



**2022 ANNUAL GROUNDWATER  
MONITORING AND CORRECTIVE ACTION  
REPORT**

Plant Bowen

Cells 1 & 2

Cells 3 & 4

Cells 9 & 10

Solid Waste Disposal Facility

Permit No. 008-018D (LI)

January 31, 2023

Prepared for:



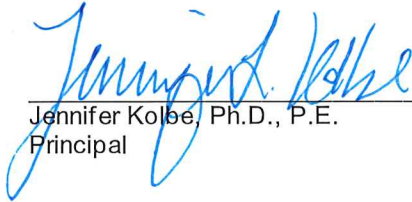
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2022 Annual Groundwater Monitoring & Corrective Action Report  
Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10

CERTIFICATION STATEMENT

This 2022 Annual Groundwater Monitoring & Corrective Action Report, Georgia Power Company - Plant Bowen Solid Waste Disposal Facility Landfill Cells 1 & 2, 3 & 4, and 9 & 10 has been prepared in compliance with the United States Environmental Protection Agency Coal Combustion Residual Rule [40 Code of Federal Regulations (CFR) 257 Subpart D] and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 by a qualified groundwater scientist or engineer with Stantec Consulting Services Inc. I hereby certify that I am a qualified groundwater scientist, in accordance with the Georgia Rules of Solid Waste Management, and 40 CFR Part 258.50(g).



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Jennifer Kolbe, Ph.D., P.E.  
Principal



January 31, 2023  
Date



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January 31, 2023  
Date



# 2022 Annual Groundwater Monitoring and Corrective Action Report Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10

## Executive Summary

This summary of the 2022 Annual Groundwater Monitoring and Corrective Action Report provides the status of the groundwater monitoring and corrective action program from January through December 2022 at the Georgia Power Company (Georgia Power) Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10 (the Landfill or the Site). This summary was prepared by Stantec Consulting Services Inc. (Stantec) on behalf of Georgia Power to meet the requirements listed in Part A, Section 6<sup>1</sup> of the United States Environmental Protection Agency (US EPA) coal combustion residuals rule (CCR Rule) (Title 40 Code of Federal Regulations [40 CFR] 257 Subpart D).

The Landfill is located in Bartow County off State Highway 113, approximately seven miles west-southwest of Cartersville, Georgia and 20 miles southeast of Rome, Georgia. The Landfill receives coal combustion by-products, coal ash, and gypsum from coal power generating processes at Plant Bowen. The Landfill cells are lined in accordance with Solid Waste Permit No. 008-018D (LI). Gypsum placement in disposal Cells 1 & 2 began in November 2008, whereas ash placement in disposal Cells 3 & 4 began in February 2015. Waste placement operations were initiated in Cells 9 & 10 in November 2015. Cells 9 & 10 are only used to store non-marketable gypsum. The Site is located on the northeastern portion of the Plant Bowen property.



**Plant Bowen Landfill Cells**

Groundwater monitoring for the Landfill was previously conducted under the requirements of the Georgia Solid Waste Permit No. 008-018D (LI) and in accordance with the specifications in the Design and Operation (D&O) Plan. Georgia Environmental Protection Division (GA EPD) issued CCR Permit No. 008-018D (CCR) on December 8, 2022, which replaces Georgia Solid Waste Permit No. 0008-018D(LI). Routine groundwater monitoring and reporting is conducted at the Site pursuant to the Groundwater Monitoring Plan in the new permit. Groundwater at the Site is monitored using a detection monitoring system of wells installed to meet federal and state monitoring requirements.

Groundwater monitoring, in accordance with the previous permit-issued Design and Operations (D&O) Plan, began in 2007 prior to disposal activities, and continues to date under the 2022 CCR Permit Groundwater Monitoring Plan. Routine sampling and reporting for CCR Rule Appendix III constituents

<sup>1</sup> 80 FR 21468, Apr. 17, 2015, as amended at 81 FR 51807, Aug. 5, 2016; 83 FR 36452, July 30, 2018; 85 FR 53561, Aug. 28, 2020



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began after the background groundwater conditions were established between February 2016 and August 2017.

During the 2022 annual reporting period, two groundwater sampling events were conducted in January-February 2022 and August 2022. Groundwater samples were submitted to Pace® Analytical Services, Inc. (Pace), for analysis of Appendix III parameters<sup>2</sup>. Per the CCR Rule, the groundwater results were evaluated in accordance with certified statistical methods. Verified Appendix III constituents with statistically significant increases (SSIs) are provided in the table below and are addressed by the April 19, 2018 Alternate Source Demonstration (ASD) with the exception of GWC-48 (chloride) and GWC-23R (sulfate and total dissolved solids). An ASD was submitted to GA EPD on November 29, 2022, to address the chloride SSI in GWC-48. An ASD will be prepared and submitted to GA EPD by April 28, 2023, to address the sulfate and total dissolved solids (TDS) SSIs.

| <b>Appendix III Constituents (SSIs)</b> | <b>January-February 2022</b>       |
|---|------------------------------------|
| Calcium                                 | GWC-16R, GWC-17R, GWC-21R, GWC-23R |
| Chloride                                | GWC-48                             |
| pH (lower limit)                        | GWC-48                             |
| <b>Appendix III Constituents (SSIs)</b> | <b>August 2022</b>                 |
| Calcium                                 | GWC-16R, GWC-17R, GWC-21R, GWC-23R |
| Chloride                                | GWC-48                             |
| pH (lower limit)                        | GWC-48                             |
| Sulfate                                 | GWC-23R                            |
| Total Dissolved Solids                  | GWC-23R                            |

Based on review of the Appendix III statistical results completed for the groundwater monitoring and corrective action program in 2022, the Landfill will continue detection monitoring. An ASD will be submitted to address the SSIs (not addressed in previous ASDs). Georgia Power will continue routine groundwater monitoring and reporting at the Landfill. Reports will be posted to the website and provided to GA EPD semi-annually.

<sup>2</sup> Boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS)



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### Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10

#### 1 Introduction

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## **Acronyms / Abbreviations**

|                  |   |
|------------------|---|
| ASD              | Alternate Source Demonstration                          |
| CCR              | Coal Combustion Residuals                               |
| CCR Rule         | Title 40 Code of Federal Regulations 257 Subpart D      |
| CFR              | Code of Federal Regulations                             |
| cm/sec           | centimeters per second                                  |
| D&O              | Design and Operation                                    |
| DO               | Dissolved Oxygen  |
| ft/day           | feet per day  |
| GA EPD           | Georgia Environmental Protection Division               |
| GSC              | Groundwater Stats Consulting, LLC                       |
| Landfill or Site | Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10     |
| mg/L             | milligrams per liter                                    |
| NELAP            | National Environmental Laboratory Accreditation Program |
| NTU              | Nephelometric Turbidity Unit                            |
| ORP              | Oxidation-Reduction Potential                           |
| Pace             | Pace® Analytical Services                               |
| QA/QC            | Quality Assurance/Quality Control                       |
| SCS              | Southern Company Services                               |
| SSI              | Statistically Significant Increase                      |
| Stantec          | Stantec Consulting Services Inc.                        |
| TDS              | Total Dissolved Solids                                  |
| US EPA           | United States Environmental Protection Agency           |
| USGS             | United States Geological Survey                         |



# 1 Introduction

This 2022 Annual Groundwater Monitoring & Corrective Action Report has been prepared by Stantec Consulting Services Inc. (Stantec) on behalf of Georgia Power Company (Georgia Power) to document groundwater monitoring activities conducted from January through December 2022 at Georgia Power's Plant Bowen solid waste disposal facility Cells 1 & 2, 3 & 4, and 9 & 10 (Landfill or Site). The groundwater monitoring activities were conducted in accordance with the United States Environmental Protection Agency (US EPA) Coal Combustion Residuals (CCR) Rule 40 Code of Federal Regulations (CFR) 257 Subpart D and the Georgia Environmental Protection Division (GA EPD) Rules of Solid Waste Management 391-3-4-.10.

Groundwater monitoring was previously conducted under the requirements of the Georgia Solid Waste Permit No. 008-018D (LI) and in accordance with the specifications in the Design and Operation (D&O) Plan. GA EPD issued CCR Permit No. 008-018D (CCR) on December 8, 2022, which replaces Georgia Solid Waste Permit No. 0008-018D(LI). Routine groundwater monitoring and reporting is conducted at the Site pursuant to the Groundwater Monitoring Plan in the new permit.

This report provides the results from two semi-annual sampling events conducted in January-February 2022 and August 2022 and the resampling events in April, October, and November 2022 at Cells 1 & 2, Cells 3 & 4, and Cells 9 & 10. These sampling events included the scheduled semi-annual sampling for the permit required Appendix I constituents and the US EPA's CCR Appendix III constituents. The April, October, and November 2022 resampling events were conducted to verify the initial statistically significant increases (SSIs) identified in the January-February 2022 and August 2022 semi-annual events. This report satisfies the reporting requirements of applicable GA EPD Solid Waste Management Rules (391-3-4-.14) and federal and Georgia CCR Rule 40 CFR 257.90 (e) and 391-3-4-.10. In this report, for ease of reference when discussing the CCR Rules, the US EPA CCR Rules are cited.

## 1.1 Site Description and Background

The Plant Bowen Landfill is a Georgia Power-owned property located in Bartow County off State Highway 113, approximately 7 miles west-southwest of Cartersville, Georgia, and 20 miles southeast of Rome, Georgia (Figure 1). The disposal facility is approximately 300 acres located on a previously undeveloped, contiguous portion of the plant property. The Plant Bowen active Landfill Cells 1 & 2, 3 & 4, and 9 & 10 are located on the northeast portion of the Plant Bowen property. The disposal facility receives coal combustion by-products, coal ash, and gypsum from coal power generating processes at Plant Bowen. The landfill cells are lined in accordance with Solid Waste Permit No. 008-018D (LI) and 008-018D (CCR). Cells 3 & 4 have a leachate collection system. Gypsum placement in disposal Cells 1 & 2 began in November 2008, whereas ash placement in disposal Cells 3 & 4 began in February 2015. Waste placement operations were initiated in Cells 9 & 10 in November 2015. Cells 9 & 10 are only used to store non-marketable gypsum. Development of Cells 5, 6, 7, and 8 has begun with site clearing. Monitoring well installation for the proposed landfill cells is scheduled for 2023 followed by eight groundwater background sampling events prior to placement of waste, per the site permit.





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1 Introduction**

A detection monitoring system around each of the active disposal cells monitors the groundwater conditions at the Site. The monitoring well locations are shown on Figure 2. A subset of the monitoring wells is equipped with data loggers and telemetry systems for water level measurements and data transmission for real-time monitoring of groundwater levels in the subsurface karst geology.

