L)	GWC-12	-200.2	-29	-27	Yes	10	0	n/a	0.02	NP
Sulfate (mg/L)	GWC-14	-138.7	-27	-27	No	10	0	n/a	0.02	NP
Sulfate (mg/L)	GWC-17	154.2	18	27	No	10	0	n/a	0.02	NP
Sulfate (mg/L)	GWB-4R	6.222	7	27	No	10	0	n/a	0.02	NP
Sulfate (mg/L)	GWB-5R	24.71	13	27	No	10	0	n/a	0.02	NP
Sulfate (mg/L)	GWB-6R	23.1	23	27	No	10	0	n/a	0.02	NP
Total Dissolved Solids (mg/L)	GWB-5R	103.1	22	23	No	9	0	n/a	0.02	NP
Total Dissolved Solids (mg/L)	GWB-6R	96.84	23	27	No	10	0	n/a	0.02	NP

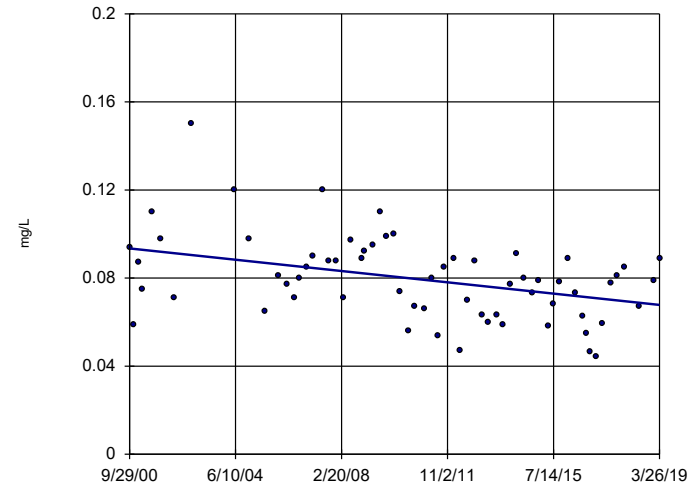
Arsenic GWC-15



n = 45
Slope = 0.001427
units per year.
Mann-Kendall
normal approx. =
6.993
critical = 2.33
Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

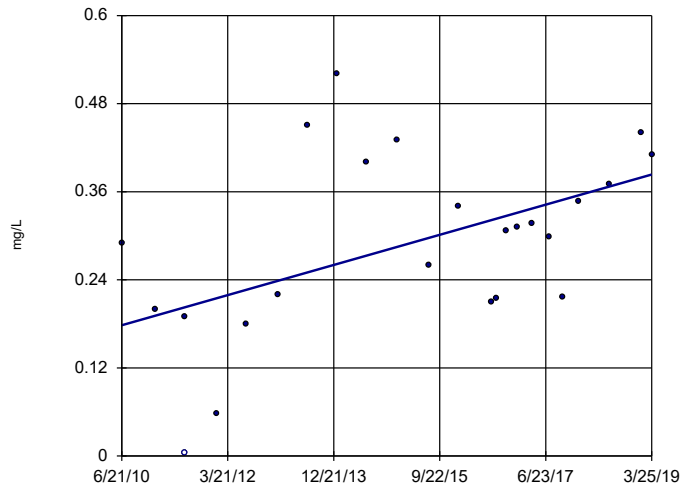
Arsenic GWC-16



n = 64
Slope = -0.001387
units per year.
Mann-Kendall
normal approx. =
-3.113
critical = -2.33
Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

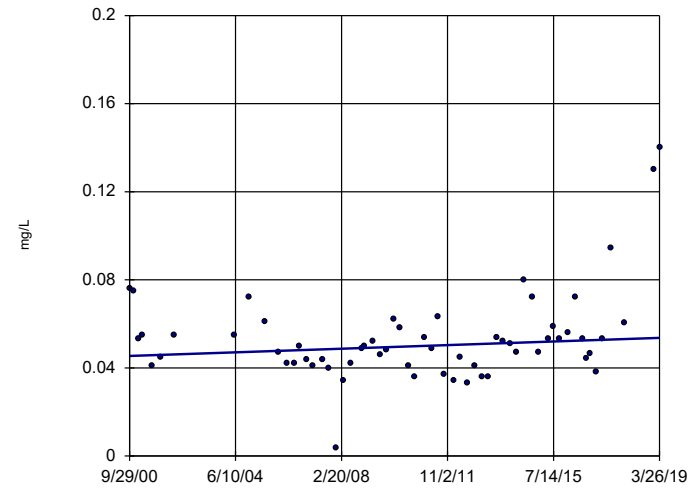
Arsenic GWC-20



n = 24
Slope = 0.02343
units per year.
Mann-Kendall
statistic = 96
critical = 95
Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

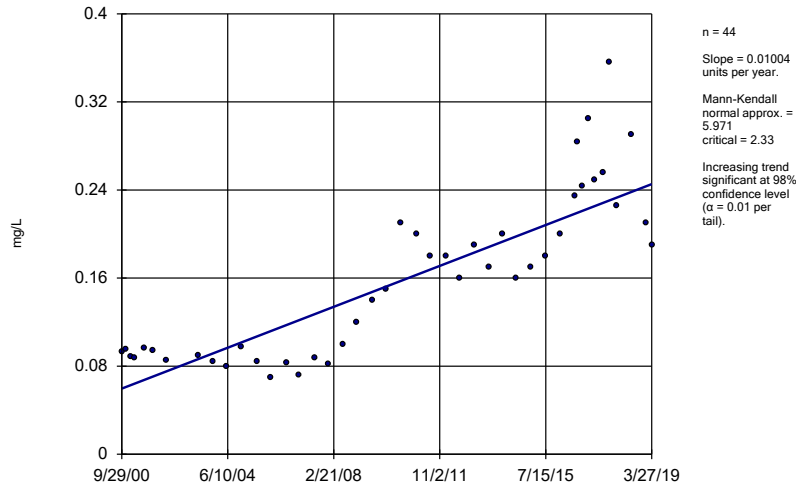
Barium GWC-16



n = 61
Slope = 0.0004432
units per year.
Mann-Kendall
normal approx. =
1.27
critical = 2.33
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

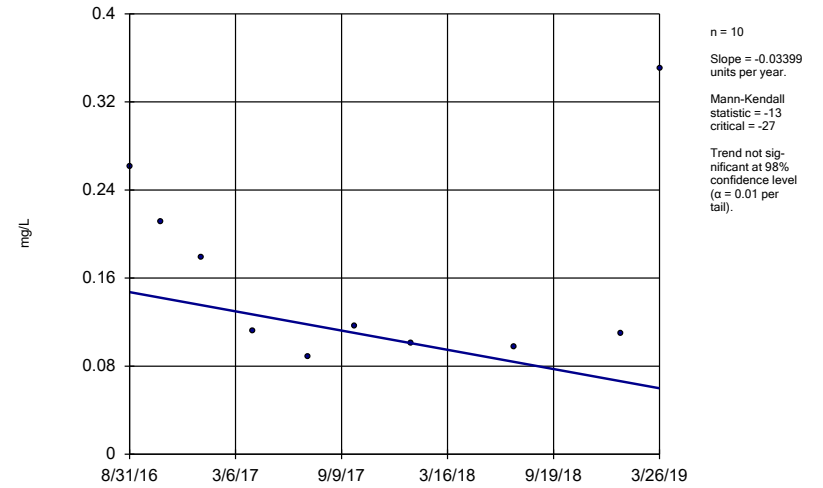
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Barium
GWC-9



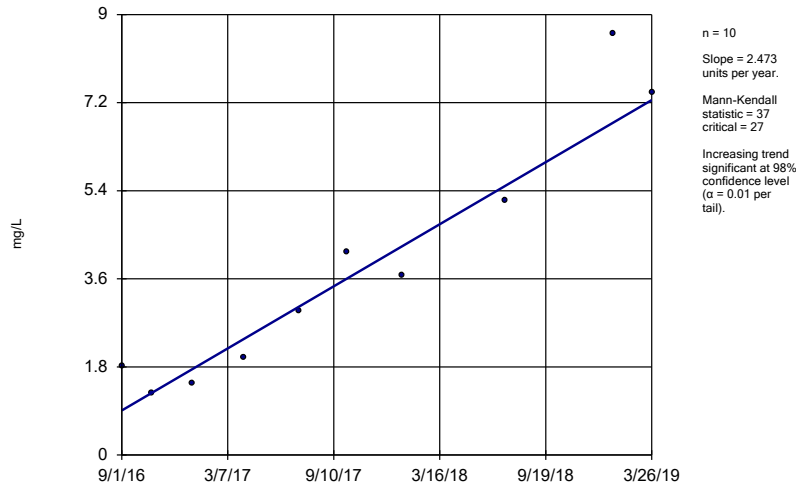
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Boron
GWC-13



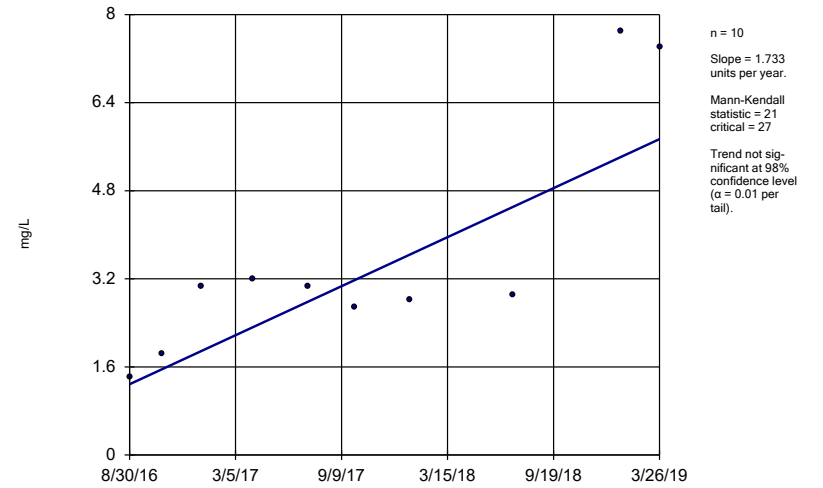
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Boron
GWC-16



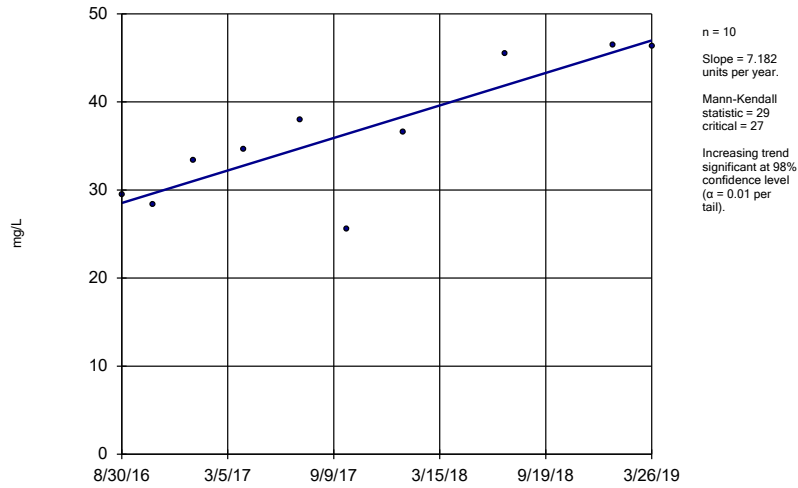
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Boron
GWB-6R



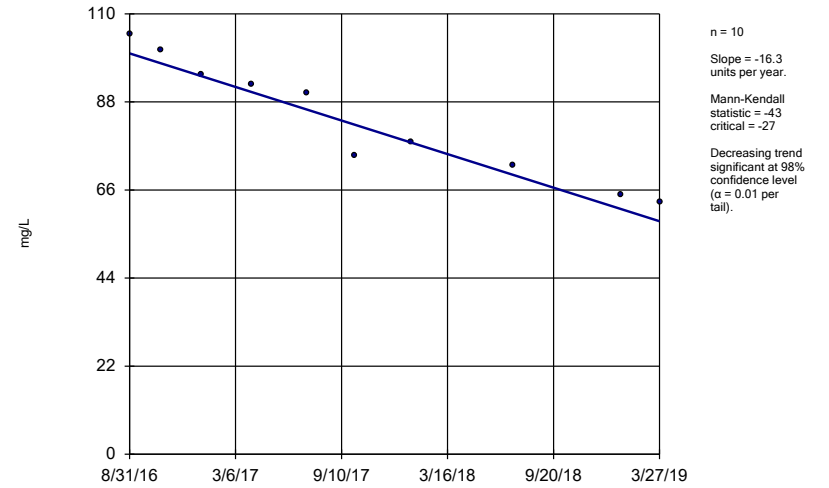
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium GWC-1



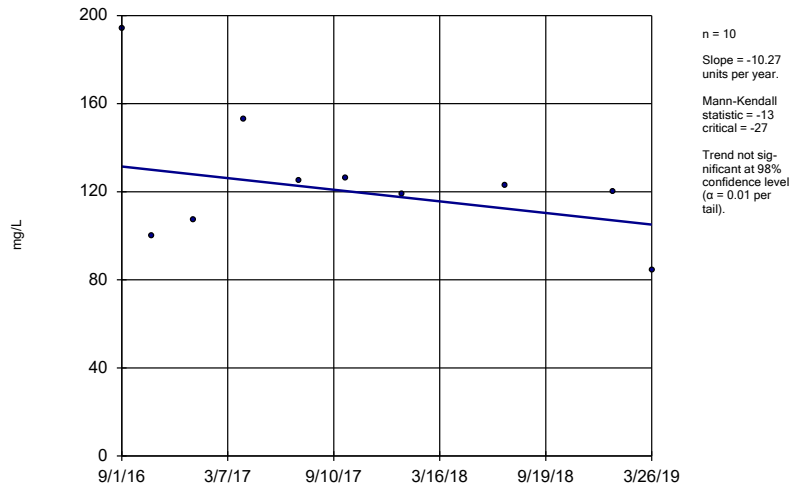
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium GWC-12