Groundwater monitoring began in 2007 in accordance with the D&O Plan, prior to disposal activities, and continues to date. Groundwater monitoring and reporting activities, conducted in accordance with 40 CFR § 257.90 through § 257.94 of the CCR Rule, were initiated in 2016. Pursuant to 40 CFR § 257.94(b), the eight baseline sampling events were conducted from February 2016 to August 2017, with the initial detection monitoring event occurring in September-October 2017.

## **1.2 Regional Geology and Hydrogeologic Setting**

The regional geology and hydrogeology of the Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10 area are summarized below. The Site lies within the Valley and Ridge physiographic province about three to four miles north of the Cartersville Fault. The Cartersville Fault separates the late Precambrian-aged metamorphic rocks to the east and south from the Cambrian-aged sedimentary rocks to the north-northwest and west.

As described in the Hydrogeologic Report and Groundwater Monitoring Plan (Southern Company Services [SCS] 2006), the lithologies present in the landfill area of Plant Bowen from the ground surface to depth are terrace deposits, a residuum clay overburden, dolomite, and limestone bedrock. The Knox Group (dolomite and limestone bedrock) produces a characteristic orange to red clayey residuum (overburden) that ranges in thickness from 19 to 127 feet across the Site and often contains weathered chert and dolomite fragments. Silt and clay with some gravel and sand (terrace deposits) overlay the clayey residuum in some areas but are not continuous across the landfill area of Plant Bowen.

Two main hydrostratigraphic layers (water-bearing zones) are present at the Site: overburden (residuum clay), and bedrock (dolomite and limestone) – both units comprise the uppermost aquifer for groundwater monitoring purposes. The uppermost aquifer is unconfined. Overburden materials are heterogeneous ranging in composition from well-graded gravelly sand to fat clay. Bedrock underlying the Site (officially mapped as Knox undifferentiated) is a carbonate bedrock. Karst features within the underlying carbonate bedrock are predominately formed along initial discontinuities including joints, fissures (slots), fractures, and bedding planes or other linear features. These karst features may be partially or completely filled with soft unconsolidated sediments or may be empty or filled with water. The top of the karst features is usually identified as having a thin zone of weathered carbonate bedrock.

The water table commonly occurs in the lower overburden, but at some locations the water table is near the overburden-bedrock interface or in the upper fractured bedrock. Based on these data, it is assumed that the overburden and upper fractured bedrock are a single inter-connected water-bearing zone below the unsaturated overburden. Therefore, the saturated overburden and the upper fractured sedimentary bedrock together comprise the uppermost aquifer beneath the landfill area at Plant Bowen.



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The groundwater flow in the Landfill Cells 1 & 2 and 9 & 10 area is generally to the north-northeast and west-northwest in the Landfill Cells 3 & 4 area. However, there are variations in groundwater flow direction due to heterogeneous and anisotropic conditions at the Site.

### **1.3 Detection Monitoring System**

The existing detection monitoring system meets the requirements listed in § 257.91, 391-3-4.14, and 391-3-4.10; a detection monitoring system was installed at the Landfill that consists of a sufficient number of wells installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer to represent the groundwater quality both upgradient of the unit (i.e., background conditions) and passing the waste boundary of the unit. The number, spacing, and depths of the groundwater monitoring wells were selected based on the characterization of site-specific hydrogeologic conditions. Pursuant to 40 CFR § 257.91, the detection monitoring system was certified by a professional engineer on October 17, 2017; the certification is maintained in the Site's operating records. The locations of the compliance wells included in the detection monitoring system are presented on Figure 2. Well construction details are listed in Table 1.



## **2 Groundwater Monitoring Activities**

The following describes monitoring-related activities performed from January to December 2022. Samples were collected in January-February 2022 and August 2022 from each of the wells in the detection monitoring system shown on Figure 2. Table 2 presents a summary of the 2022 groundwater sampling events completed for the Landfill during this monitoring period.

### **2.1 Monitoring Well Installation and Maintenance**

Monitoring wells are inspected semi-annually to determine if repairs or corrective actions are necessary to meet the requirements of the Georgia Water Well Standards Act (O.C.G.A. § 12-5-134(5)(d)(vii)). In January-February 2022 and August 2022, monitoring wells were inspected, and necessary corrective actions were identified and subsequently completed, as documented in Appendix A.

The following modifications were made to the detection monitoring system during the 2022 reporting period:

- Georgia Power abandoned GWA-36 on March 15, 2022, due to persistent high turbidity during the January-February 2022 semi-annual groundwater sampling event, which identified possible filter pack sand in the pump used for purging and sampling of the well. The well was replaced with GWA-36A, which was located less than 50 feet from GWA-36. The well screen of GWA-36A was placed to intercept a water-bearing zone in the overburden similar to GWA-36.
- Georgia Power abandoned GWA-4 on March 14, 2022, without replacement due to the lack of continuous and persistent groundwater present in the overburden at that location.
- The Well Installation Report for GWA-36A and Abandonment Report for GWA-4 and GWA-36 were submitted on May 6, 2022, to GA EPD and are provided in Appendix B.
- Georgia Power abandoned GWA-51RZ, GWA-52, GWA-53, GWA-53R, GWA-54, GWA-55, GWA-55R, and GWA-56 in December 2022 due to the expansion of Landfill Cells 5, 6, 7, and 8. The monitoring well abandonment report is provided in Appendix B.

### **2.2 Detection Monitoring Program**

Georgia Power currently monitors groundwater associated with the Landfill under the detection groundwater monitoring program in accordance with § 257.94 and Solid Waste Management Rule 391-3-4-.14(22). As of CCR permit issuance, ongoing groundwater monitoring will be in accordance with GA EPD CCR Rule 391-3-4-.10(6). The semi-annual detection monitoring events occurred in January-February 2022 and August 2022. Groundwater samples were collected from monitoring wells in the detection monitoring system (Figure 2) and analyzed for:

- Appendix III constituents according to § 257.94(a);



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2 Groundwater Monitoring Activities**

- A state-modified Appendix I list of detection constituents according to GA EPD Rules for Solid Waste Management 391-3-4-.14 and the approved D&O plan. The state-modified analyte list (D&O Appendix I Metals) includes antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium, silver, thallium, vanadium, and zinc; and
- Field parameters recorded during sampling, including pH, temperature, turbidity, dissolved oxygen (DO), specific conductance, and oxidation-reduction potential (ORP).

### **2.3 Additional Sampling**

An ephemeral spring at the Site, as shown on Figure 2, is checked for water during each groundwater sampling event. Consistent with previous events, water was not present in the spring during the January-February 2022 or August 2022 events, and the spring was not sampled.

In addition to routine Appendix I D&O and Appendix III constituents, groundwater samples from the January-February 2022 event were analyzed for major cations and anions. The chemical composition of groundwater based on major ion chemistry data will be used to evaluate groundwater quality. Results are included in laboratory reports discussed in Section 3.5.



### 3 Sample Methodology & Analyses

The following section presents a summary of the field sampling procedures that were implemented, and the groundwater sampling results that were obtained in connection with the detection monitoring program conducted from January through December 2022.

#### 3.1 Groundwater Elevation Measurements and Flow Direction

Prior to each sampling event, groundwater levels were recorded at each monitoring well and piezometer at the Landfill. The calculated groundwater elevations for the January-February 2022 and August 2022 sampling events are presented in Table 3.

The groundwater elevation data were used to develop potentiometric surface elevation contour maps (Figures 3 through 6). Review of Figures 3 through 6 shows that groundwater elevations vary between landfill cells due to topographic variations in the overburden-bedrock aquifer. Groundwater elevations are similar between the overburden and the upper bedrock at most onsite locations indicating hydraulic communication between the saturated overburden and upper bedrock. The general direction of groundwater flow in the overburden and bedrock of Landfill Cells 1 & 2 and 9 & 10 area is to the north-northeast, and to the west-northwest for Landfill Cells 3 & 4. Observed groundwater elevations and flow directions are consistent with previous observations.

#### 3.2 Groundwater Gradient and Flow Velocity

The groundwater flow velocity at the Site was calculated using a derivation of Darcy's Law. Specifically,

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

Where:

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

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

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

$n_e$  = Effective porosity

The general groundwater flow velocity that was calculated for the Site is based on hydraulic gradients determined from 2022 groundwater level measurement data; information used for the calculations is provided in Table 4. Average hydraulic conductivity values were based on previous slug test data, and an estimated effective porosity of 0.01 (based on default soil type value for silty clays to clays in US EPA 530/SW-89-031 [US EPA 1989]) for the screened horizon. The average hydraulic conductivity values used in the soil aquifer calculations ( $2.54 \times 10^{-5}$  centimeters/second [cm/sec] = 0.072 feet per day [ft/day]) and the bedrock aquifer calculations ( $1.26 \times 10^{-4}$  cm/sec = 0.36 ft/day) are presented in the Plant Bowen Proposed Coal Combustion By-Product Storage Facility Site Acceptability Report (SCS, 2002).



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3 Sample Methodology & Analyses**

Results for groundwater flow velocities range from approximately 0.03 to 0.17 ft/day in the overburden aquifer and from approximately 0.02 to 0.33 ft/day in the bedrock aquifer (Table 4).

Lower groundwater velocities noted in the overburden material are due to the abundance of residual clays in this zone. Higher velocities noted in the upper fractured bedrock are attributed to preferential groundwater flow in the fractured bedrock. Groundwater flow in the Knox Dolomite Formation, underlying the Site, occurs in joints, fractures, bedding planes, and solution channels (Croft, 1963). These pathways can facilitate relatively higher groundwater flows in the upper fractured bedrock. However, the flow rates noted in the wells screened in the upper fractured bedrock (Table 4) also suggest an abundance of residual clays in the zone where the top of the carbonate bedrock is more weathered than the underlying karst features at the Site.

### **3.3 Continuous Water Level Monitoring (Hydrogeologic Monitoring)**

Georgia Power continuously monitors groundwater level fluctuations in accordance with the Plant Bowen Site Acceptability Report - Hydrogeological Assessment and Demonstration of Engineering Measures (SCS, 2004). The hydrogeologic monitoring network provides Site-wide water level data, which are evaluated for changes in subsurface hydrologic conditions. The hydrogeologic data are evaluated weekly and reported semi-annually.

#### **3.3.1 HYDROGEOLOGIC MONITORING NETWORK**

Hydrogeologic monitoring locations for Cells 1 & 2, 3 & 4, and 9 & 10 were selected following analysis of the interim data and review of historical groundwater elevations and potentiometric surface maps (Figure 2). Across the landfill cells, there are a total of 33 wells as of December 2022 currently equipped with transducers for monitoring water levels. There were previously 37 wells equipped with transducers, of which four were removed from the monitoring network on October 12, 2022, due to the landfill expansion.

For the hydrogeologic monitoring network, Georgia Power utilized In-Situ® Instruments, Inc.'s Win-Situ® reporting software, and Level Troll 500® pressure transducers. Each pressure transducer was deployed in a selected monitoring well at a fixed depth and linked to its own telemetry box with a vented transducer cable. Groundwater levels were recorded multiple times daily from each well transducer, and each transducer was programmed to record fluctuations in water levels of  $\pm 0.5$  feet occurring within four-hour recording schedules. The telemetry system relays water level data via satellite to a central data storage unit that can be accessed in real-time over the internet; whereby, the data can be checked for anomalous groundwater level fluctuations. Groundwater elevations, along with the river stage elevations and rainfall data, recorded between December 16, 2021 and December 11, 2022, are provided in two monitoring reports for the three disposal cell units in Appendix C: Memoranda on Hydrogeologic Monitoring Program.

Monitoring well GWA-36 was abandoned on March 15, 2022 and replaced with new monitoring well GWA-36A on March 18, 2022. A new transducer has not been installed in replacement well GWA-36A. During this reporting period, the data for the transducer location at GWA-36 are not continuous because this transducer was offline due to drilling activities. Data logging in wells GWA-53, GWA-53R, GWA-55,



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and GWA-55R was terminated on October 11, 2022, when the transducers were removed from these wells which were abandoned in preparation of the landfill expansion in this area.

During the first six-month period, transducers from wells GWA-3A, GWC-25R, and GWC-49R had issues with the telemetry systems and data upload. SCS staff corrected these issues for GWA-3A and GWC-49R and data logging and transmission has been reestablished since the beginning on the second hydrogeological monitoring period. The ongoing data upload issues associated with GWA-25R were resolved in early November and groundwater level data is again being recorded at this location.

The United States Geological Survey (USGS) river gauge (#02394670) at Cartersville, Georgia was used to monitor the surface water elevations in the Etowah River. Rainfall data are also obtained from the USGS station #02394670 on the Etowah River at Georgia Route 61 and from an on-site rain gauge.

### **3.3.2 HYDROGEOLOGIC MONITORING RESULTS**

Over the 2022 annual monitoring period from December 16, 2021 through December 11, 2022, the hydrogeologic monitoring network pressure transducers were operational and collected continuous groundwater elevation data, with the exceptions described in Appendix C and above. Table 1 in the hydrogeologic monitoring memoranda (Appendix C) lists identified data anomalies, their causes, and major maintenance efforts during the monitoring period. Observed disruptions in the transducer water levels were found to be directly attributed to: (a) drawdown during sampling events, water level gauging, and well development, (b) maintenance of wells, transducers, or telemetry units, or (c) significant rainfall events (greater than 1.5 inches of rain). Hydrogeologic monitoring data for calendar year 2022 did not show water level fluctuations or sudden decreases in groundwater elevation data attributed to subsurface changes that might be indicative of land subsidence or sinkhole formation.

## **3.4 Groundwater Sampling**

For the 2022 annual monitoring period, groundwater samples were collected during two detection monitoring events in January-February 2022 and August 2022 and verification events in April, October, and November 2022. Sampling procedures were conducted in accordance with US EPA Region 4 Laboratory Services and Applied Science Division operating procedures (US EPA 2013, 2017). Monitoring wells were purged and sampled using low-flow sampling procedures. Dedicated or non-dedicated low-flow pneumatic bladder pumps were used to purge and sample the wells. A SmartTroll® or AquaTroll® (In-Situ® field instrument) was used to monitor and record field water quality parameters (pH, specific conductance, DO, temperature, and ORP) and a Hach 2100Q was used to measure turbidity during well purging to verify stabilization prior to sampling.

Groundwater samples were collected when the following stabilization criteria were met for three consecutive readings:

- pH  $\pm$  0.1 Standard Units
- Specific conductance  $\pm$  5%



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- $\pm 10\%$  for DO where DO > 0.5 milligrams per liter (mg/L). No criterion applies if DO < 0.5 mg/L.
- Turbidity measurements less than five Nephelometric Turbidity Units (NTUs), or between five and ten NTUs after three hours of purging.
- Temperature – Record only, not used for stabilization criteria.
- ORP – Record only, not used for stabilization criteria.

Once stabilization was achieved, samples were collected into appropriately preserved laboratory-supplied sample containers. Sample bottles were placed in ice-packed coolers and submitted to Pace® Analytical Services (Pace) in Peachtree Corners (Atlanta), Georgia following standard chain-of-custody protocol. Stabilization logs and Equipment Calibration forms are included in Appendix D.

### **3.5 Laboratory Analyses**

Laboratory analyses were performed by Pace, of Peachtree Corners (Atlanta), Georgia. Pace is accredited by National Environmental Laboratory Accreditation Program (NELAP) and maintains a NELAP certification for the constituents analyzed. In addition, Pace is certified to perform analysis by the State of Georgia. Groundwater data laboratory reports and chain-of-custody records for the monitoring events are presented in Appendix D.

The groundwater analytical results from the January-February 2022 and August 2022 detection events and the April, October, and November 2022 verification events are summarized in Tables 5 and 6. The Pace laboratory reports associated with these results are provided in Appendix D. The pH field measurements recorded during the detection monitoring and verification sampling events are also provided in Tables 5 and 6.

### **3.6 Quality Assurance & Quality Control**

During each sampling event, quality assurance/quality control (QA/QC) samples were collected. Equipment blanks (where non-dedicated sampling equipment is used) were collected at a rate of one QA/QC sample per ten groundwater samples. Blind field duplicate samples were collected by filling additional containers at the same location during the sampling event at a rate of one QA/QC sample per ten groundwater samples. Field blanks were also collected to evaluate ambient conditions at the sampling locations at a rate of one QA/QC sample per ten groundwater samples.

QA/QC of the groundwater data were assessed by performing a data quality evaluation of the reported laboratory results. A data quality evaluation was conducted on the data using laboratory precision and accuracy, and analytical method requirements (US EPA, 2002). The data quality evaluations are included in Appendix D.

The analytical results provided in Table 5 provide concentrations from the groundwater sampling events as reported by the laboratory. When values are followed by a "J" flag, this indicates that the value is an estimated analyte concentration detected between the method detection limit and the laboratory reporting





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limit. 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. Radium values followed by a “U” flag indicate that the constituent was not detected above the analytical minimum detectable concentration. The data are considered usable for meeting project objectives, and the results are considered valid.



## **4 Statistical Analysis**

This section presents a summary of the statistical approach applied to assess the 2022 annual groundwater data for potential SSIs of permit stipulated constituents reported in downgradient compliance wells relative to the available historical dataset. The statistical analyses used at the Site for Appendix I D&O and CCR Rule Appendix III constituents were conducted pursuant to 40 CFR § 257.93 and Rule 391-3-4-.14 in accordance with the recommended statistical methodology provided in 2017 by MacStat Consulting, Ltd. and based on methodology presented in Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance, March 2009, EPA 530/R-09-007 (US EPA, 2009).

On August 12 2019, Georgia Power submitted a minor permit modification to GA EPD to allow for the inclusion of intrawell methods for Appendix I D&O constituents. This approach was approved by GA EPD in a letter dated August 20, 2019. On February 26, 2021, Georgia Power submitted a minor modification to implement a two-step statistical approach for the detection monitoring program to address initial SSIs over background for constituents currently analyzed using an intrawell statistical approach. This approach was approved by GA EPD in a letter dated April 19, 2021. The two-step analysis is similar in concept to the procedure used in compliance monitoring programs where an interwell statistical limit is used to determine “background” (Unified Guidance, Chapter 7, Section 7.5).

On February 25, 2022, Georgia Power updated the Statistical Analysis Method Certification (certified by a registered Professional Engineer) to combine Cells 1& 2 and Cells 9 &10 overburden and bedrock wells because both units comprise the uppermost aquifer for groundwater monitoring purposes.

### **4.1 Statistical Methods**

Descriptions of the statistical analyses of groundwater quality data obtained in the Groundwater Stats Consulting, LLC (GSC) Statistical Analysis Reports are provided in Appendix E. Table 8 provides a summary of the statistical methodology used at Cells 1 & 2, 3 & 4, and 9 & 10 for the January-February and August 2022 events. Sanitas™ groundwater statistical software was used to perform the statistical analyses. Sanitas™ is a commercially available decision support software package that incorporates the statistical tests required of Subtitle C and D facilities by US EPA regulations and guidance as recommended in the Unified Guidance (US EPA, 2009) document. Detailed statistical methods used for Appendix I D&O and Appendix III constituents are discussed in statistical analysis packages provided in Appendix E and summarized in Section 4.1.1.

#### **4.1.1 APPENDIX I AND APPENDIX III STATISTICAL METHOD**

Intrawell and interwell methods were used to analyze the January-February 2022 and August 2022 detection groundwater monitoring event results, as summarized in Table 7. Eligibility for intrawell methods is discussed in detail in the Statistical Analysis Reports (Appendix E). In instances where a potential SSI was identified by intrawell statistical methods, interwell statistical methods were used as a second step to determine if the initial exceedance was below a sitewide background limit. If the concentrations exceeded both the intrawell and interwell prediction limits, then an additional verification sampling (i.e., one of two



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resampling) was collected to verify the potential SSI. When a re-sample result did not exceed the intrawell prediction limit, then the result was not declared an SSI. If the resample exceeded the prediction limit or a resample was not collected, then the SSI was verified and declared. In instances where a potential SSI was identified by interwell statistical methods, a re-sample was collected to verify the initial result. When a re-sample result did not exceed the prediction limit, then the result was not declared an SSI. If the resample exceeded the prediction limit or a resample was not collected, then the SSI was verified and declared.

Background data were tested using the Sen’s Slope/Mann Kendall or linear regression trend test to confirm suspected increasing or decreasing trends (Appendix E). The distribution of the data determined which trend test was used.

**4.2 Statistical Analyses Results**

Statistical analysis of the January-February 2022 and August 2022 detection monitoring event Appendix III and Appendix I D&O constituent data is provided in Appendix E. The January-February 2022 and August 2022, along with necessary verification groundwater data were statistically evaluated by GSC.

Using the intrawell and interwell and one of two resampling approach described in Section 4.1 for the detection monitoring data and associated verification data, verified prediction limit exceedances from the January-February and August 2022 events for Appendix III CCR and Appendix I D&O constituents are presented in Tables 8 through 10 below. No Appendix I D&O constituents exceedances were identified in the August 2022 data.