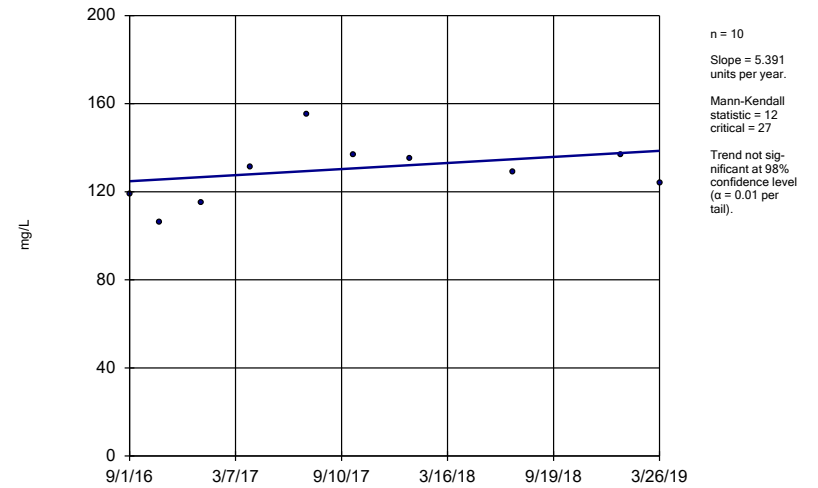
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium GWC-14



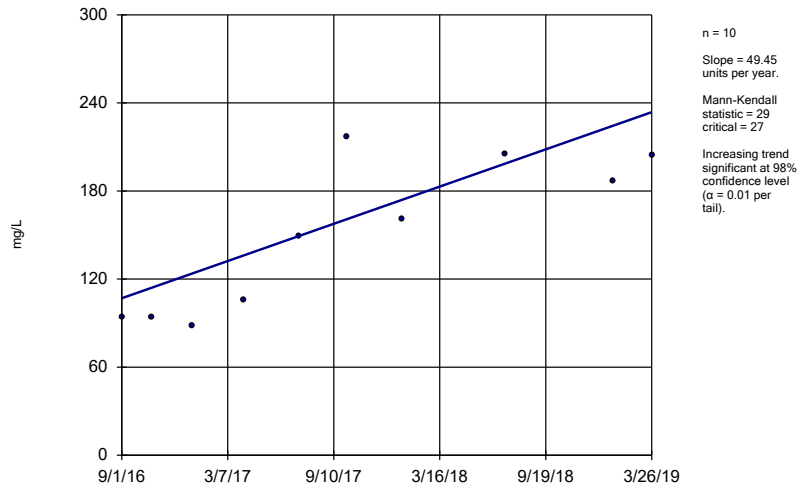
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium GWC-15



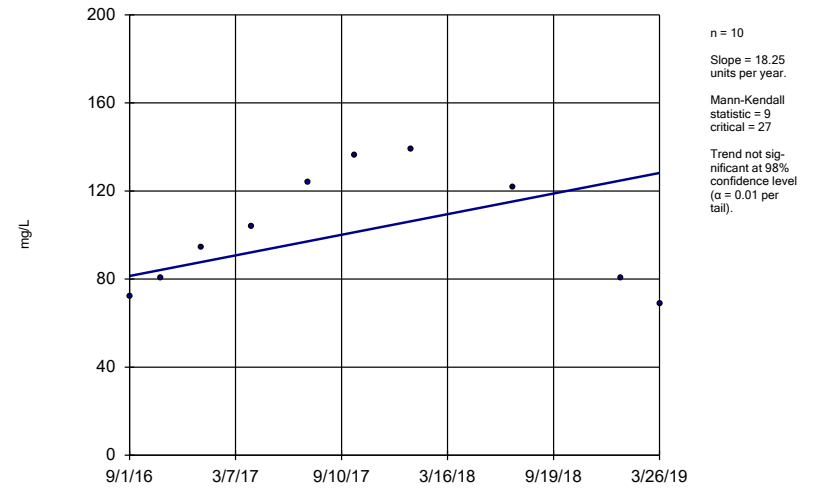
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium GWC-16



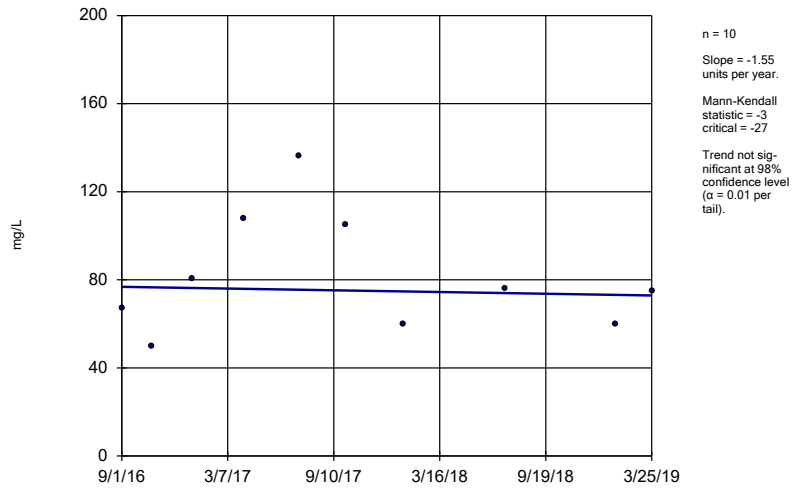
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium GWC-17



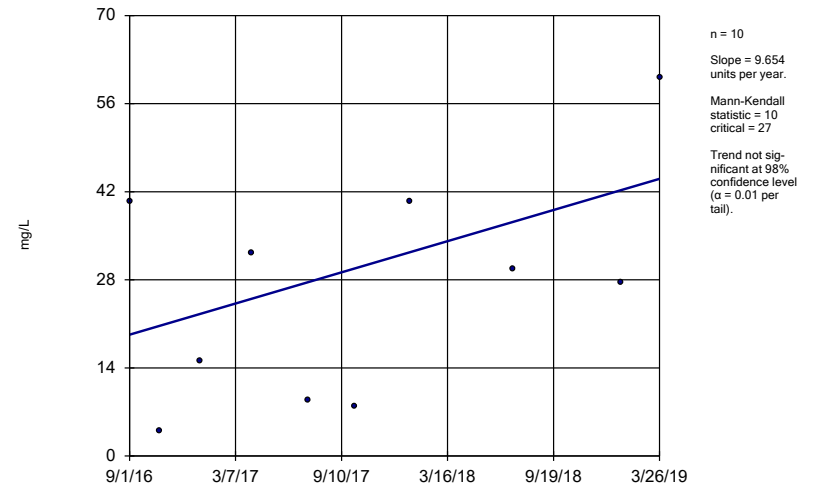
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium GWC-20



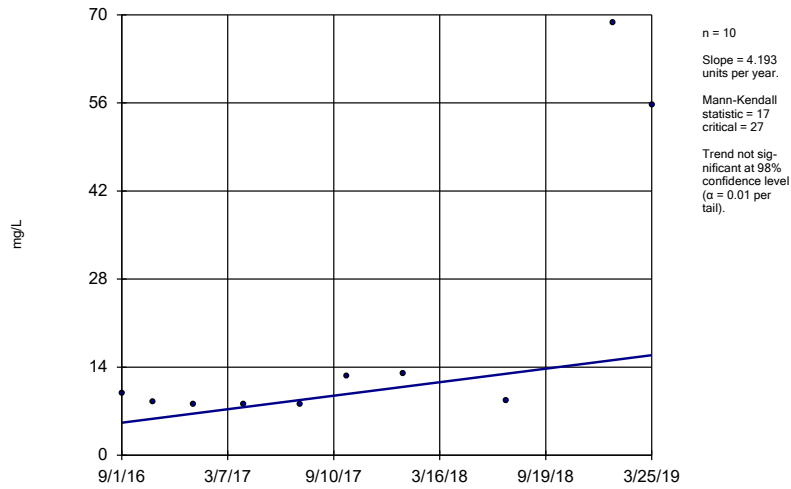
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium GWC-21



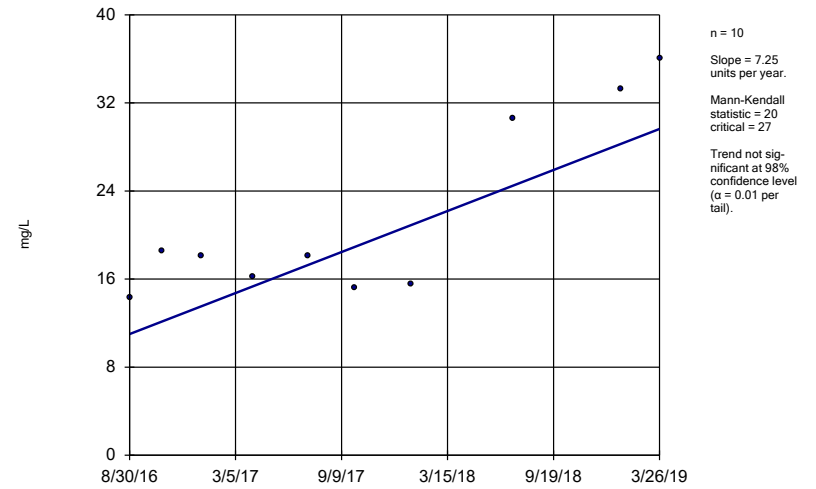
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium
GWB-4R



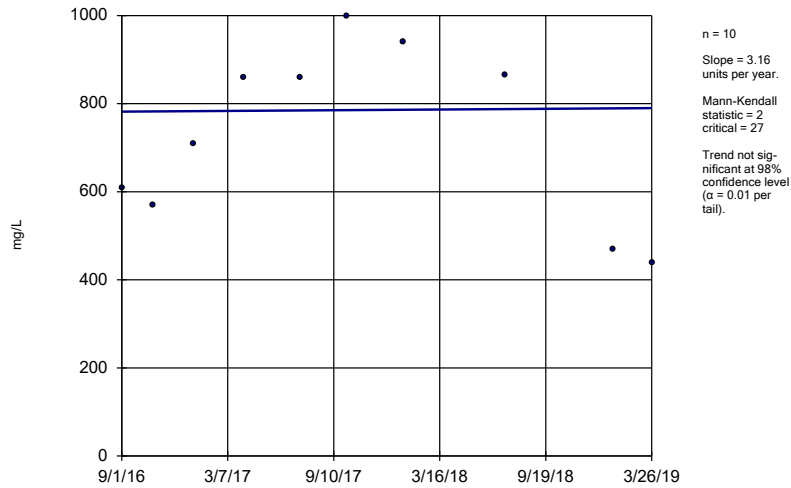
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium
GWB-5R



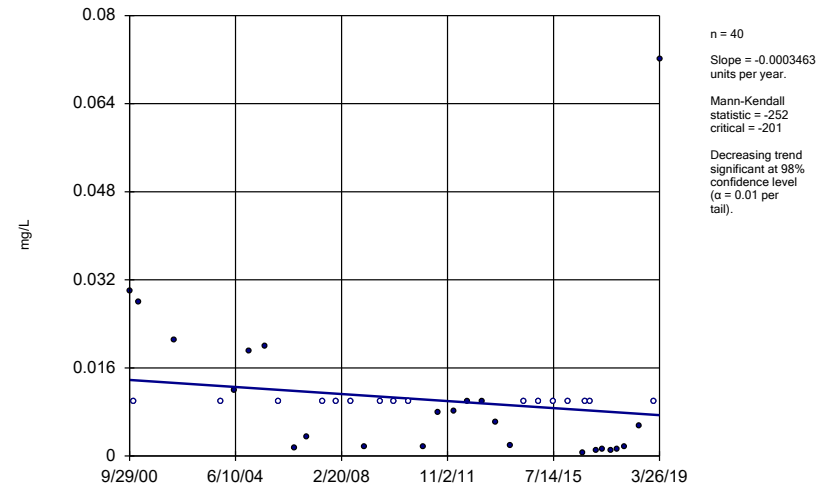
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Chloride
GWC-17



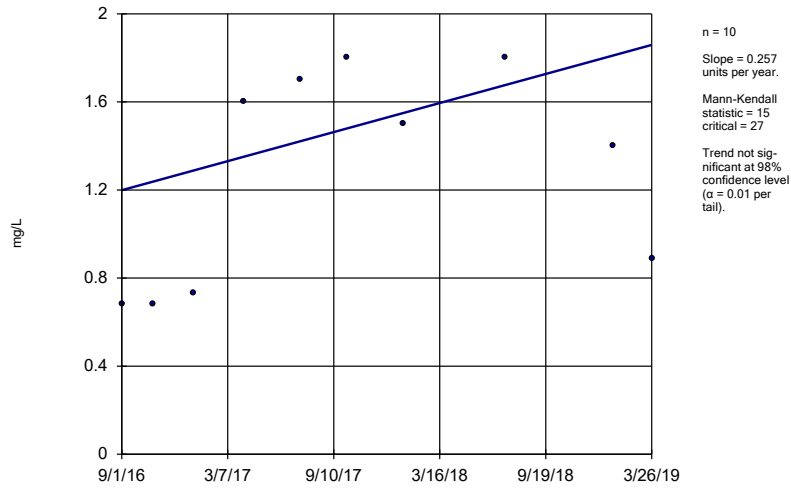
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Chromium
GWB-5R