**TABLE 8  
 DOWNGRADIENT PREDICTION LIMIT EXCEEDANCE SUMMARY  
 APPENDIX III CCR Constituents  
 January-February 2022  
 Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10  
 Bartow County, Georgia**

| <b>Appendix III Constituents</b>      | <b>Downgradient Wells with Prediction Limit Exceedances</b> |
|---------------------------------------|---|
| <b>Cells 1 &amp; 2 and 9 &amp; 10</b> |   |
| Chloride                              | GWC-48*   |
| pH (lower limit)                      | GWC-48**  |
| <b>Cells 3 &amp; 4</b>                |   |
| Calcium                               | GWC-16R**, GWC-17R**, GWC-21R**, and GWC-23R**              |

\*Prediction limit exceedance based on April 2022 resampling event results

\*\* ASD submitted refer to Section 5 for more information



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**TABLE 9**  
**DOWNGRADIENT PREDICTION LIMIT EXCEEDANCE SUMMARY**  
**APPENDIX III CCR Constituents**  
**August 2022**  
**Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10**  
**Bartow County, Georgia**

| <b>Appendix III Constituents</b>      | <b>Downgradient Wells with Prediction Limit Exceedances</b> |
|---------------------------------------|---|
| <b>Cells 1 &amp; 2 and 9 &amp; 10</b> |   |
| Chloride                              | GWC-48**  |
| pH (lower limit)                      | GWC-48**  |
| <b>Cells 3 &amp; 4</b>                |   |
| Calcium                               | GWC-16R**, GWC-17R**, GWC-21R**, and GWC-23R**              |
| Sulfate                               | GWC-23R*  |
| Total Dissolved Solids                | GWC-23R*  |

\*Prediction limit exceedance based on October and November 2022 resampling event results

\*\* ASD submitted refer to Section 5 for more information

**TABLE 10**  
**DOWNGRADIENT PREDICTION LIMIT EXCEEDANCE SUMMARY**  
**APPENDIX I D&O Constituents**  
**January-February 2022**  
**Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10**  
**Bartow County, Georgia**

| <b>Appendix I D&amp;O Constituents</b> | <b>Downgradient Wells with Prediction Limit Exceedances</b> |
|--|---|
| <b>Cells 1 &amp; 2 and 9 &amp; 10</b>  |   |
| Beryllium                              | GWC-5**   |
| Mercury                                | GWC-48**  |
| <b>Cells 3 &amp; 4</b>                 |   |
| Antimony                               | GWC-16R**   |

\*Prediction limit exceedance based on April 2022 resampling event results

\*\* ASD submitted refer to Section 5 for more information



## **5 Alternate Source Demonstration**

Alternate Source Demonstrations (ASDs) were previously submitted to GA EPD under separate report covers to address SSIs of Appendix I D&O and Appendix III constituents. Based on GA EPD guidance, ASDs no longer require concurrence if an SSI has not been detected for two consecutive events, which indicates natural variability. SSIs confirmed during this reporting period are addressed by previous ASDs listed below. SSIs from the previous events not confirmed during this reporting period are noted in the table.

During this reporting period an ASD was submitted to address SSIs for beryllium, chloride, and mercury, and is noted in the table below (Appendix F). As described in the ASD, the occurrence of SSIs for beryllium and mercury are due to the lower prediction limits used in the initial statistical analysis, which was a result of lowered reporting limits in September 2020.

**TABLE 11  
 REPORTING LIMIT TRENDS FOR BERYLLIUM AND MERCURY  
 Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10  
 Bartow County, Georgia**

| <b>Constituent</b> | <b>September 2020 - August 2022<br/>Reporting Limits</b> | <b>April 2016 - March 2020<br/>Reporting Limits</b> |
|--------------------|--|---|
|                    | <b>mg/L</b>  | <b>mg/L</b>   |
| Beryllium          | 0.000046 - 0.0005  | 0.003   |
| Mercury            | 0.000078 - 0.0002  | 0.0005  |

As presented above, the reporting limits decreased for beryllium (0.003 mg/L to 0.0005 mg/L) and mercury (0.0005 mg/L to 0.0002 mg/L) beginning in September 2020. Alternate prediction limits were subsequently used in the revised statistical analysis which resulted in no exceedances for beryllium and mercury from the 2022 data set. Additionally, as described in the ASD, the occurrence of SSI for chloride is due to natural variability.



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 5 Alternate Source Demonstration**

| <b>Alternate Source Demonstration</b>  | <b>Constituent</b> | <b>Well</b>                                 | <b>Status of Approval by GA EPD</b> |
|--|--------------------|---|-------------------------------------|
| Amec Foster Wheeler Environment & Infrastructure, Inc., Alternate Source Demonstration Plant Bowen Cells 3 & 4 Solid Waste Disposal Facility Permit No. 008-018D (LI), August 30, 2017                       | Antimony           | GWC-16R                                     | Submitted                           |
| Wood Environment & Infrastructure Solutions, Inc., Alternate Source Demonstration Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10 Solid Waste Disposal Facility Permit No. 008-018D (LI), April 19, 2018 | pH                 | GWC-48,                                     | Approved 1/30/2019                  |
|  | Calcium            | GWC-16R,<br>GWC-17R,<br>GWC-21R,<br>GWC-23R |                                     |
| Stantec, Alternate Source Demonstration for Beryllium, Chloride, and Mercury, January-February 2022 Semi-Annual Event  | Beryllium          | GWC-48 <sup>(1)</sup>                       | Submitted                           |
|  | Chloride           | GWC-48                                      |                                     |
|  | Mercury            | GWC-5 <sup>(1)</sup>                        |                                     |

Note:

<sup>1</sup> SSI from the previous event not confirmed during most recent sampling event (August 2022)



## **6 Monitoring Program Status**

Groundwater monitoring for the Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10 is in the detection monitoring phase. In January-February 2022, the first semi-annual detection monitoring event of 2022 was conducted, and exceedances of statistical prediction limits were identified. Statistical exceedances of one Appendix III (chloride in GWC-48) and two Appendix I D&O constituents (beryllium in GWC-5, and mercury in GWC-48) were verified with resampling in April 2022. Those statistical exceedances are addressed in an ASD submitted on November 29, 2022 (Appendix F). The August 2022 semi-annual detection monitoring event identified two statistical prediction limit exceedances not previously addressed in an ASD. Statistical exceedances of two Appendix III constituents (sulfate and TDS in GWC-23R) were verified with resampling in November 2022. An ASD will be submitted by April 28, 2023, to address the verified SSIs not previously addressed. Groundwater monitoring at Plant Bowen Landfill Cells 1 & 2, 3 & 4, 9 & 10 will continue in the detection monitoring phase.



## **7 Conclusions & Future Actions**

This 2022 Annual Groundwater Monitoring & Corrective Action Report for Georgia Power's Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10 was prepared to fulfill the requirements of both applicable federal and state CCR Rules and GA EPD Solid Waste Management Rules (40 CFR § 257.90(e), 391-3-4-.10, and 391-3-4-.14).

In January-February 2022, verified statistical exceedances of one Appendix III and two Appendix I D&O constituents that had not been addressed by a previous ASD were identified. The remaining statistical exceedances were either addressed by resampling results not verifying the initial exceedance or in previous ASDs. These statistical exceedances identified during the 2022 reporting period are not thought to be the result of a release from the Landfill Cells 1 & 2, 3 & 4, and 9 & 10 and are attributed to natural variability of groundwater chemistry underlying the Site. Those statistical exceedances are addressed in an ASD submitted on November 29, 2022 (Appendix F). The August 2022 verified statistical exceedances of two Appendix III constituents that have not been addressed by a previous ASD. An ASD will be submitted by April 28, 2023, to address the verified SSIs not previously addressed. Groundwater monitoring at Plant Bowen Landfill Cells 1 & 2, 3 & 4, 9 & 10 will continue in the detection monitoring phase. The next 2023 semi-annual groundwater monitoring event is scheduled for January-February 2023.





## **8 References**

- Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec), 2017. Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10 Alternate Source Demonstration Cells 3 & 4 (Antimony in wells GWC-16R and GWC-21R, and Nickel in wells GWC-16R), August 30, 2017.
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- U. S. Environmental Protection Agency (US EPA), 1989. USEPA 530/SW-89-031 Interim Final RCRA Investigation (RFI) Guidance, Volume I and II.
- US EPA, 2002. Data Validation Standard Operating Procedures and Quality Assurance Manual., November.
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- US EPA, 2013. Groundwater Sampling, SESDPROC-301-R3.
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- Wood Environment & Infrastructure Solutions, Inc., 2018. Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10 Alternate Source Demonstration Cells 1 & 2, 3 & 4, and 9 & 10 (Barium, Zinc, pH, Calcium, Chloride, Sulfate, and TDS various wells), April 19, 2018.
- Wood Environment & Infrastructure Solutions, Inc., 2020. Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10 Alternate Source Demonstration for March 2020 Semi-Annual Event Cells 1 & 2, 3 & 4, and 9 & 10 (Barium, Zinc, pH, Calcium, Chloride, Sulfate, and TDS various wells), August 31, 2020.
- Wood Environment & Infrastructure Solutions, Inc., 2021. Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10 Alternate Source Demonstration for Barium, Chromium, and Sulfate February-March 2021 Semi-



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8 References**

Annual Event Cells 1 & 2, 3 & 4, and 9 & 10 (Chromium in GWC-46R, Barium and Sulfate in GWC-48), November 19, 2021.



# **TABLES**



**TABLE 1**  
**Summary of Monitoring Well Construction**

**Georgia Power Company - Plant Bowen**  
**Landfill Cells 1&2, 3&4, and 9&10**  
**Bartow County, Georgia**

| Well Name                             | Installation Date | Northing (ft NAD83) <sup>(1)</sup> | Easting (ft NAD83) <sup>(1)</sup> | Ground Surface Elevation (ft, NAVD88) <sup>(2)</sup> | Top of Casing Elevation (ft, NAVD88) <sup>(2)</sup> | Top of Screen Elevation (ft, NAVD88) <sup>(3)</sup> | Bottom of Screen Elevation (ft, NAVD88) <sup>(3)</sup> | Screen Length (ft) | Well Depth (ft below ground surface) | Lithology Screened | Hydraulic Location and Purpose |
|---------------------------------------|-------------------|------------------------------------|-----------------------------------|--|---|---|--|--------------------|--------------------------------------|--------------------|--------------------------------|
| <b>Cells 1 &amp; 2 and 9 &amp; 10</b> |                   |                                    |                                   |  |   |   |  |                    |                                      |                    |                                |
| GWA-1                                 | 4/12/2007         | 1502842.29                         | 2071724.15                        | 738.86   | 741.76  | 601.13  | 591.13   | 10                 | 147.90                               | Overburden/Bedrock | Upgradient <sup>(4)</sup>      |
| GWA-2                                 | 4/4/2007          | 1502640.55                         | 2071935.13                        | 731.48   | 733.89  | 590.00  | 580.00   | 10                 | 151.92                               | Overburden/Bedrock | Upgradient <sup>(4)</sup>      |
| GWA-2R                                | 8/3/2007          | 1502615.38                         | 2071965.52                        | 732.66   | 734.83  | 637.53  | 627.53   | 10                 | 106.03                               | Bedrock            | Upgradient <sup>(4)</sup>      |
| GWA-3                                 | 4/11/2007         | 1502386.74                         | 2072067.26                        | 729.90   | 732.47  | 644.90  | 634.90   | 10                 | 95.40                                | Overburden         | Upgradient <sup>(4)</sup>      |
| GWA-3A                                | 3/16/2021         | 1502374.48                         | 2072061.21                        | 728.68   | 731.68  | 601.88  | 591.88   | 10                 | 137.27                               | Overburden         | Upgradient <sup>(4)</sup>      |
| GWA-4 <sup>(7)</sup>                  | 3/14/2007         | 1502241.02                         | 2072318.24                        | 740.40   | 743.06  | 680.91  | 670.91   | 10                 | 69.64                                | Overburden         | Upgradient <sup>(5)</sup>      |
| GWA-4R                                | 3/13/2007         | 1502246.31                         | 2072317.15                        | 740.65   | 743.23  | 657.60  | 647.60   | 10                 | 93.17                                | Bedrock            | Upgradient <sup>(5)</sup>      |
| GWA-4RZ                               | 10/28/2016        | 1502238.85                         | 2072329.55                        | 740.04   | 742.84  | 633.04  | 623.04   | 10                 | 117.00                               | Bedrock            | Upgradient <sup>(4)</sup>      |
| GWA-39Z                               | 3/1/2016          | 1502655.66                         | 2071120.65                        | 731.80   | 735.15  | 628.10  | 618.10   | 10                 | 114.00                               | Overburden         | Upgradient <sup>(4)</sup>      |
| GWA-39RZ                              | 11/4/2016         | 1502618.73                         | 2071164.20                        | 729.57   | 732.62  | 602.57  | 592.57   | 10                 | 137.00                               | Bedrock            | Upgradient <sup>(4)</sup>      |
| GWA-40                                | 6/7/2011          | 1503195.09                         | 2071299.94                        | 728.93   | 731.77  | 589.03  | 579.03   | 10                 | 150.20                               | Overburden         | Upgradient <sup>(4)</sup>      |
| GWA-41                                | 6/6/2011          | 1503519.02                         | 2071046.18                        | 738.91   | 742.35  | 646.41  | 636.41   | 10                 | 102.54                               | Overburden         | Upgradient <sup>(4)</sup>      |
| GWA-41R                               | 6/1/2011          | 1503527.39                         | 2071050.84                        | 737.95   | 743.08  | 635.19  | 625.19   | 10                 | 113.06                               | Bedrock            | Upgradient <sup>(4)</sup>      |
| GWA-42                                | 6/1/2011          | 1503823.34                         | 2071049.95                        | 734.45   | 738.05  | 662.69  | 652.69   | 10                 | 82.06                                | Overburden         | Upgradient <sup>(4)</sup>      |
| GWA-43                                | 5/25/2011         | 1504129.20                         | 2070982.44                        | 707.61   | 710.94  | 627.71  | 617.71   | 10                 | 90.20                                | Overburden         | Upgradient <sup>(4)</sup>      |
| GWA-43R                               | 5/24/2011         | 1504117.39                         | 2070973.14                        | 707.80   | 711.19  | 594.10  | 584.10   | 10                 | 124.20                               | Bedrock            | Upgradient <sup>(4)</sup>      |
| GWA-50                                | 6/4/2008          | 1502154.80                         | 2072442.13                        | 728.74   | 731.21  | 644.71  | 634.71   | 10                 | 94.33                                | Overburden         | Upgradient <sup>(4)</sup>      |
| GWA-50R                               | 6/10/2008         | 1502150.85                         | 2072448.35                        | 727.87   | 730.37  | 599.69  | 589.69   | 10                 | 138.48                               | Bedrock            | Upgradient <sup>(4)</sup>      |
| GWC-5                                 | 4/18/2006         | 1502341.56                         | 2072677.44                        | 735.11   | 737.56  | 634.00  | 624.00   | 10                 | 111.29                               | Overburden         | Downgradient <sup>(4)</sup>    |
| GWC-6                                 | 5/1/2007          | 1502520.08                         | 2072962.89                        | 725.97   | 728.64  | 628.35  | 618.35   | 10                 | 107.53                               | Overburden         | Downgradient <sup>(4)</sup>    |
| GWC-6RZ                               | 4/28/2015         | 1502502.00                         | 2072900.50                        | 728.66   | 731.91  | 633.66  | 623.66   | 10                 | 105.30                               | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-7Z                                | 5/19/2016         | 1502640.13                         | 2073193.22                        | 709.70   | 713.04  | 606.00  | 596.00   | 10                 | 114.00                               | Overburden         | Downgradient <sup>(4)</sup>    |
| GWC-8Z                                | 4/28/2015         | 1502827.67                         | 2073526.15                        | 698.68   | 702.09  | 635.68  | 625.68   | 10                 | 73.30                                | Overburden         | Downgradient <sup>(4)</sup>    |
| GWC-8RR                               | 6/27/2011         | 1502857.71                         | 2073501.74                        | 698.96   | 701.92  | 601.96  | 591.96   | 10                 | 107.30                               | Bedrock            | Downgradient <sup>(4)</sup>    |

**TABLE 1**  
**Summary of Monitoring Well Construction**

**Georgia Power Company - Plant Bowen**  
**Landfill Cells 1&2, 3&4, and 9&10**  
**Bartow County, Georgia**

| Well Name                             | Installation Date | Northing (ft NAD83) <sup>(1)</sup> | Easting (ft NAD83) <sup>(1)</sup> | Ground Surface Elevation (ft, NAVD88) <sup>(2)</sup> | Top of Casing Elevation (ft, NAVD88) <sup>(2)</sup> | Top of Screen Elevation (ft, NAVD88) <sup>(3)</sup> | Bottom of Screen Elevation (ft, NAVD88) <sup>(3)</sup> | Screen Length (ft) | Well Depth (ft below ground surface) | Lithology Screened | Hydraulic Location and Purpose |
|---------------------------------------|-------------------|------------------------------------|-----------------------------------|--|---|---|--|--------------------|--------------------------------------|--------------------|--------------------------------|
| <b>Cells 1 &amp; 2 and 9 &amp; 10</b> |                   |                                    |                                   |  |   |   |  |                    |                                      |                    |                                |
| GWC-10                                | 9/6/2006          | 1503162.70                         | 2074019.96                        | 684.89   | 687.87  | 626.70  | 616.70   | 10                 | 68.33                                | Overburden         | Downgradient <sup>(4)</sup>    |
| GWC-10R                               | 5/15/2007         | 1503154.01                         | 2074020.44                        | 685.33   | 687.95  | 599.83  | 589.83   | 10                 | 95.18                                | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-11                                | 6/1/2007          | 1503390.40                         | 2073829.95                        | 675.04   | 677.83  | 643.28  | 633.28   | 10                 | 41.71                                | Overburden         | Downgradient <sup>(4)</sup>    |
| GWC-11R                               | 5/31/2007         | 1503395.25                         | 2073828.03                        | 675.98   | 677.73  | 608.08  | 598.08   | 10                 | 78.85                                | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-12                                | 6/4/2007          | 1503662.54                         | 2073693.63                        | 674.66   | 677.25  | 636.56  | 626.56   | 10                 | 48.41                                | Overburden         | Downgradient <sup>(4)</sup>    |
| GWC-13                                | 5/31/2007         | 1503898.17                         | 2073495.16                        | 684.19   | 686.76  | 613.75  | 603.75   | 10                 | 80.43                                | Overburden         | Downgradient <sup>(4)</sup>    |
| GWC-13R                               | 6/5/2007          | 1503908.53                         | 2073501.95                        | 683.17   | 685.97  | 594.17  | 584.17   | 10                 | 99.10                                | Bedrock            | Downgradient <sup>(5)</sup>    |
| GWC-13RZ                              | 11/2/2016         | 1503926.70                         | 2073517.44                        | 681.71   | 684.60  | 589.71  | 579.71   | 10                 | 102.00                               | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-14                                | 8/22/2007         | 1504059.92                         | 2073205.96                        | 684.04   | 686.81  | 616.30  | 606.30   | 10                 | 78.01                                | Overburden         | Downgradient <sup>(5)</sup>    |
| GWC-14Z                               | 11/3/2016         | 1504060.77                         | 2073193.66                        | 684.34   | 687.28  | 621.34  | 611.34   | 10                 | 73.00                                | Overburden         | Downgradient <sup>(4)</sup>    |
| GWC-15                                | 6/1/2007          | 1503943.59                         | 2072927.52                        | 692.75   | 695.19  | 635.74  | 625.74   | 10                 | 67.11                                | Overburden         | Downgradient <sup>(5)</sup>    |
| GWC-15Z                               | 10/31/2016        | 1503952.26                         | 2072918.71                        | 693.28   | 695.92  | 631.28  | 621.28   | 10                 | 72.00                                | Overburden         | Downgradient <sup>(4)</sup>    |
| GWC-15R                               | 5/24/2007         | 1503936.17                         | 2072919.39                        | 693.39   | 696.13  | 611.25  | 601.25   | 10                 | 92.36                                | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-44                                | 6/9/2011          | 1504436.66                         | 2071414.30                        | 710.15   | 712.89  | 637.22  | 627.22   | 10                 | 83.23                                | Overburden         | Downgradient <sup>(4)</sup>    |
| GWC-45                                | 5/17/2007         | 1504539.38                         | 2071956.71                        | 698.41   | 701.53  | 643.98  | 633.98   | 10                 | 64.73                                | Overburden         | Downgradient <sup>(4)</sup>    |
| GWC-45R                               | 5/22/2007         | 1504538.68                         | 2071945.39                        | 699.00   | 702.02  | 583.56  | 573.56   | 10                 | 125.74                               | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-46R                               | 8/15/2014         | 1504522.23                         | 2072184.47                        | 687.94   | 690.49  | 641.84  | 631.84   | 10                 | 56.50                                | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-47                                | 4/23/2014         | 1504543.69                         | 2072481.34                        | 687.44   | 690.86  | 630.44  | 620.44   | 10                 | 67.33                                | Overburden         | Downgradient <sup>(4)</sup>    |
| GWC-47R                               | 4/24/2014         | 1504539.25                         | 2072467.10                        | 687.71   | 691.13  | 616.91  | 606.91   | 10                 | 81.20                                | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-48                                | 6/8/2011          | 1504490.63                         | 2072851.71                        | 686.20   | 688.33  | 642.70  | 632.70   | 10                 | 54.00                                | Overburden         | Downgradient <sup>(4)</sup>    |
| GWC-49Z                               | 3/1/2016          | 1504238.30                         | 2072896.49                        | 706.12   | 709.11  | 626.92  | 616.92   | 10                 | 89.50                                | Overburden         | Downgradient <sup>(4)</sup>    |
| GWC-49R                               | 4/17/2014         | 1504246.02                         | 2072918.76                        | 706.24   | 709.56  | 585.54  | 575.54   | 10                 | 131.10                               | Bedrock            | Downgradient <sup>(4)</sup>    |