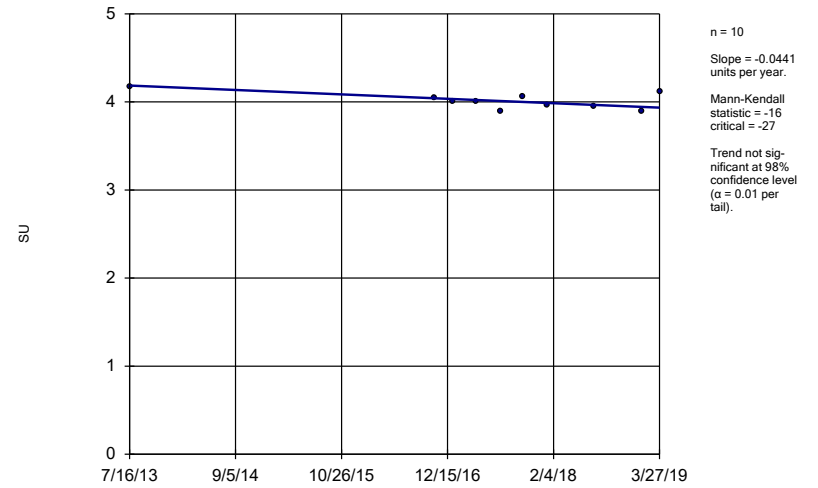
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Fluoride
GWC-17



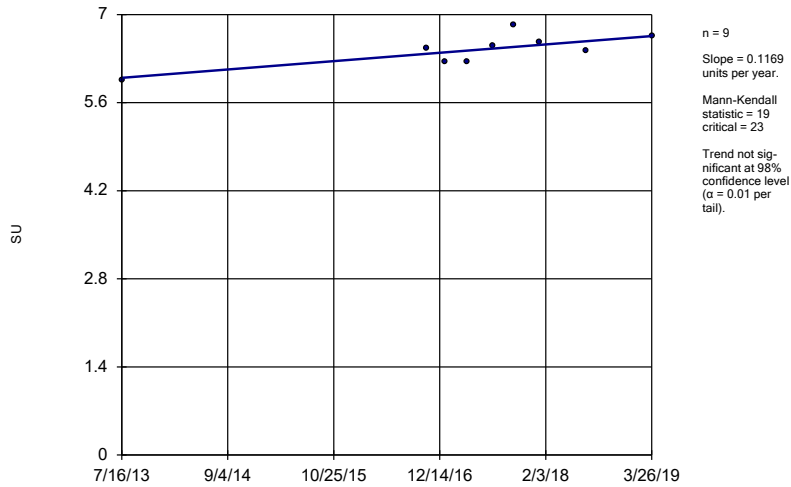
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

pH
GWC-12



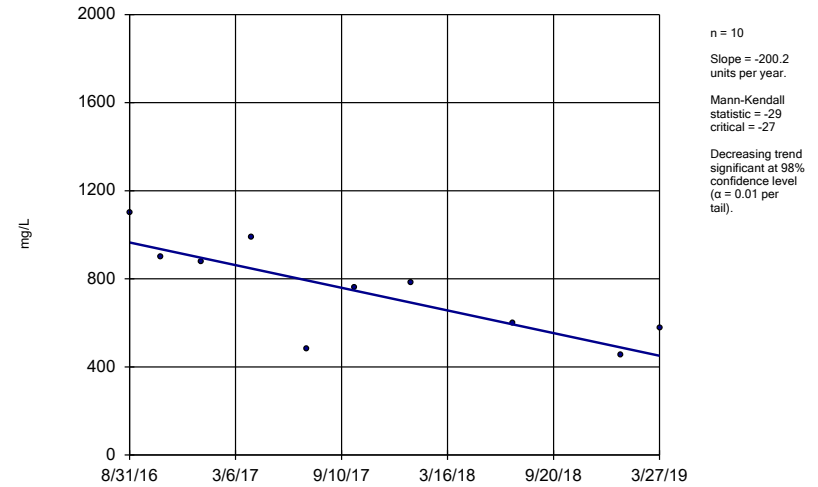
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

pH
GWC-15



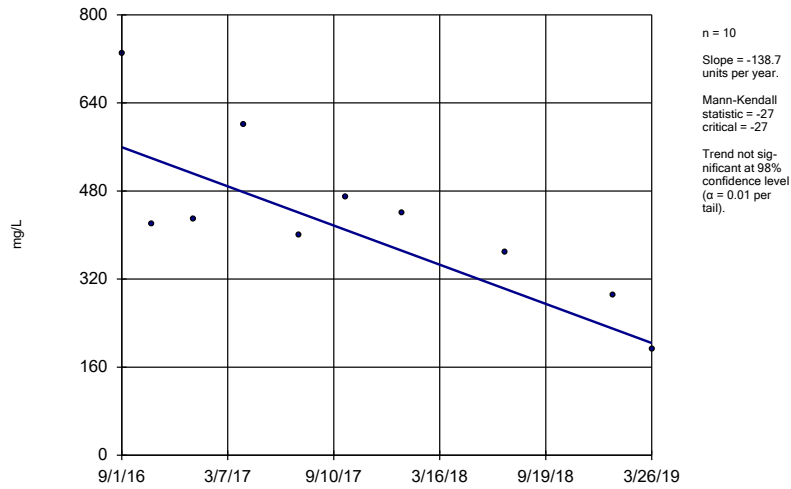
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sulfate
GWC-12



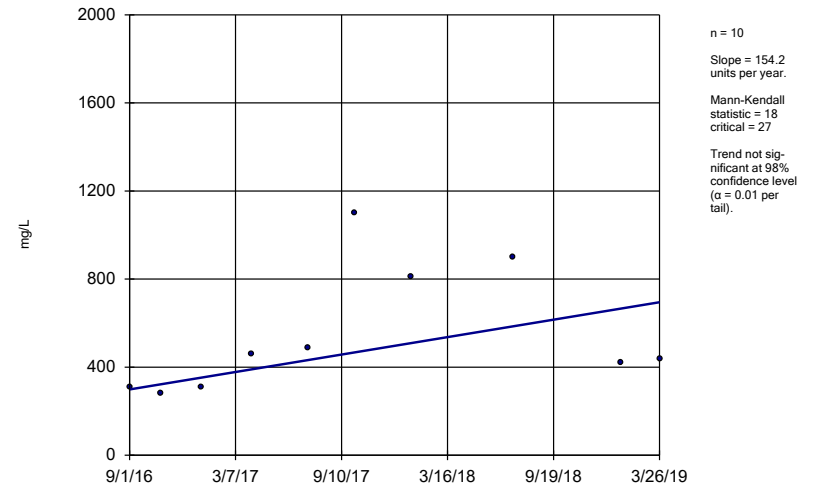
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sulfate
GWC-14



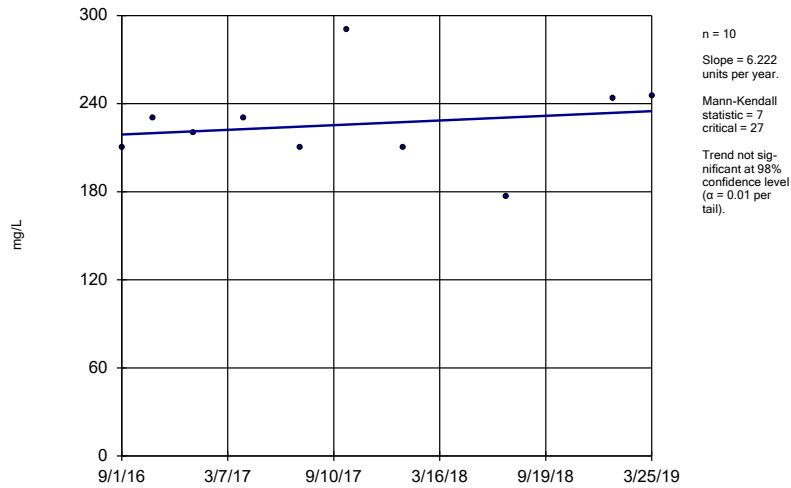
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sulfate
GWC-17



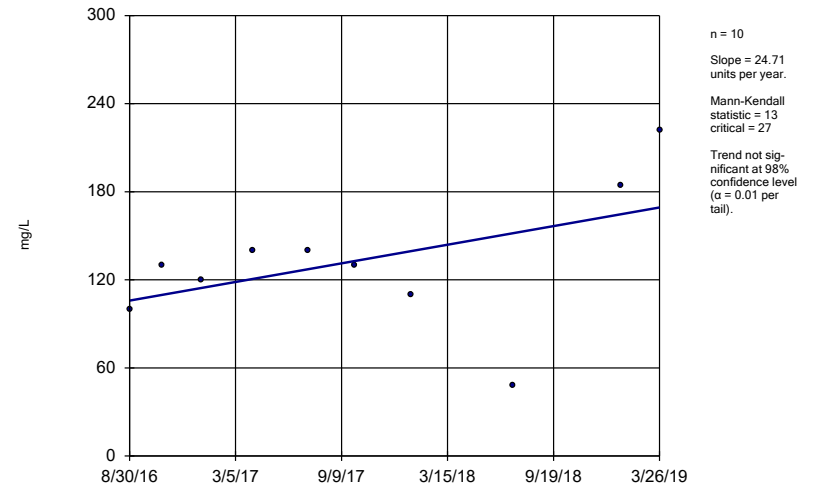
Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sulfate
GWB-4R

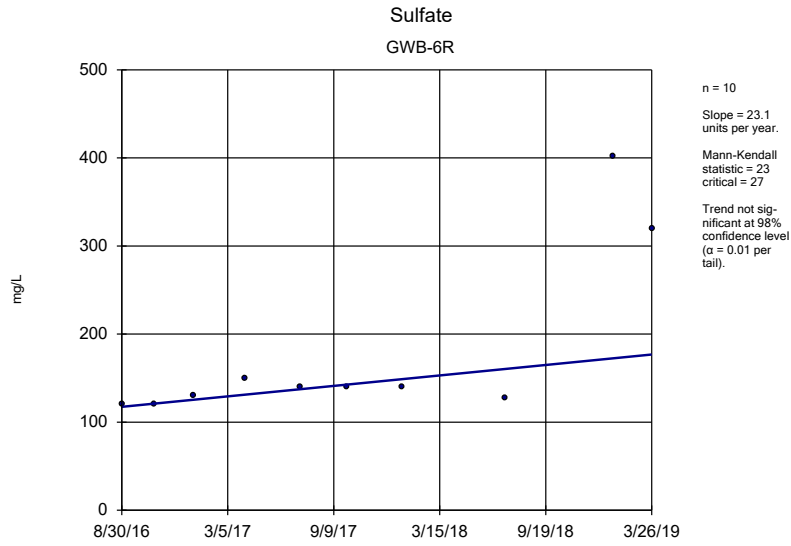


Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Sulfate
GWB-5R



Sen's Slope Estimator Analysis Run 8/13/2019 5:51 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road



Sen's Slope Estimator

Constituent: Arsenic, Barium Analysis Run 8/13/2019 5:53 PM View: Trend Test
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-15	GWC-16	GWC-20	GWC-16
9/29/2000	<0.005	0.094		0.076
11/21/2000	<0.005	0.059		0.075
1/20/2001	<0.005	0.087		0.053
3/14/2001	<0.005	0.075		0.055
7/16/2001	<0.005	0.11		0.041
11/1/2001	<0.005	0.098		0.045
4/25/2002	<0.005	0.071		0.055
11/20/2002	<0.005	0.15		
6/6/2003	<0.005			
12/12/2003	<0.005			
5/26/2004	<0.005	0.12		0.055
12/7/2004	<0.005	0.098		0.072
6/21/2005	<0.005	0.065		0.061
12/12/2005	<0.005	0.081		0.047
4/4/2006		0.077		0.042
6/27/2006	<0.005	0.071		0.042
8/30/2006		0.08		0.05
12/4/2006	<0.005	0.085		0.044
2/15/2007		0.09		0.041
6/23/2007	<0.005	0.12		0.044
9/11/2007		0.088		0.04
12/11/2007	<0.005	0.088		0.0035
3/11/2008		0.071		0.034
6/24/2008	<0.005	0.097		0.042
11/3/2008		0.089		0.049
12/5/2008	<0.005	0.092		0.05
3/25/2009		0.095		0.052
7/8/2009	0.0052	0.11		0.046
9/14/2009		0.099		0.048
12/20/2009	<0.005	0.1		0.062
3/4/2010		0.074		0.058
6/20/2010	0.0068			
6/21/2010		0.056	0.29	0.041
9/14/2010		0.067		0.036
1/7/2011	<0.005	0.066	0.2	0.054
4/15/2011		0.08		0.049
7/7/2011	<0.005	0.054	<0.005	0.063
7/8/2011			0.19	
9/25/2011		0.085		0.037
1/17/2012	<0.005			
1/18/2012		0.089	0.058	0.034
4/4/2012		0.0473		0.0446
7/9/2012	<0.005			
7/10/2012		0.07	0.18	0.033
10/9/2012		0.088		0.041
1/18/2013	0.0089	0.063	0.22	0.036
4/5/2013		0.06		0.036
7/17/2013	0.011	0.063	0.45	0.054
10/11/2013		0.059		0.052
1/13/2014	0.017			
1/14/2014		0.077	0.52	0.051
4/3/2014		0.091		0.047

Sen's Slope Estimator

Constituent: Arsenic, Barium Analysis Run 8/13/2019 5:53 PM View: Trend Test
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-15	GWC-16	GWC-20	GWC-16
7/9/2014	0.014	0.08		0.08
7/10/2014			0.4	
10/24/2014		0.073		0.072
1/12/2015			0.43	
1/13/2015	0.011			
1/14/2015		0.079		0.047
5/11/2015		0.058		0.053
7/16/2015	0.02	0.068		0.059
7/18/2015			0.26	
10/6/2015		0.078		0.053
1/17/2016	0.014	0.089	0.34	0.056
4/26/2016		0.0731		0.0721
7/27/2016	0.0303			
7/28/2016		0.0627	0.209	0.0534
9/1/2016	0.0533	0.0551	0.215	0.0445
10/25/2016	0.0551	0.0466	0.307	0.0464
1/4/2017		0.0444	0.311	0.0379
1/5/2017	0.0437			
4/3/2017	0.0713			
4/4/2017			0.317	
4/5/2017		0.0591		0.0534
7/11/2017	0.0745		0.299	
7/12/2017		0.0776		0.0944
10/2/2017	0.0723		0.216	
10/3/2017		0.0813		
1/9/2018	0.0731			
1/10/2018		0.085	0.347	0.0603
7/9/2018			0.37	
7/10/2018	0.09	0.067		
1/17/2019	0.13	0.079		0.13
1/21/2019			0.44	
3/25/2019			0.41	
3/26/2019	0.1	0.089		0.14

Sen's Slope Estimator

Constituent: Barium, Boron Analysis Run 8/13/2019 5:53 PM View: Trend Test

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWC-13	GWC-16	GWB-6R
9/29/2000	0.093			
11/21/2000	0.095			
1/20/2001	0.089			
3/14/2001	0.088			
7/16/2001	0.096			
11/1/2001	0.094			
4/25/2002	0.085			
6/6/2003	0.09			
12/12/2003	0.084			
5/26/2004	0.08			
12/7/2004	0.098			
6/21/2005	0.084			
12/12/2005	0.07			
6/27/2006	0.083			
12/4/2006	0.072			
6/23/2007	0.087			
12/11/2007	0.082			
6/23/2008	0.1			
12/4/2008	0.12			
7/8/2009	0.14			
12/21/2009	0.15			
6/20/2010	0.21			
1/7/2011	0.2			
7/8/2011	0.18			
1/18/2012	0.18			
7/10/2012	0.16			
1/18/2013	0.19			
7/17/2013	0.17			
1/14/2014	0.2			
7/9/2014	0.16			
1/14/2015	0.17			
7/17/2015	0.18			
1/18/2016	0.2			
7/28/2016	0.234			
8/30/2016				1.41
8/31/2016	0.284	0.261		
9/1/2016			1.82	
10/25/2016			1.26	
10/26/2016		0.211		1.83
10/27/2016	0.244			
1/4/2017			1.46	
1/5/2017		0.179		3.07
1/6/2017	0.305			
4/5/2017			2	
4/6/2017	0.249	0.112		3.19
7/12/2017	0.256	0.0882	2.95	3.06
10/3/2017			4.15	2.69
10/4/2017	0.356	0.116		
1/9/2018				2.81
1/10/2018		0.101	3.68	
1/11/2018	0.226			
7/10/2018			5.2	2.9

Sen's Slope Estimator

Constituent: Barium, Boron Analysis Run 8/13/2019 5:53 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-9	GWC-13	GWC-16	GWB-6R
7/11/2018	0.29	0.098		
1/16/2019		0.11		7.7
1/17/2019			8.6	
1/18/2019	0.21			
3/26/2019		0.35	7.4	7.4
3/27/2019	0.19			

Sen's Slope Estimator

Constituent: Calcium Analysis Run 8/13/2019 5:53 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-1	GWC-12	GWC-14	GWC-15
8/30/2016	29.4			
8/31/2016		105		
9/1/2016			194	119
10/25/2016	28.3		100	106
10/26/2016		101		
1/4/2017	33.4	94.9		
1/5/2017			107	115
4/3/2017				131
4/4/2017	34.6		153	
4/5/2017		92.5		
7/10/2017		90.3		
7/11/2017			125	155
7/12/2017	38			
10/2/2017			126	137
10/3/2017	25.5			
10/4/2017		74.6		
1/9/2018			119	135
1/10/2018	36.5			
1/11/2018		78.1		
7/9/2018			123	
7/10/2018	45.5			129
7/11/2018		72.2		
1/16/2019	46.5		120	
1/17/2019		64.7		137
3/26/2019	46.3		84.2	124
3/27/2019		63.1		

Sen's Slope Estimator

Constituent: Calcium Analysis Run 8/13/2019 5:53 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-16	GWC-17	GWC-20	GWC-21
9/1/2016	93.8	71.9	67.2	40.5
10/25/2016	94.1		50.1	3.91
10/26/2016		80.3		
1/4/2017	88.2		80.4	15.2
1/5/2017		94.4		
4/4/2017			108	32.3
4/5/2017	106	104		
7/11/2017			136	
7/12/2017	149			
7/13/2017		124		8.92
10/2/2017			105	
10/3/2017	217			7.88
10/4/2017		136		
1/9/2018				40.5
1/10/2018	161		60.1	
1/11/2018		139		
7/9/2018			75.9	
7/10/2018	205			29.8
7/11/2018		122		
1/16/2019		80.5		
1/17/2019	187			27.6
1/21/2019			60	
3/25/2019			74.8	
3/26/2019	204	68.8		60.1

Sen's Slope Estimator

Constituent: Calcium, Chloride, Chromium Analysis Run 8/13/2019 5:53 PM View: Trend Test

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWB-4R	GWB-5R	GWC-17	GWB-5R
9/29/2000				0.03
11/21/2000				<0.01
1/20/2001				0.028
4/25/2002				0.021
12/12/2003				<0.01
5/26/2004				0.012
12/7/2004				0.019
6/21/2005				0.02
12/12/2005				<0.01
6/27/2006				0.0015
12/4/2006				0.0034
6/23/2007				<0.01
12/11/2007				<0.01
6/24/2008				<0.01
12/5/2008				0.0016
7/7/2009				<0.01
12/21/2009				<0.01
6/20/2010				<0.01
1/6/2011				0.0017
7/7/2011				0.008
1/17/2012				0.0082
7/9/2012				0.01
1/17/2013				0.01
7/16/2013				0.0061
1/13/2014				0.002
7/9/2014				<0.01
1/13/2015				<0.01
7/16/2015				<0.01
1/18/2016				<0.01
7/27/2016				0.0006 (J)
8/30/2016		14.3		<0.01
9/1/2016	9.91		610	
10/26/2016	8.56	18.6	570	<0.01
1/3/2017		18.1		0.001 (J)
1/5/2017			710	
1/6/2017	8.18			
4/4/2017	8.12			
4/5/2017			860	
4/6/2017		16.2		0.0013 (J)
7/12/2017	8	18.1		0.0011 (J)
7/13/2017			860	
10/3/2017		15.2		0.0012 (J)
10/4/2017	12.5		1000	
1/10/2018		15.5		0.0016 (J)
1/11/2018	12.9		940	
7/10/2018		30.6		0.0055 (J)
7/11/2018	8.6		864	
1/16/2019	68.8	33.3	469	<0.01
3/25/2019	55.6			
3/26/2019		36.1	439	0.072

Sen's Slope Estimator

Constituent: Fluoride, pH, Sulfate Analysis Run 8/13/2019 5:53 PM View: Trend Test

Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-17	GWC-12	GWC-15	GWC-12
7/16/2013		4.17	5.96	
8/31/2016				1100
9/1/2016	0.68			
10/25/2016			6.46	
10/26/2016	0.68	4.04		900
1/4/2017		4.01		880
1/5/2017	0.73		6.25	
4/3/2017			6.25	
4/5/2017	1.6	4		990
7/10/2017		3.89		480
7/11/2017			6.5	
7/13/2017	1.7			
10/2/2017			6.83	
10/4/2017	1.8	4.06		760
1/9/2018			6.57	
1/11/2018	1.5	3.96		780
7/10/2018			6.42	
7/11/2018	1.8	3.95		598
1/16/2019	1.4			
1/17/2019		3.89		454
3/26/2019	0.89		6.65	
3/27/2019		4.11		579

Sen's Slope Estimator

Constituent: Sulfate Analysis Run 8/13/2019 5:53 PM View: Trend Test
Grumman Road Landfill Client: Southern Company Data: Grumman Road

	GWC-14	GWC-17	GWB-4R	GWB-5R
8/30/2016				100
9/1/2016	730	310	210	
10/25/2016	420			
10/26/2016		280	230	130
1/3/2017				120
1/5/2017	430	310		
1/6/2017			220	
4/4/2017	600		230	
4/5/2017		460		
4/6/2017				140
7/11/2017	400			
7/12/2017			210	140
7/13/2017		490		
10/2/2017	470			
10/3/2017				130
10/4/2017		1100	290	
1/9/2018	440			
1/10/2018				110
1/11/2018		810	210	
7/9/2018	369			
7/10/2018				48.1
7/11/2018		902	177	
1/16/2019	291	422	244	184
3/25/2019			245	
3/26/2019	192	439		222

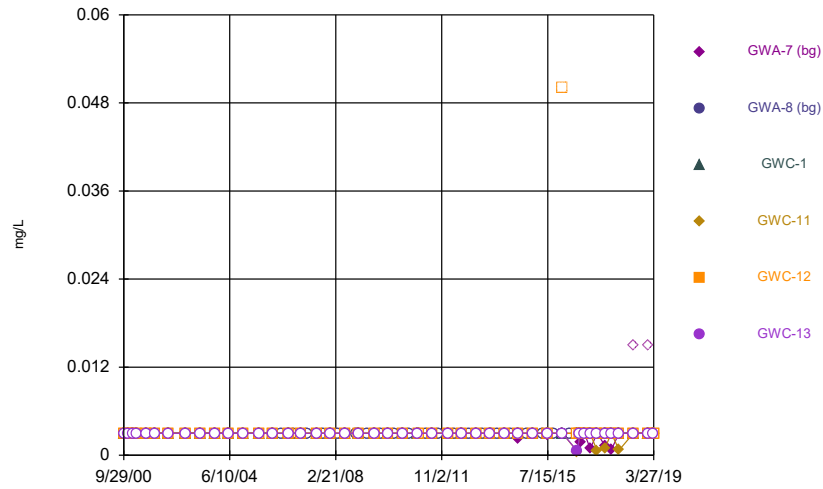
Sen's Slope Estimator

Constituent: Sulfate, Total Dissolved Solids Analysis Run 8/13/2019 5:53 PM View: Trend Test

Grumman Road Landfill Client: Southern Company Data: Grumman Road

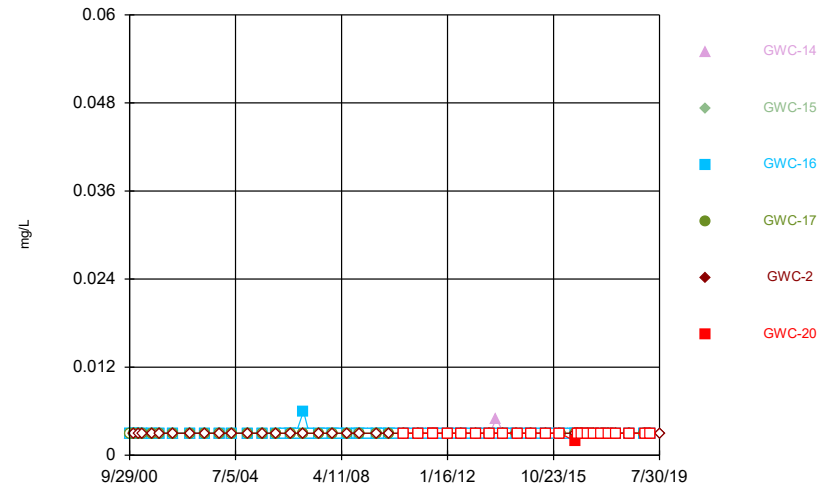
	GWB-6R	GWB-5R	GWB-6R
8/30/2016	120	224	365
10/26/2016	120	297	373
1/3/2017		366	
1/5/2017	130		543
4/6/2017	150	279	434
7/12/2017	140	308	454
10/3/2017	140	288	389
1/9/2018	140		415
1/10/2018		493	
7/10/2018	128		453
1/16/2019	402	382	1320
3/26/2019	319	1040	1250

Antimony



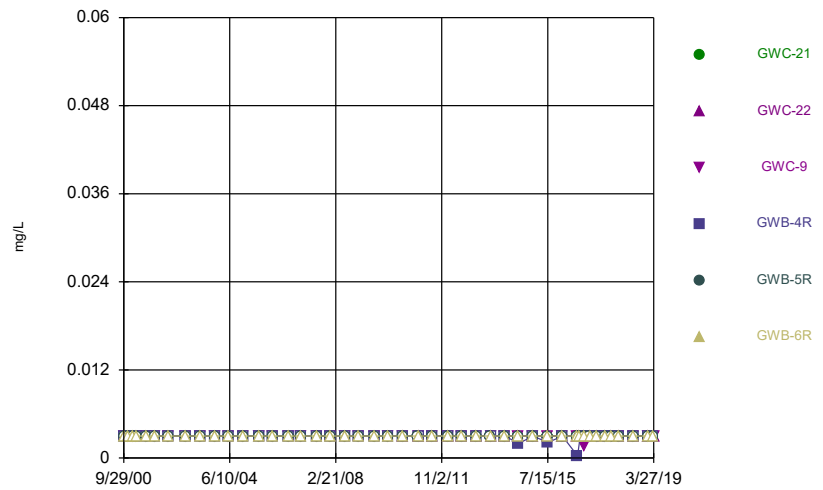
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Antimony



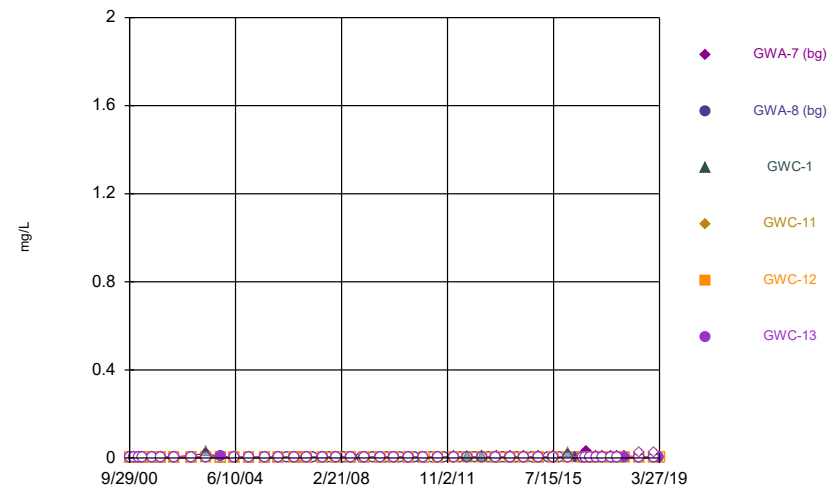
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Antimony