**TABLE 1  
Summary of Monitoring Well Construction**

**Georgia Power Company - Plant Bowen  
Landfill Cells 1&2, 3&4, and 9&10  
Bartow County, Georgia**

| Well Name               | Installation Date | Northing (ft NAD83) <sup>(1)</sup> | Easting (ft NAD83) <sup>(1)</sup> | Ground Surface Elevation (ft, NAVD88) <sup>(2)</sup> | Top of Casing Elevation (ft, NAVD88) <sup>(2)</sup> | Top of Screen Elevation (ft, NAVD88) <sup>(3)</sup> | Bottom of Screen Elevation (ft, NAVD88) <sup>(3)</sup> | Screen Length (ft) | Well Depth (ft below ground surface) | Lithology Screened | Hydraulic Location and Purpose |
|-------------------------|-------------------|------------------------------------|-----------------------------------|--|---|---|--|--------------------|--------------------------------------|--------------------|--------------------------------|
| <b>Cells 3 &amp; 4</b>  |                   |                                    |                                   |  |   |   |  |                    |                                      |                    |                                |
| GWA-36 <sup>(8)</sup>   | 6/16/2011         | 1505057.77                         | 2073384.03                        | 681.89   | 684.50  | 616.19  | 606.19   | 10                 | 76.00                                | Overburden         | Upgradient <sup>(4)</sup>      |
| GWA-36A <sup>(8)</sup>  | 3/18/2022         | 1505026.95                         | 2073357.46                        | 680.63   | 683.75  | 588.80  | 578.80   | 10                 | 102.16                               | Overburden         | Upgradient <sup>(4)</sup>      |
| GWA-36R                 | 6/15/2011         | 1505051.72                         | 2073384.47                        | 681.41   | 684.16  | 605.71  | 595.71   | 10                 | 86.00                                | Bedrock            | Upgradient <sup>(4)</sup>      |
| GWA-36RA                | 7/2/2021          | 1505060.13                         | 2073365.45                        | 682.26   | 684.50  | 583.26  | 573.26   | 10                 | 109.40                               | Bedrock            | Upgradient <sup>(4)</sup>      |
| GWA-37                  | 9/11/2013         | 1505345.45                         | 2073069.32                        | 700.44   | 703.72  | 606.24  | 596.24   | 10                 | 104.50                               | Overburden         | Upgradient <sup>(4)</sup>      |
| GWA-38                  | 6/13/2011         | 1505501.33                         | 2072831.77                        | 713.32   | 716.24  | 658.62  | 648.62   | 10                 | 65.00                                | Overburden         | Upgradient <sup>(4)</sup>      |
| GWA-51RZ <sup>(9)</sup> | 3/1/2016          | 1505310.36                         | 2073781.34                        | 705.81   | 708.58  | 625.11  | 615.11   | 10                 | 91.00                                | Bedrock            | Upgradient <sup>(4)</sup>      |
| GWA-52 <sup>(9)</sup>   | 4/21/2015         | 1505459.85                         | 2073876.00                        | 706.56   | 709.77  | 635.96  | 625.96   | 10                 | 80.96                                | Overburden         | Upgradient <sup>(4)</sup>      |
| GWA-53 <sup>(9)</sup>   | 4/10/2015         | 1505695.52                         | 2074038.90                        | 707.61   | 710.99  | 600.11  | 590.06   | 10                 | 117.85                               | Overburden         | Upgradient <sup>(4)</sup>      |
| GWA-53R <sup>(9)</sup>  | 4/10/2015         | 1505689.06                         | 2074032.00                        | 708.38   | 711.58  | 553.38  | 543.24   | 10                 | 165.44                               | Bedrock            | Upgradient <sup>(4)</sup>      |
| GWA-54 <sup>(9)</sup>   | 4/14/2015         | 1505853.39                         | 2074286.28                        | 701.23   | 704.23  | 638.23  | 628.36   | 10                 | 73.17                                | Overburden         | Upgradient <sup>(4)</sup>      |
| GWA-55 <sup>(9)</sup>   | 4/15/2015         | 1506034.69                         | 2074507.04                        | 693.43   | 696.72  | 641.33  | 631.31   | 10                 | 62.42                                | Overburden         | Upgradient <sup>(4)</sup>      |
| GWA-55R <sup>(9)</sup>  | 4/15/2015         | 1506041.22                         | 2074517.62                        | 693.28   | 696.53  | 600.78  | 590.75   | 10                 | 102.83                               | Bedrock            | Upgradient <sup>(4)</sup>      |
| GWA-56 <sup>(9)</sup>   | 4/16/2015         | 1506128.38                         | 2074633.08                        | 689.14   | 692.17  | 616.48  | 606.48   | 10                 | 82.96                                | Overburden         | Upgradient <sup>(4)</sup>      |
| GWC-16R                 | 12/13/2011        | 1505877.86                         | 2072607.38                        | 727.77   | 730.59  | 643.07  | 633.07   | 10                 | 95.00                                | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-17R                 | 12/8/2011         | 1506069.29                         | 2072829.29                        | 730.02   | 733.37  | 650.82  | 640.82   | 10                 | 89.50                                | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-18                  | 6/6/2011          | 1506306.70                         | 2072929.28                        | 718.92   | 721.88  | 652.22  | 642.22   | 10                 | 77.00                                | Overburden         | Downgradient <sup>(4)</sup>    |
| GWC-18R                 | 6/2/2011          | 1506301.39                         | 2072929.47                        | 718.97   | 721.76  | 591.77  | 581.77   | 10                 | 137.50                               | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-19R                 | 6/7/2011          | 1506395.96                         | 2073158.36                        | 723.13   | 726.31  | 589.43  | 579.43   | 10                 | 144.00                               | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-20R                 | 6/9/2011          | 1506602.14                         | 2073486.53                        | 717.63   | 720.59  | 643.63  | 633.63   | 10                 | 84.30                                | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-21R                 | 12/16/2011        | 1506695.89                         | 2073784.42                        | 720.45   | 723.07  | 641.25  | 631.25   | 10                 | 89.50                                | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-22R                 | 6/14/2011         | 1506717.93                         | 2074105.65                        | 712.54   | 715.41  | 605.84  | 595.84   | 10                 | 117.00                               | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-23R                 | 6/28/2011         | 1506701.61                         | 2074446.53                        | 688.02   | 690.94  | 651.32  | 641.32   | 10                 | 47.00                                | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-24R                 | 6/21/2011         | 1506694.13                         | 2074806.11                        | 673.76   | 676.57  | 647.06  | 637.06   | 10                 | 37.00                                | Bedrock            | Downgradient <sup>(4)</sup>    |
| GWC-25R                 | 6/21/2011         | 1506494.89                         | 2075088.90                        | 673.59   | 676.42  | 586.89  | 576.89   | 10                 | 97.00                                | Bedrock            | Downgradient <sup>(4)</sup>    |

Notes:

- (1) NAD83 indicates elevation in feet (ft) referenced to the North American Datum of 1983. Coordinates are from March 2021 re-survey of the Landfill wells by Donaldson & Garret Associates, Inc.
- (2) NAVD88 indicates elevation in ft referenced to the North American Vertical Datum 1988. Elevations are from March 2021 re-survey of the Landfill wells by Donaldson & Garret Associates, Inc.
- (3) Screen elevations calculated using depth below ground surface and ground surface elevations from the March 2021 re-survey.
- (4) Detection well measured for water levels and sampled for groundwater quality.
- (5) Piezometer measured for water level only.
- (6) Total well depth provided on well construction logs.
- (7) GWA-4 was abandoned on 3/14/2022 without replacement due to lack of continuous and persistent groundwater present in the overburden.
- (8) GWA-36 was abandoned on 3/16/2022 and was replaced with new well GWA-36A, completed on 3/18/2022 with installation of protective cover and pad.
- (9) Monitoring well was abandoned in November-December 2022.
- (10) GWA-53R and GWC-18 screened interval lengths updated January 2023

**TABLE 2**  
**Groundwater Sampling Event Summary**

**Georgia Power Company - Plant Bowen**  
**Landfill Cells 1&2, 3&4, and 9&10**  
**Bartow County, Georgia**

| Well ID   | Hydraulic Location | Summary of Sampling Events     |                |                            |  | Status of Monitoring Well |
|---|--------------------|--------------------------------|----------------|----------------------------|--|---------------------------|
|   |                    | January 25 - February 17, 2022 | April 28, 2022 | August 5 - August 19, 2022 | October 12, October 21, November 3, 2022 |                           |
| Purpose of Sampling Event   |                    | Detection                      | Verification   | Detection                  | Verification                             |                           |
| <b>LANDFILL CELLS 1 &amp; 2 and 9 &amp; 10 MONITORING WELL SYSTEM</b> |                    |                                |                |                            |  |                           |
| GWA-1   | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-2   | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-2R  | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-3A  | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-4RZ   | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-39Z   | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-39RZ  | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-40  | Upgradient         | X                              |                | X                          | X  | Detection Monitoring      |
| GWA-41  | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-41R   | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-42  | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-43  | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-43R   | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-50  | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-50R   | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWC-5   | Downgradient       | X                              | X              | X                          |  | Detection Monitoring      |
| GWC-6   | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-6RZ   | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-7Z  | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-8Z  | Downgradient       | X                              | X              | X                          |  | Detection Monitoring      |
| GWC-8RR   | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-9   | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-10  | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-10R   | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-11  | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-11R   | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-12  | Downgradient       | X                              | X              | X                          |  | Detection Monitoring      |
| GWC-13  | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-13RZ  | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-14Z   | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-15Z   | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-15R   | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-44  | Downgradient       | X                              |                | X                          | X  | Detection Monitoring      |
| GWC-45  | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-45R   | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-46R   | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-47  | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-47R   | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-48  | Downgradient       | X                              | X              | X                          | X  | Detection Monitoring      |
| GWC-49Z   | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-49R   | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |

**TABLE 2**  
**Groundwater Sampling Event Summary**

**Georgia Power Company - Plant Bowen**  
**Landfill Cells 1&2, 3&4, and 9&10**  
**Bartow County, Georgia**

| Well ID  | Hydraulic Location | Summary of Sampling Events     |                |                            |  | Status of Monitoring Well |
|--|--------------------|--------------------------------|----------------|----------------------------|--|---------------------------|
|  |                    | January 25 - February 17, 2022 | April 28, 2022 | August 5 - August 19, 2022 | October 12, October 21, November 3, 2022 |                           |
| Purpose of Sampling Event                              |                    | Detection                      | Verification   | Detection                  | Verification                             |                           |
| <b>LANDFILL CELLS 3 &amp; 4 MONITORING WELL SYSTEM</b> |                    |                                |                |                            |  |                           |
| GWA-36A  | Upgradient         | X <sup>1</sup>                 |                | X                          |  | Detection Monitoring      |
| GWA-36RA   | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-37   | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-38   | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-51RZ   | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-52   | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-53   | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-53R  | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-54   | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-55   | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-55R  | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWA-56   | Upgradient         | X                              |                | X                          |  | Detection Monitoring      |
| GWC-16R  | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-17R  | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-18   | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-18R  | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-19R  | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-20R  | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-21R  | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-22R  | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-23R  | Downgradient       | X                              |                | X                          | X  | Detection Monitoring      |
| GWC-24R  | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |
| GWC-25R  | Downgradient       | X                              |                | X                          |  | Detection Monitoring      |

Notes:

X - indicates well sampled during event

X<sup>1</sup> - GWA-36A was initially sampled on April 6, 2022



**TABLE 3  
SUMMARY OF GROUNDWATER ELEVATIONS**

**Georgia Power Company - Plant Bowen  
Landfill Cells 1&2, 3&4, and 9&10  
Bartow County, Georgia**

| Well ID  | Top of Casing Elevation<br>(feet NAVD88) | Depth to Water<br>(feet, below TOC)<br>1/24/2022 | Groundwater Elevation (feet<br>NAVD88)<br>1/24/2022 | Depth to Water<br>(feet, below TOC)<br>8/3/2022 | Groundwater Elevation (feet<br>NAVD88)<br>8/3/2022 |
|--|--|--|---|---|--|
| <b>Landfill Cells 1 &amp; 2 and 9 &amp; 10</b> |  |  |   |   |  |
| GWA-1  | 741.76                                   | 83.62  | 658.14  | 84.82   | 656.94   |
| GWA-2  | 733.89                                   | 78.92  | 654.97  | 80.79   | 653.10   |
| GWA-2R   | 734.83                                   | 79.09  | 655.74  | 81.25   | 653.58   |
| GWA-3A   | 731.68                                   | 76.11  | 655.57  | 78.27   | 653.41   |
| GWA-4  | 743.06                                   | Dry  |   | Well Abandoned                                  |  |
| GWA-4R   | 743.23                                   | 85.38  | 657.85  | 86.76   | 656.47   |
| GWA-4RZ  | 742.84                                   | 85.66  | 657.18  | 87.17   | 655.67   |
| GWA-39Z  | 735.15                                   | 65.80  | 669.35  | 67.58   | 667.57   |
| GWA-39RZ                                       | 732.62                                   | 64.08  | 668.54  | 65.90   | 666.72   |
| GWA-40   | 731.77                                   | 67.64  | 664.13  | 70.30   | 661.47   |
| GWA-41   | 742.35                                   | 77.32  | 665.03  | 80.09   | 662.26   |
| GWA-41R  | 743.08                                   | 78.04  | 665.04  | 80.79   | 662.29   |
| GWA-42   | 738.05                                   | 75.54  | 662.51  | 81.07   | 656.98   |
| GWA-43   | 710.94                                   | 50.54  | 660.40  | 53.41   | 657.53   |
| GWA-43R  | 711.19                                   | 50.94  | 660.25  | 53.78   | 657.41   |
| GWC-44   | 712.89                                   | 50.62  | 662.27  | 52.91   | 659.98   |
| GWC-45   | 701.53                                   | 39.18  | 662.35  | 45.07   | 656.46   |
| GWC-45R  | 702.02                                   | 49.39  | 652.63  | 51.92   | 650.10   |
| GWC-46R  | 690.49                                   | 37.68  | 652.81  | 40.17   | 650.32   |
| GWC-47   | 690.86                                   | 38.40  | 652.46  | 40.95   | 649.91   |
| GWC-47R  | 691.13                                   | 38.61  | 652.52  | 41.12   | 650.01   |
| GWC-48   | 688.33                                   | 35.64  | 652.69  | 37.68   | 650.65   |
| GWC-49Z  | 709.11                                   | 53.42  | 655.69  | 55.33   | 653.78   |
| GWC-49R  | 709.56                                   | 54.14  | 655.42  | 56.04   | 653.52   |
| GWA-50   | 731.21                                   | 59.89  | 671.32  | 60.28   | 670.93   |
| GWA-50R  | 730.37                                   | 73.15  | 657.22  | 75.68   | 654.69   |
| GWC-5  | 737.56                                   | 76.85  | 660.71  | 79.08   | 658.48   |
| GWC-6  | 728.64                                   | 70.72  | 657.92  | 73.47   | 655.17   |
| GWC-6RZ  | 731.91                                   | 74.46  | 657.45  | 77.07   | 654.84   |
| GWC-7Z   | 713.04                                   | 55.46  | 657.58  | 58.11   | 654.93   |
| GWC-8Z   | 702.09                                   | 45.36  | 656.73  | 47.69   | 654.40   |
| GWC-8RR  | 701.92                                   | 45.18  | 656.74  | 47.50   | 654.42   |
| GWC-9  | 694.67                                   | 39.77  | 654.90  | 41.62   | 653.05   |
| GWC-10   | 687.87                                   | 32.92  | 654.95  | 34.80   | 653.07   |
| GWC-10R  | 687.95                                   | 32.99  | 654.96  | 34.87   | 653.08   |
| GWC-11   | 677.83                                   | 22.70  | 655.13  | 24.57   | 653.26   |
| GWC-11R  | 677.73                                   | 22.63  | 655.10  | 24.52   | 653.21   |
| GWC-12   | 677.25                                   | 21.78  | 655.47  | 23.70   | 653.55   |
| GWC-13   | 686.76                                   | 31.15  | 655.61  | 33.17   | 653.59   |
| GWC-13R  | 685.97                                   | 30.55  | 655.42  | 32.48   | 653.49   |
| GWC-13RZ                                       | 684.60                                   | 62.21  | 622.39  | 62.93   | 621.67   |
| GWC-14   | 686.81                                   | 31.12  | 655.69  | 33.01   | 653.80   |
| GWC-14Z  | 687.28                                   | 30.65  | 656.63  | 32.51   | 654.77   |
| GWC-15   | 695.19                                   | 38.70  | 656.49  | 40.75   | 654.44   |
| GWC-15R  | 696.13                                   | 39.83  | 656.30  | 41.89   | 654.24   |
| GWC-15Z  | 695.92                                   | 39.52  | 656.40  | 41.53   | 654.39   |

**TABLE 3  
SUMMARY OF GROUNDWATER ELEVATIONS**

**Georgia Power Company - Plant Bowen  
Landfill Cells 1&2, 3&4, and 9&10  
Bartow County, Georgia**

| Well ID                         | Top of Casing Elevation<br>(feet NAVD88) | Depth to Water<br>(feet, below TOC)<br>1/24/2022 | Groundwater Elevation (feet<br>NAVD88)<br>1/24/2022 | Depth to Water<br>(feet, below TOC)<br>8/3/2022 | Groundwater Elevation (feet<br>NAVD88)<br>8/3/2022 |
|---------------------------------|--|--|---|---|--|
| <b>Landfill Cells 3 &amp; 4</b> |  |  |   |   |  |
| GWA-36                          | 684.50                                   | 31.49  | 653.01  | Well Abandoned                                  |  |
| GWA-36A                         | 683.75                                   | Not Installed                                    |   | 31.48   | 652.27   |
| GWA-36RA                        | 684.50                                   | 32.20  | 652.30  | 33.14   | 651.36   |
| GWA-37                          | 703.72                                   | 49.32  | 654.40  | 50.64   | 653.08   |
| GWA-38                          | 716.24                                   | 50.53  | 665.71  | 52.22   | 664.02   |
| GWA-51RZ                        | 708.58                                   | 55.39  | 653.19  | 56.57   | 652.01   |
| GWA-52                          | 709.77                                   | 56.17  | 653.60  | 57.39   | 652.38   |
| GWA-53                          | 710.99                                   | 57.28  | 653.71  | 58.49   | 652.50   |
| GWA-53R                         | 711.58                                   | 57.92  | 653.66  | 59.16   | 652.42   |
| GWA-54                          | 704.23                                   | 50.38  | 653.85  | 51.61   | 652.62   |
| GWA-55                          | 696.72                                   | 42.93  | 653.79  | 44.09   | 652.63   |
| GWA-55R                         | 696.53                                   | 42.78  | 653.75  | 43.96   | 652.57   |
| GWA-56                          | 692.17                                   | 38.42  | 653.75  | 39.56   | 652.61   |
| GWC-16R                         | 730.59                                   | 78.81  | 651.78  | 69.62   | 660.97   |
| GWC-17R                         | 733.37                                   | 82.82  | 650.55  | 83.41   | 649.96   |
| GWC-18                          | 721.88                                   | 73.13  | 648.75  | 73.83   | 648.05   |
| GWC-18R                         | 721.76                                   | 72.69  | 649.07  | 73.68   | 648.08   |
| GWC-19R                         | 726.31                                   | 76.58  | 649.73  | 77.55   | 648.76   |
| GWC-20R                         | 720.59                                   | 70.47  | 650.12  | 71.35   | 649.24   |
| GWC-21R                         | 723.07                                   | 71.17  | 651.90  | 72.33   | 650.74   |
| GWC-22R                         | 715.41                                   | 63.26  | 652.15  | 64.43   | 650.98   |
| GWC-23R                         | 690.94                                   | 38.56  | 652.38  | 39.93   | 651.01   |
| GWC-24R                         | 676.57                                   | 24.20  | 652.37  | 25.42   | 651.15   |
| GWC-25R                         | 676.42                                   | 23.24  | 653.18  | 24.52   | 651.90   |

Notes:

TOC - top of casing

NAVD88 indicates the North American Vertical Datum 1988. Elevations from March 2021 re-survey of the Landfill wells by Donaldson & Garret Associates, Inc.

GWA-4 was abandoned on 3/14/2022 without replacement due to lack of continuous and persistent groundwater present in the overburden.