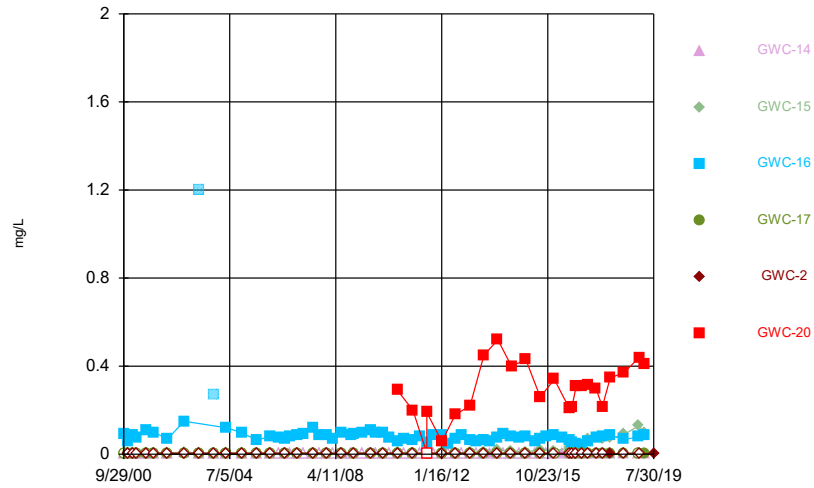
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Arsenic



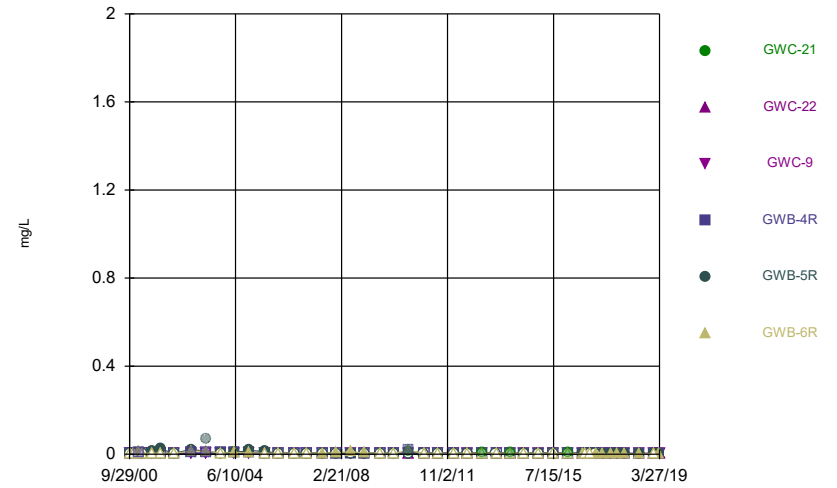
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Arsenic



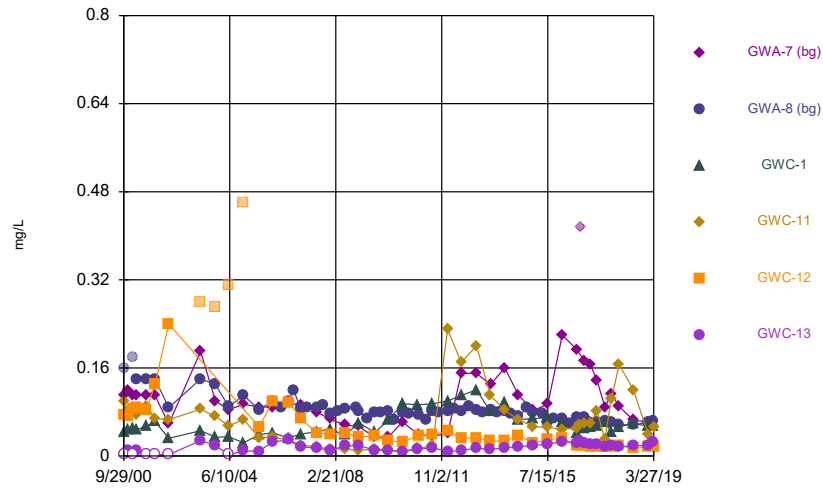
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Arsenic



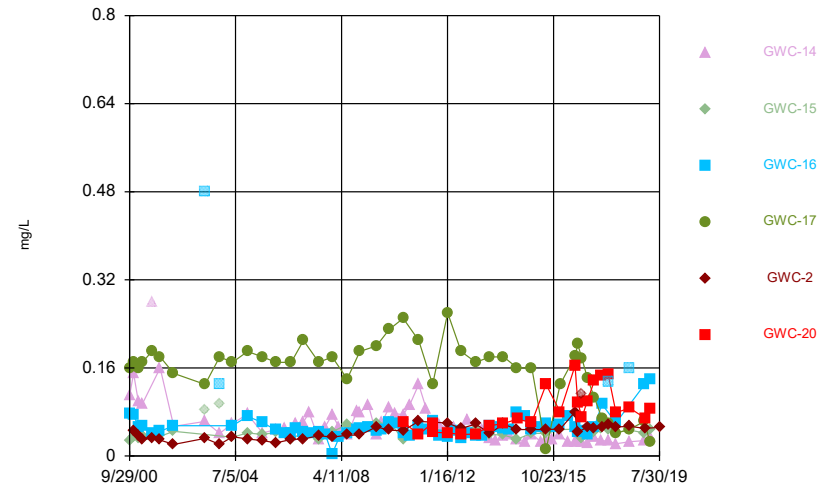
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Barium



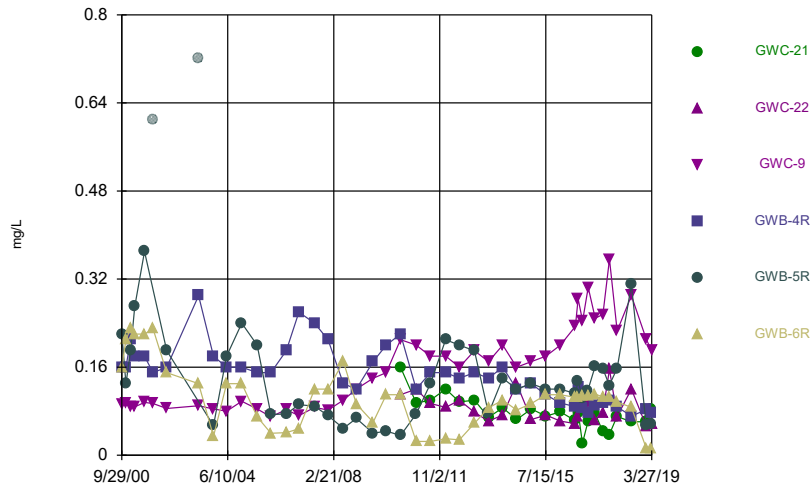
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Barium



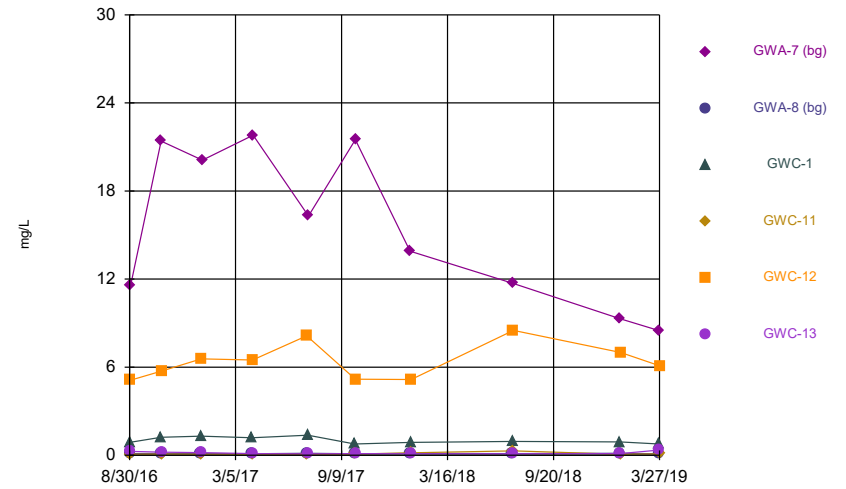
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Barium



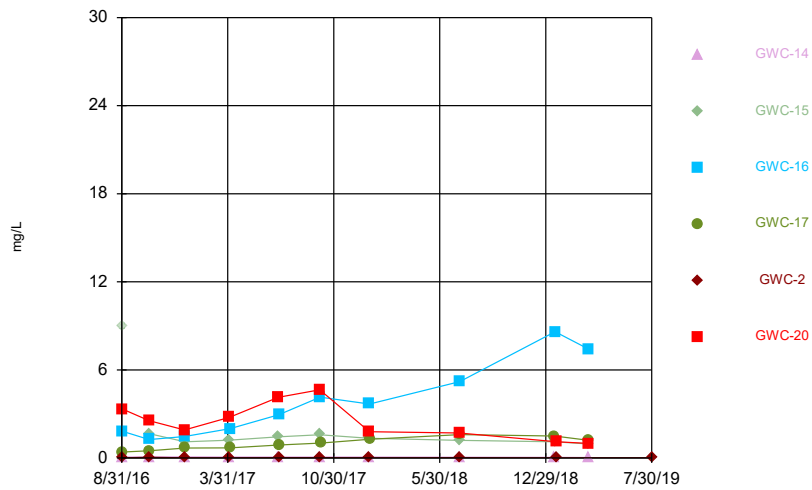
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Boron



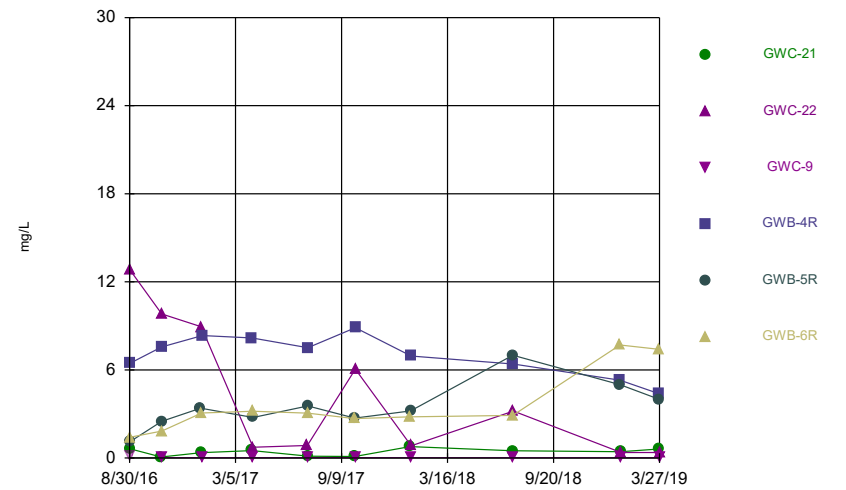
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Boron



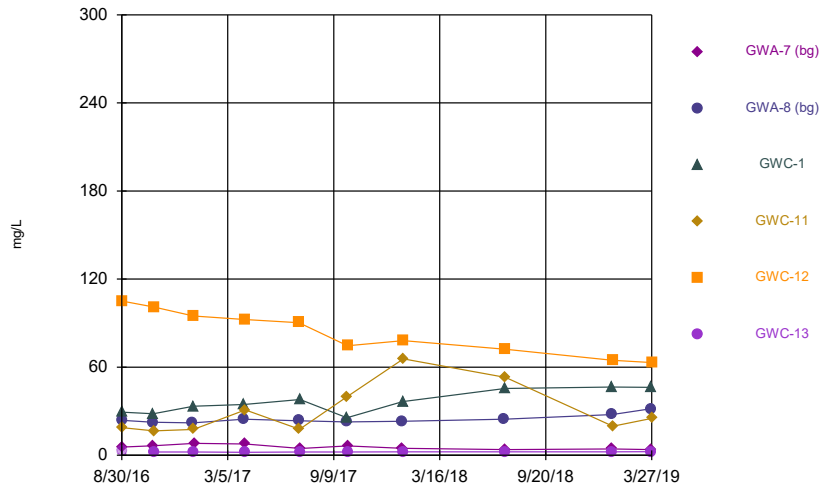
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Boron



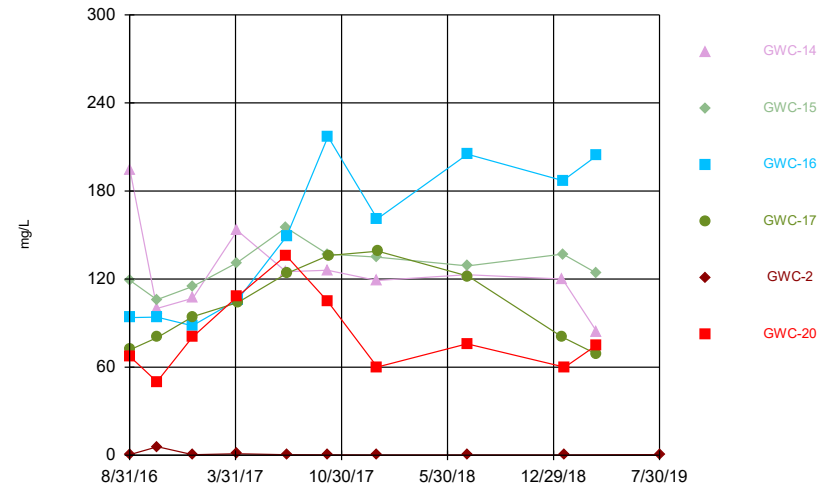
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium



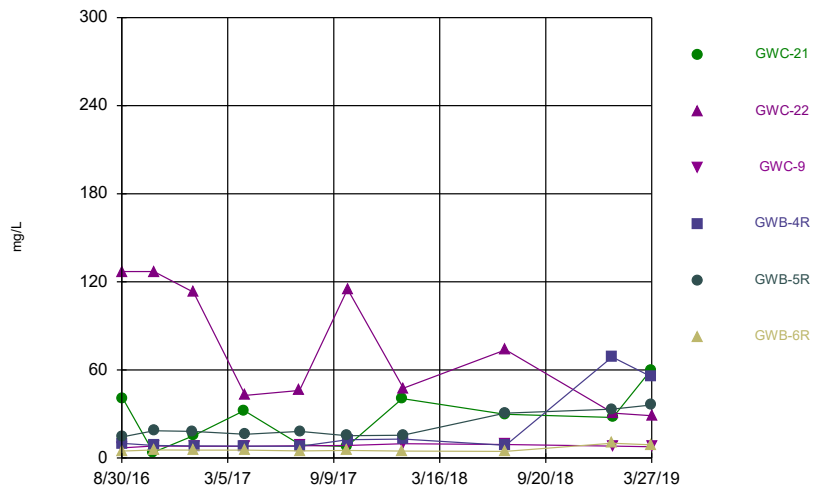
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Calcium



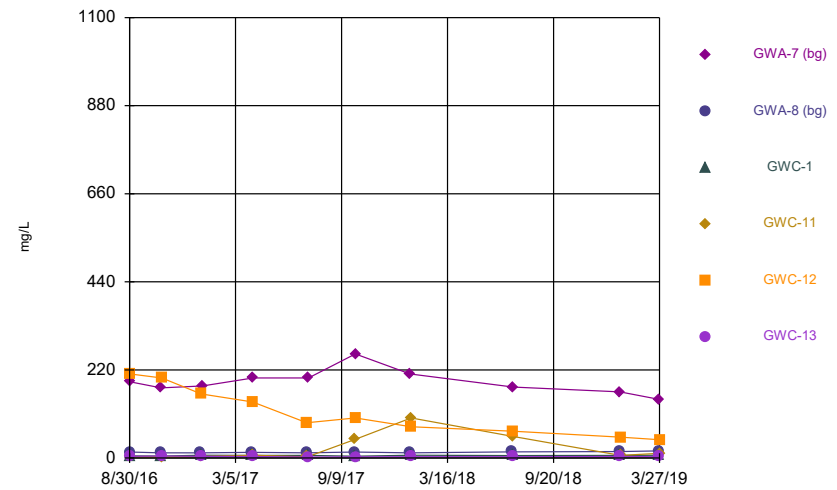
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Calcium



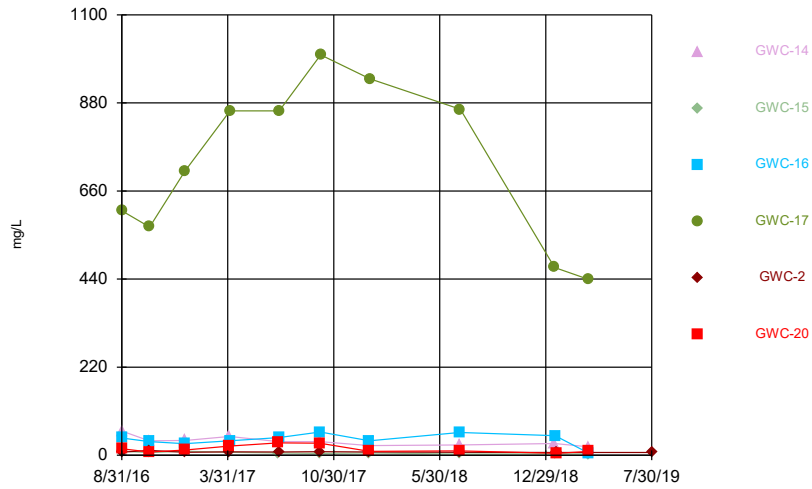
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Chloride



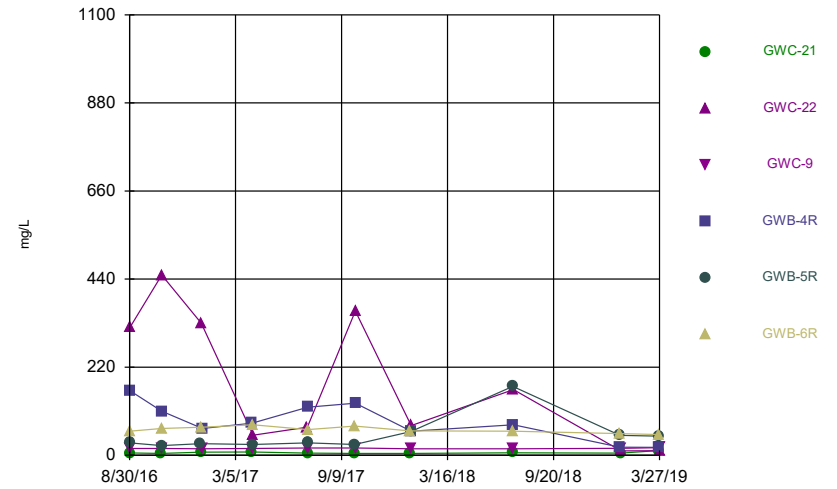
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Chloride



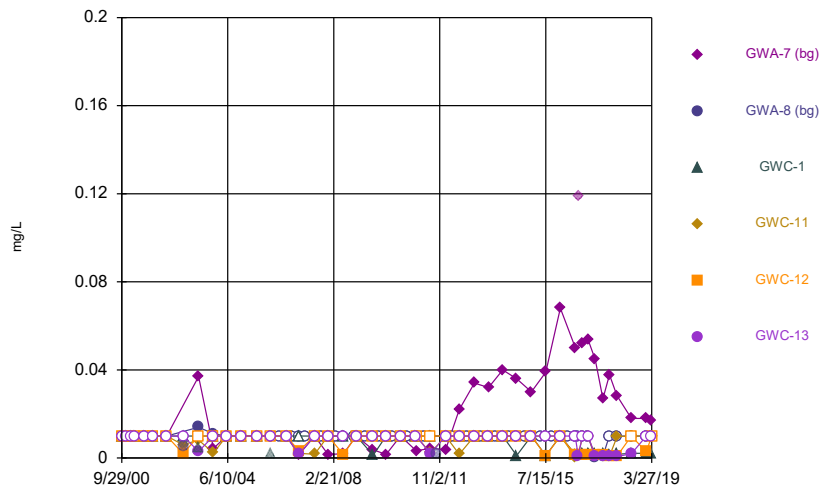
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Chloride



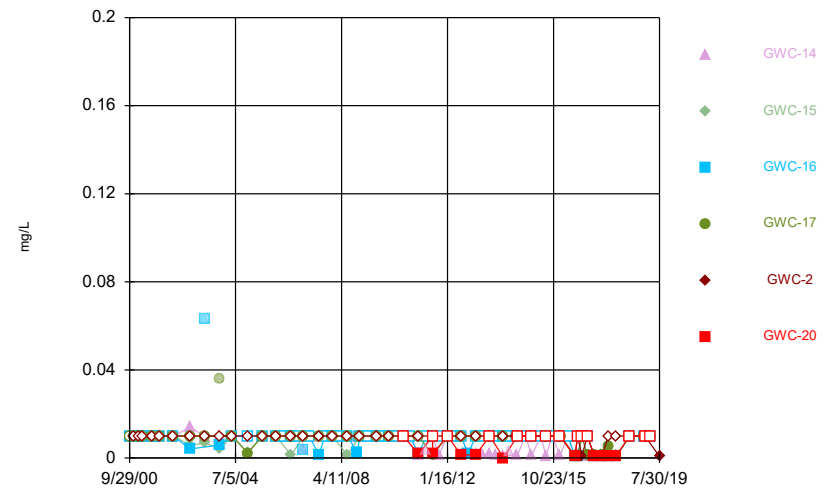
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Chromium



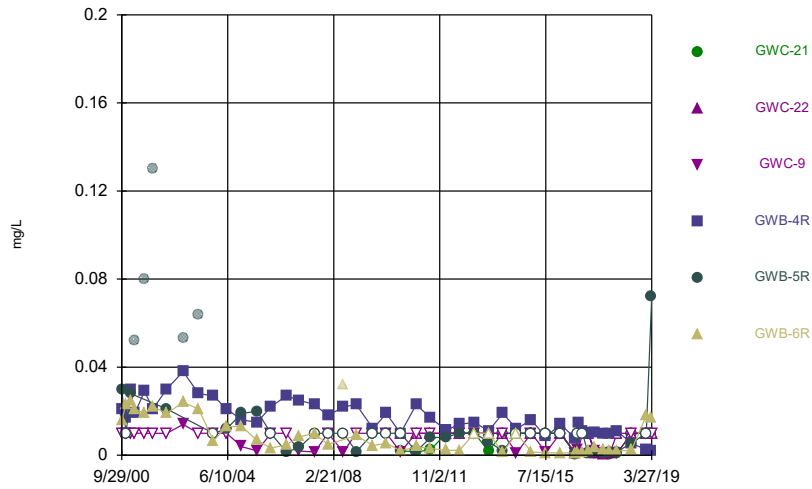
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Chromium



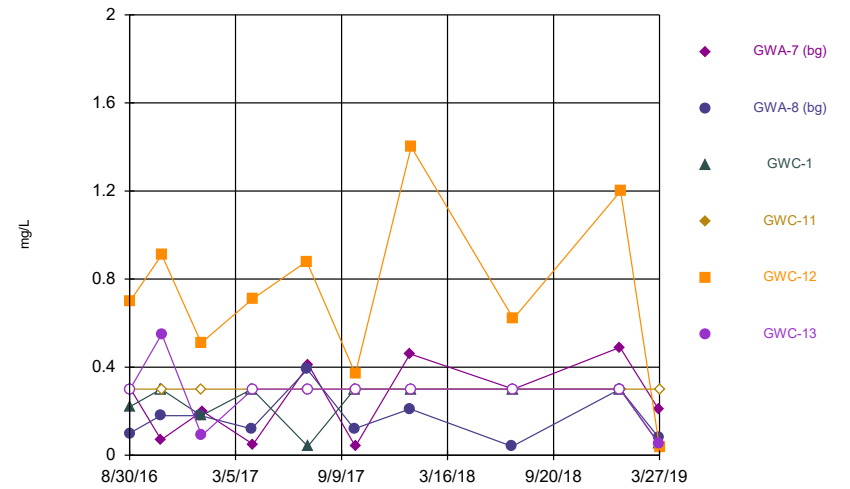
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Chromium



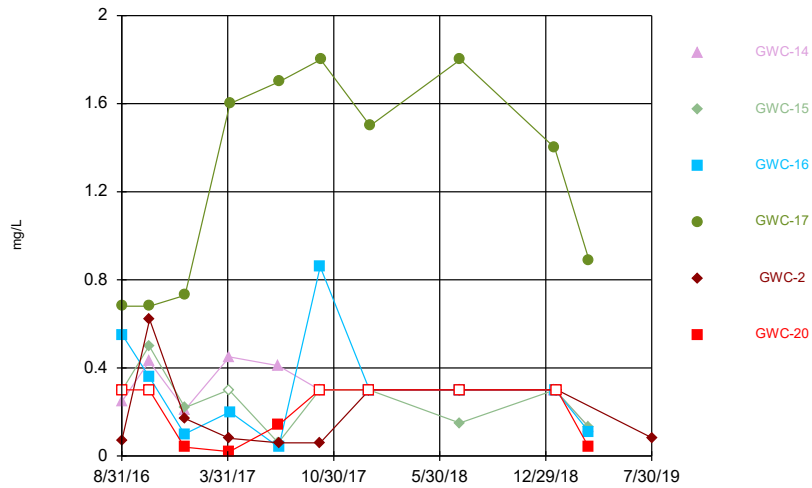
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Fluoride



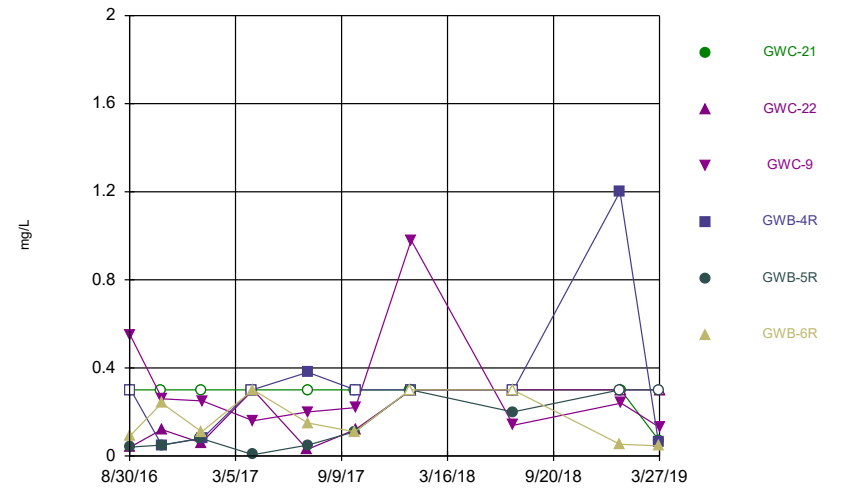
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Fluoride



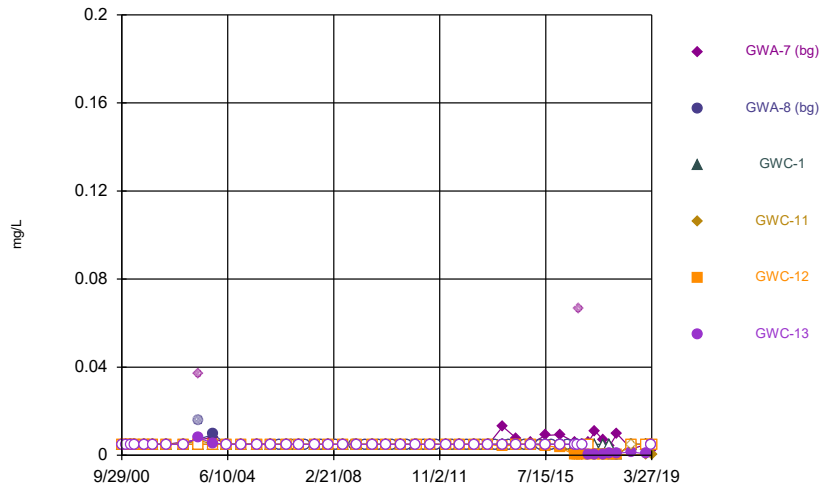
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Fluoride



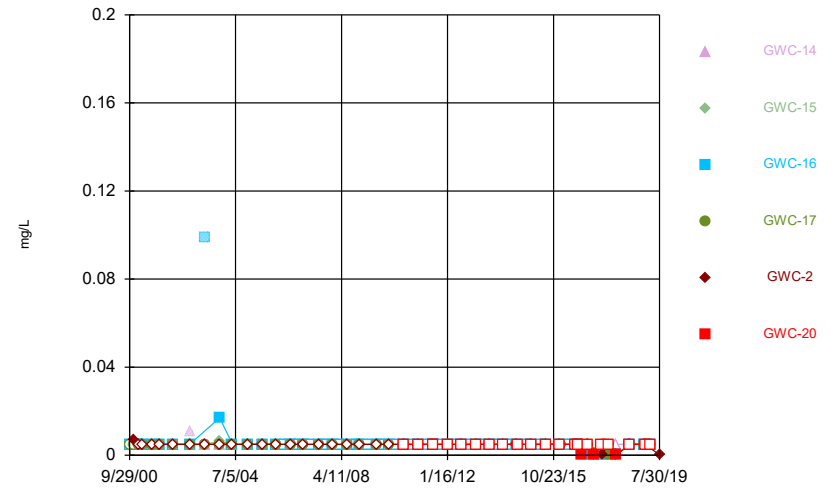
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Lead



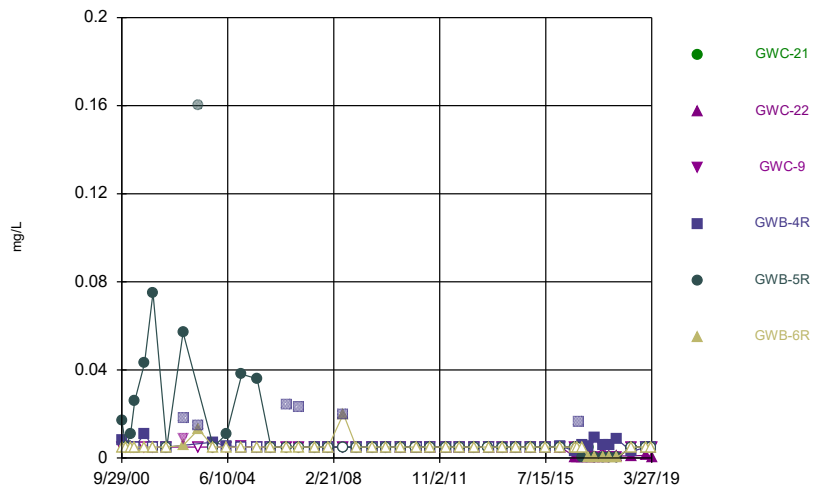
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Lead



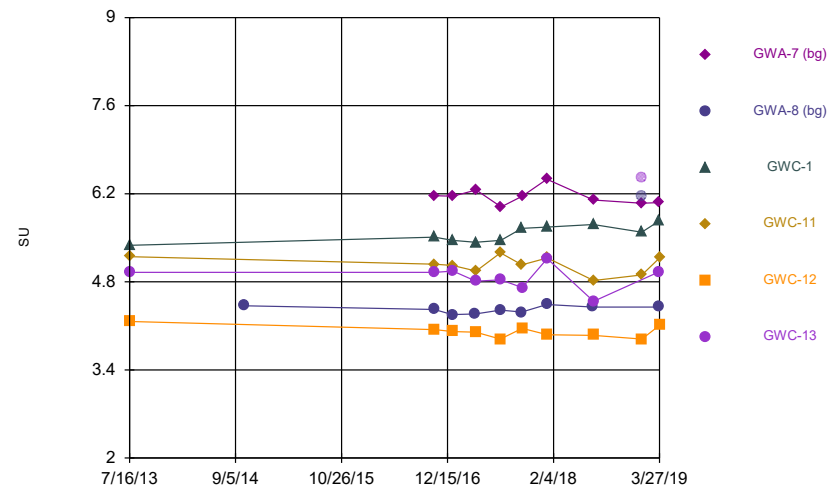
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Lead



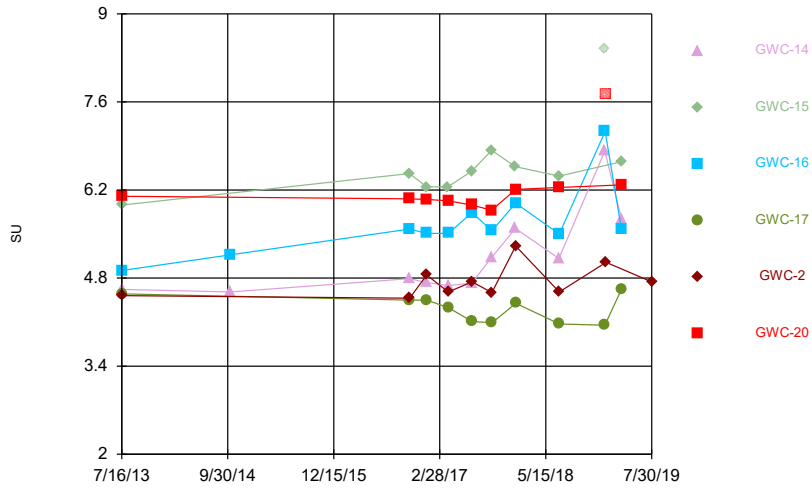
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

pH



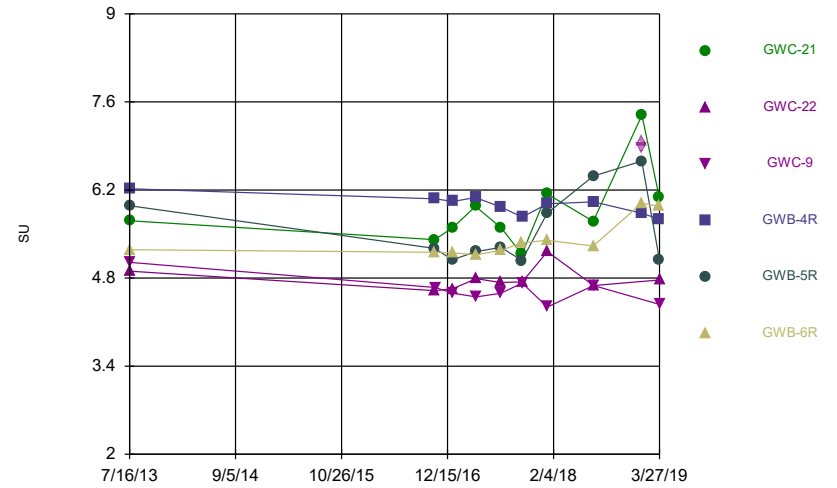
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

pH



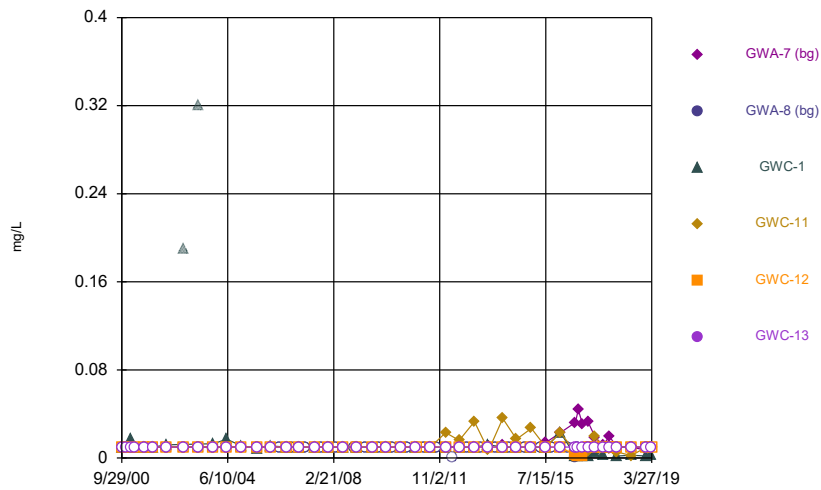
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

pH



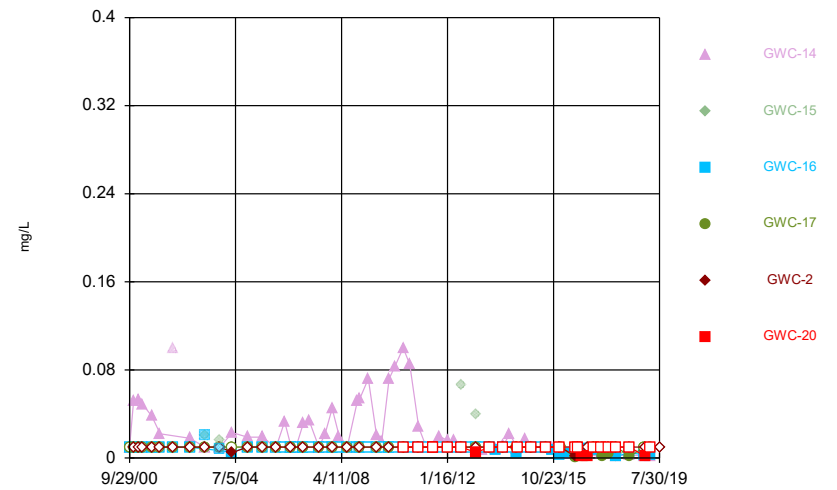
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Selenium



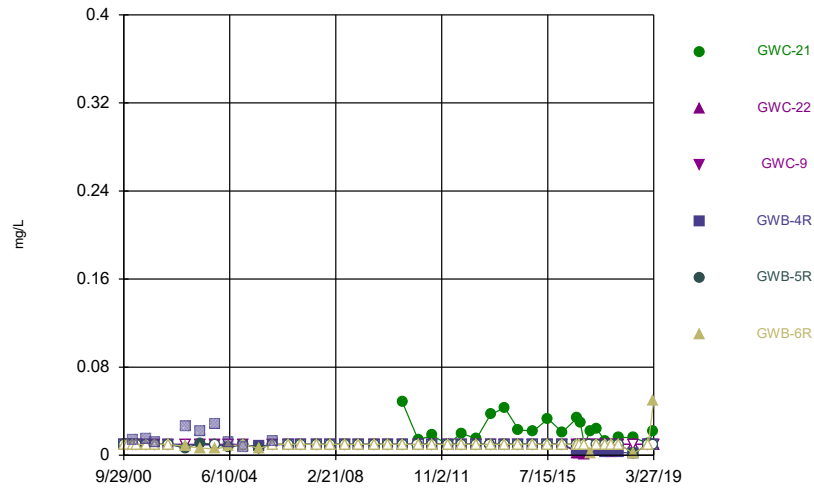
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 Grumman Road Landfill Client: Southern Company Data: Grumman Road

Selenium

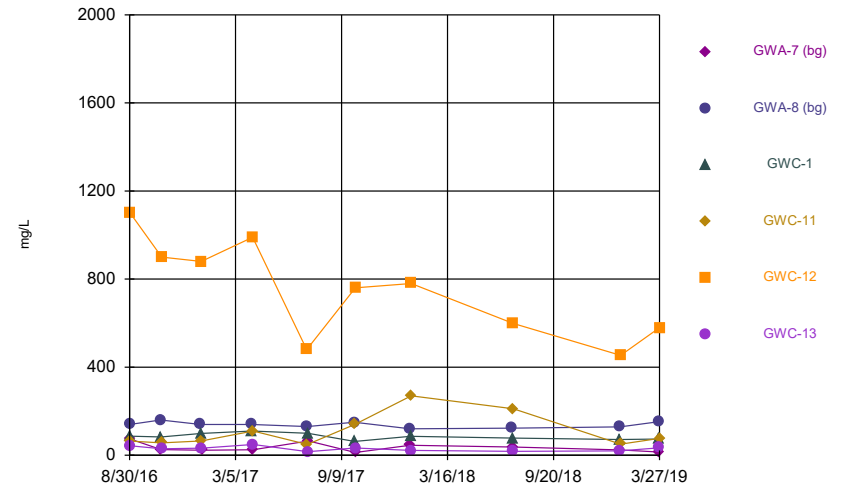


Time Series Analysis Run 8/13/2019 11:21 AM View: Time Series
 Grumman Road Landfill Client: Southern Company Data: Grumman Road

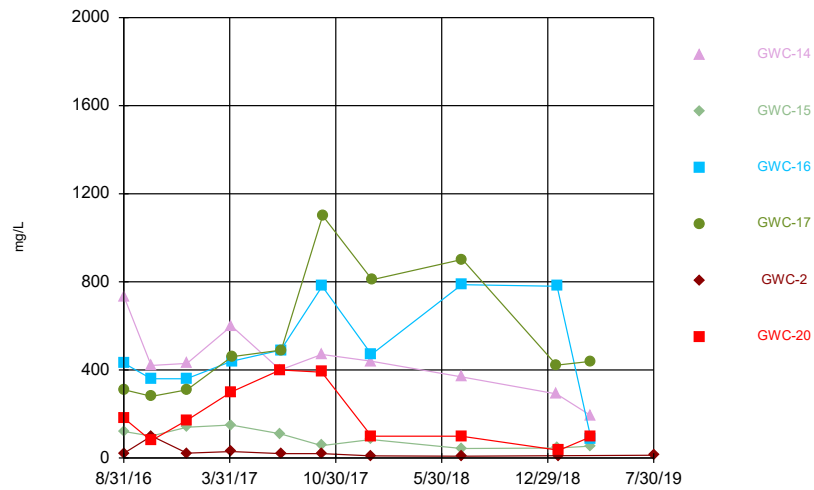
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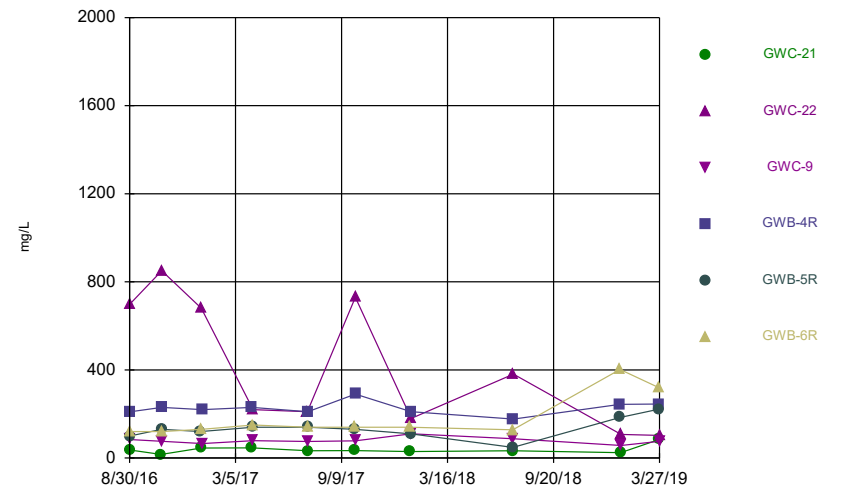
Sulfate



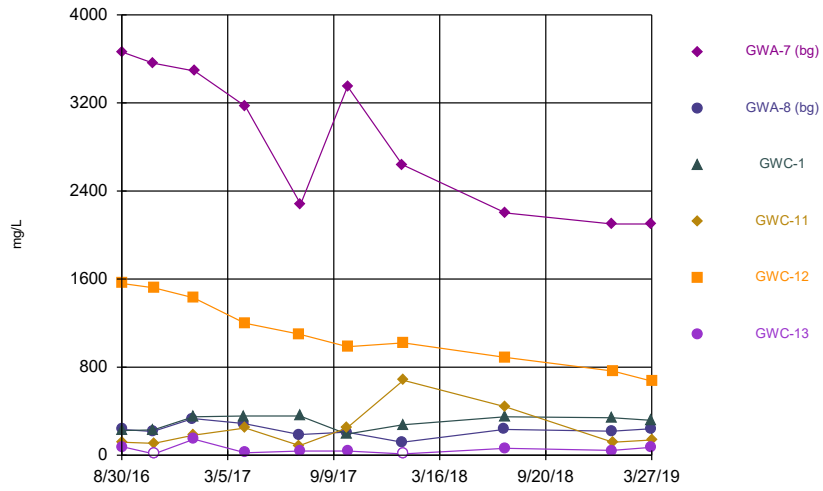
Sulfate



Sulfate

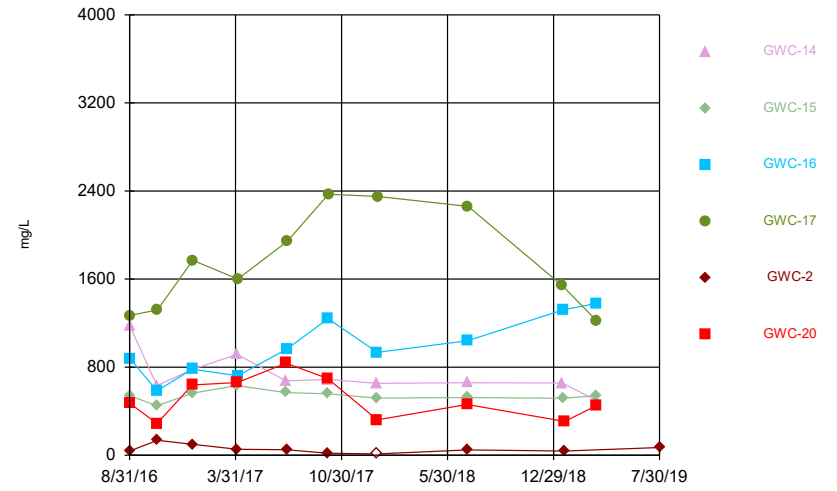


Total Dissolved Solids



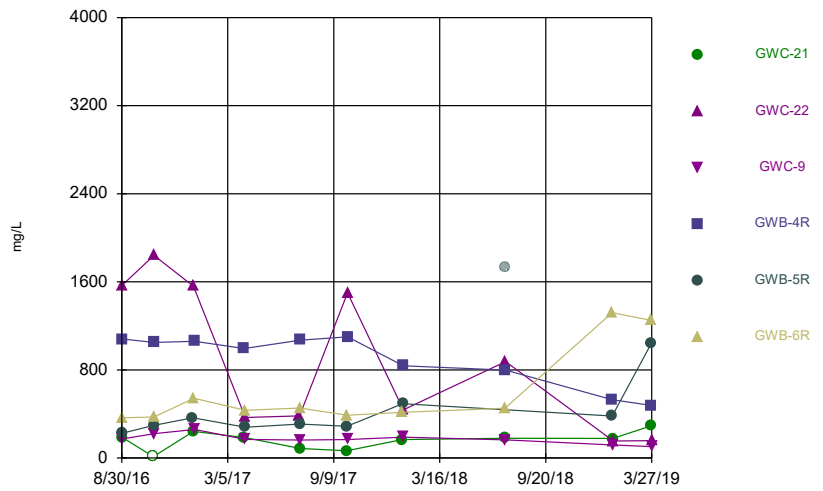
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Total Dissolved Solids



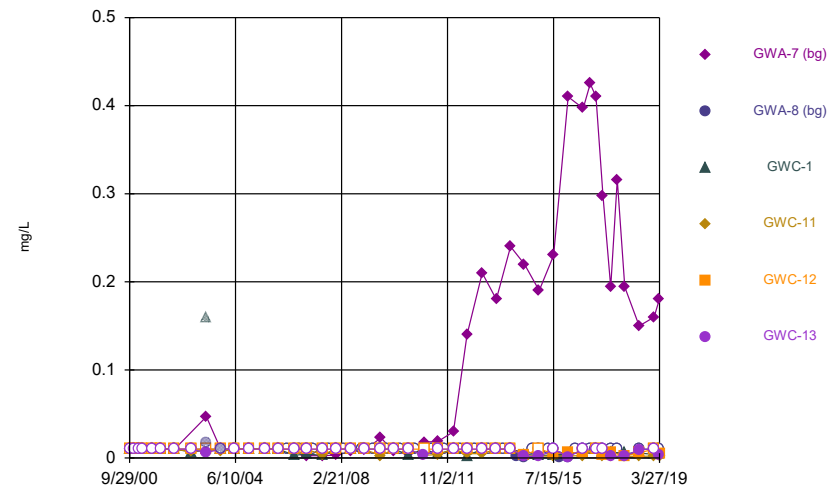
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Total Dissolved Solids



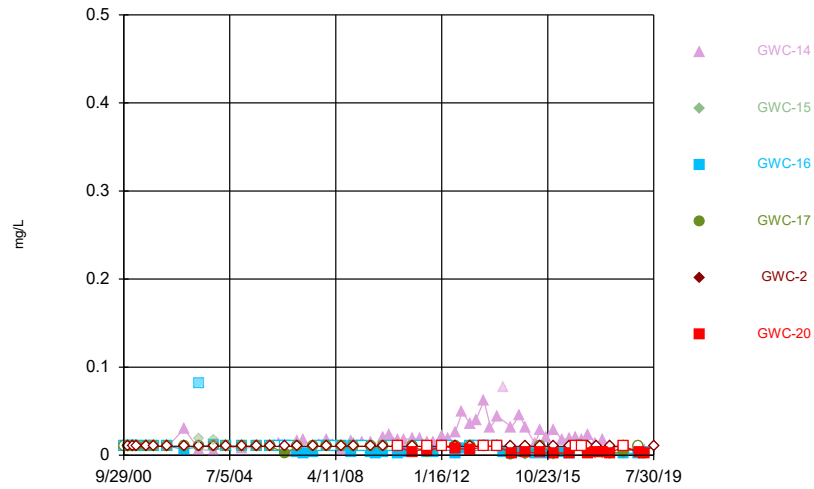
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Grumman Road Landfill Client: Southern Company Data: Grumman Road

Vanadium



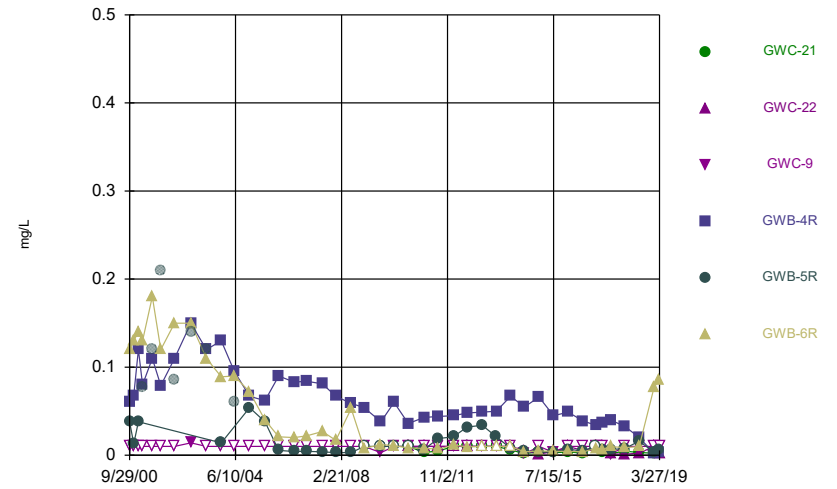
Time Series Analysis Run 8/13/2019 11:21 AM View: Time Series
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Vanadium



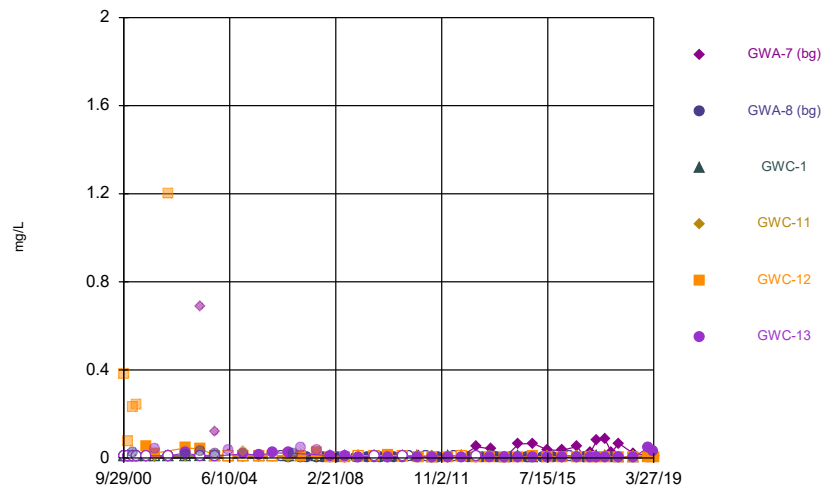
Time Series Analysis Run 8/13/2019 11:21 AM View: Time Series
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Vanadium



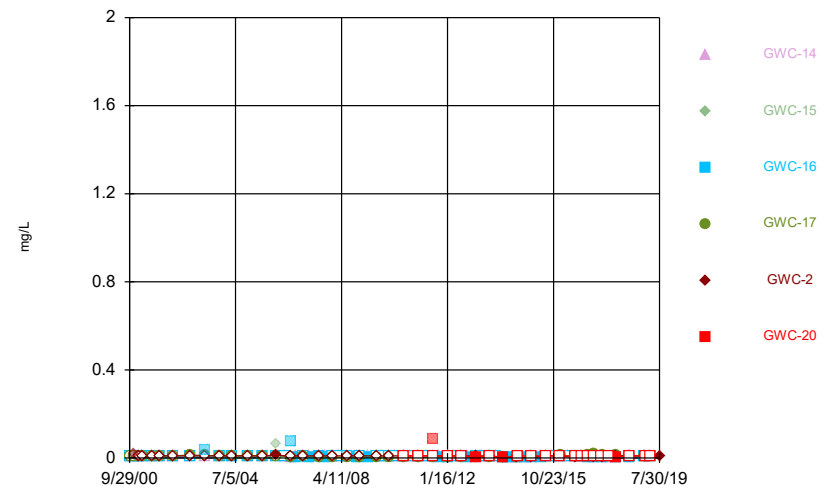
Time Series Analysis Run 8/13/2019 11:21 AM View: Time Series
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Zinc



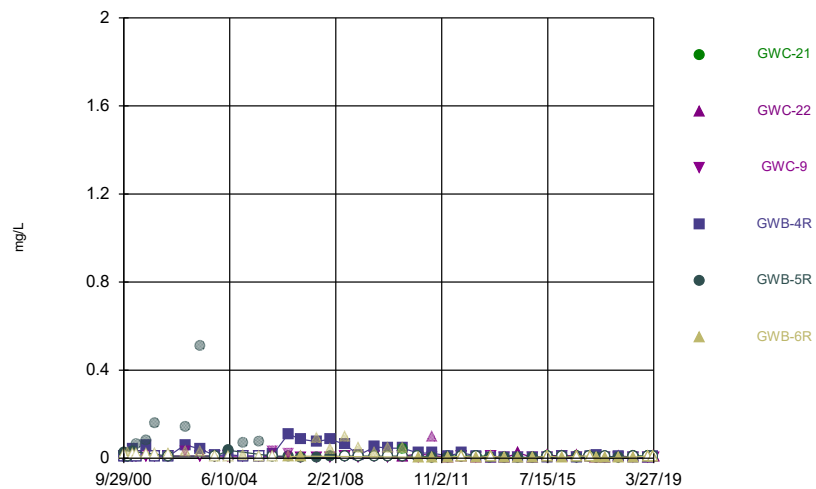
Time Series Analysis Run 8/13/2019 11:21 AM View: Time Series
Grumman Road Landfill Client: Southern Company Data: Grumman Road

Zinc



Time Series Analysis Run 8/13/2019 11:21 AM View: Time Series
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Zinc



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