GWA-36 was abandoned on 3/16/2022 and was replaced with new well GWA-36A, completed on 3/18/2022 with installation of protective cover and pad.

TABLE 4  
GROUNDWATER FLOW VELOCITY CALCULATIONS - JANUARY AND AUGUST 2022

Georgia Power Company - Plant Bowen  
Landfill Cells 1&2, 3&4, and 9&10  
Bartow County, Georgia

| Flow Paths                         | Groundwater Measurement Date   | Groundwater Elevations in Well Pairs (h <sub>1</sub> , h <sub>2</sub> ) (feet) |        | Change in Elevation (Δh) (feet) | Distance Measured (L) (feet) | Hydraulic Gradient (i) (feet/foot) | Average Hydraulic Conductivity (K) (feet/day) | Estimated Effective Porosity (n <sub>e</sub> ) | Calculated Groundwater Flow Velocity (V) (feet/day) | Calculated Groundwater Flow Velocity (V) (feet/year) |       |
|------------------------------------|--------------------------------|--|--------|---------------------------------|------------------------------|------------------------------------|---|--|---|--|-------|
|                                    |                                |  |        |                                 |                              |                                    |   |  |   |  |       |
| Landfill<br>Cells 1 & 2 and 9 & 10 | Overburden<br>GWC-5 to GWC-9   | 1/14/2022  | 660.71 | 654.90                          | 5.81                         | 1302                               | 0.004   | 0.072  | 0.01  | 0.03   | 11.7  |
|                                    | Overburden<br>GWA-50 to GWC-6  | 1/14/2022  | 671.32 | 657.92                          | 13.40                        | 650                                | 0.021   | 0.072  | 0.01  | 0.15   | 54.2  |
|                                    | Overburden<br>GWC-5 to GWC-9   | 8/3/2022   | 658.48 | 653.05                          | 5.43                         | 1302                               | 0.004   | 0.072  | 0.01  | 0.03   | 11.0  |
|                                    | Overburden<br>GWA-50 to GWC-6  | 8/3/2022   | 670.93 | 655.17                          | 15.76                        | 650                                | 0.024   | 0.072  | 0.01  | 0.17   | 63.7  |
|                                    | Bedrock<br>GWC-8RR to GWC-10R  | 1/14/2022  | 656.74 | 654.96                          | 1.78                         | 600                                | 0.003   | 0.36   | 0.01  | 0.11   | 39.0  |
|                                    | Bedrock<br>GWA-6RZ to GWC-15R  | 1/14/2022  | 657.45 | 656.30                          | 1.15                         | 1439                               | 0.001   | 0.36   | 0.01  | 0.03   | 10.5  |
|                                    | Bedrock<br>GWC-8RR to GWC-10R  | 8/3/2022   | 654.42 | 653.08                          | 1.34                         | 600                                | 0.002   | 0.36   | 0.01  | 0.08   | 29.3  |
|                                    | Bedrock<br>GWA-6RZ to GWC-15R  | 8/3/2022   | 654.84 | 654.24                          | 0.60                         | 1439                               | 0.000   | 0.36   | 0.01  | 0.02   | 5.5   |
|                                    | Overburden<br>GWA-40 to GWC-47 | 1/14/2022  | 664.13 | 652.46                          | 11.67                        | 1786                               | 0.007   | 0.072  | 0.01  | 0.05   | 17.2  |
|                                    | Overburden<br>GWC-45 to GWC-47 | 1/14/2022  | 662.35 | 652.46                          | 9.89                         | 525                                | 0.019   | 0.072  | 0.01  | 0.14   | 49.5  |
|                                    | Overburden<br>GWA-40 to GWC-47 | 8/3/2022   | 661.47 | 649.91                          | 11.56                        | 1786                               | 0.006   | 0.072  | 0.01  | 0.05   | 17.0  |
|                                    | Overburden<br>GWC-45 to GWC-47 | 8/3/2022   | 656.46 | 649.91                          | 6.55                         | 525                                | 0.012   | 0.072  | 0.01  | 0.09   | 32.8  |
|                                    | Bedrock<br>GWA-41R to GWC-45R  | 1/14/2022  | 665.04 | 652.63                          | 12.41                        | 1348                               | 0.009   | 0.36   | 0.01  | 0.33   | 121.0 |
|                                    | Bedrock<br>GWC-49R to GWC-47R  | 1/14/2022  | 655.42 | 652.52                          | 2.90                         | 547                                | 0.005   | 0.36   | 0.01  | 0.19   | 69.7  |
|                                    | Bedrock<br>GWA-41R to GWC-45R  | 8/3/2022   | 662.29 | 650.10                          | 12.19                        | 1348                               | 0.009   | 0.36   | 0.01  | 0.33   | 118.8 |
|                                    | Bedrock<br>GWC-49R to GWC-47R  | 8/3/2022   | 653.52 | 650.01                          | 3.51                         | 547                                | 0.006   | 0.36   | 0.01  | 0.23   | 84.3  |

**TABLE 4**  
**GROUNDWATER FLOW VELOCITY CALCULATIONS - JANUARY AND AUGUST 2022**

Georgia Power Company - Plant Bowen  
 Landfill Cells 1&2, 3&4, and 9&10  
 Bartow County, Georgia

| Flow Paths           |                             | Groundwater Measurement Date | Groundwater Elevations in Well Pairs (h <sub>1</sub> , h <sub>2</sub> ) (feet) |        | Change in Elevation (Δh) (feet) | Distance Measured (L) (feet) | Hydraulic Gradient (i) (feet/foot) | Average Hydraulic Conductivity (K) (feet/day) | Estimated Effective Porosity (n <sub>e</sub> ) | Calculated Groundwater Flow Velocity (V) (feet/day) | Calculated Groundwater Flow Velocity (V) (feet/year) |
|----------------------|-----------------------------|------------------------------|--|--------|---------------------------------|------------------------------|------------------------------------|---|--|---|--|
| Landfill Cells 3 & 4 | Overburden GWA-53 to GWC-18 | 1/14/2022                    | 653.71   | 648.75 | 4.96                            | 1250                         | 0.004                              | 0.072   | 0.01   | 0.03  | 10.4   |
|                      | Overburden GWA-37 to GWC-18 | 1/14/2022                    | 654.40   | 648.75 | 5.65                            | 977                          | 0.006                              | 0.072   | 0.01   | 0.04  | 15.2   |
|                      | Overburden GWA-53 to GWC-18 | 8/3/2022                     | 652.50   | 648.05 | 4.45                            | 1250                         | 0.004                              | 0.072   | 0.01   | 0.03  | 9.4  |
|                      | Overburden GWA-37 to GWC-18 | 8/3/2022                     | 653.08   | 648.05 | 5.03                            | 977                          | 0.005                              | 0.072   | 0.01   | 0.04  | 13.5   |
|                      | Bedrock GWA-53R to GWC-18R  | 1/14/2022                    | 653.66   | 649.07 | 4.59                            | 1265                         | 0.004                              | 0.36  | 0.01   | 0.13  | 47.7   |
|                      | Bedrock GWC-25R to GWC-21R  | 1/14/2022                    | 653.18   | 651.90 | 1.28                            | 1325                         | 0.001                              | 0.36  | 0.01   | 0.03  | 12.7   |
|                      | Bedrock GWA-53R to GWC-18R  | 8/3/2022                     | 652.42   | 648.08 | 4.34                            | 1265                         | 0.003                              | 0.36  | 0.01   | 0.12  | 45.1   |
|                      | Bedrock GWC-25R to GWC-21R  | 8/3/2022                     | 651.90   | 650.74 | 1.16                            | 1325                         | 0.001                              | 0.36  | 0.01   | 0.03  | 11.5   |

Notes:

The average hydraulic conductivity values, measured in centimeters/second (cm/sec) used in the soil aquifer calculations (2.54 x 10<sup>-5</sup> cm/sec = 0.072 ft/day) and the bedrock aquifer calculations (1.26 x 10<sup>-4</sup> cm/sec = 0.36 ft/day) are presented in the 2002 Plant Bowen Proposed Coal Combustion By-Product Storage Facility Site Acceptability Report. An estimated effective porosity of 0.01 (based on default soil type value for silty clays to clays in USEPA 530/SW-89-031) of the screened horizon.

**Table 5**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 1 2 and 9 10**

| Constituent     |                  | Well ID    |            |            |            |            |            |            |            |
|-----------------|------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                 |                  | GWA-1      |            | GWA-2      |            | GWA-2R     |            | GWA-3A     |            |
|                 |                  | 2/1/2022   | 8/16/2022  | 2/1/2022   | 8/16/2022  | 2/1/2022   | 8/16/2022  | 2/2/2022   | 8/16/2022  |
| Appendix III    | <b>Boron</b>     | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   |
|                 | <b>Calcium</b>   | 34.1       | 34.0       | 48         | 39.5 J     | 34.1       | 37.9 J     | 22.6       | 22.2 J     |
|                 | <b>Chloride</b>  | 1.2        | 0.99 J     | 1.4        | 1.1        | 0.77 J     | 0.82 J     | 1.9        | 2.5        |
|                 | <b>Fluoride</b>  | < 0.05     | 0.089 J    | < 0.05     | 0.086 J    | < 0.05     | 0.090 J    | < 0.05     | 0.082 J    |
|                 | <b>pH</b>        | 7.52       | 7.36       | 6.3        | 6.63       | 6.62       | 7.11       | 7.94       | 7.74       |
|                 | <b>Sulfate</b>   | 0.93 J     | 0.78 J     | 86.1       | 58.5       | 1.5        | 7.8        | 3.4        | 3.5        |
|                 | <b>TDS</b>       | 143        | 159        | 202        | 182        | 114        | 123        | 104        | 85.0       |
| Appendix I      | <b>Antimony</b>  | 0.0028 J   | 0.0084     | < 0.00078  | < 0.00078  | 0.0029 J   | 0.0020 J   | < 0.00078  | < 0.00078  |
|                 | <b>Arsenic</b>   | < 0.0011   | < 0.0022   | 0.0019 J   | < 0.0022   | 0.0053     | 0.0033 J   | < 0.0011   | < 0.0022   |
|                 | <b>Barium</b>    | 0.015      | 0.017      | 0.026      | 0.021      | 0.024      | 0.027      | 0.0064     | 0.0067     |
|                 | <b>Beryllium</b> | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 |
|                 | <b>Cadmium</b>   | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  |
|                 | <b>Chromium</b>  | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   | 0.0069     | < 0.0011   |
|                 | <b>Cobalt</b>    | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | 0.00093 J  | 0.00040 J  | < 0.00039  | < 0.00039  |
|                 | <b>Copper</b>    | < 0.0005   | < 0.0010   | < 0.0005   | < 0.0010   | 0.00096 J  | < 0.0010   | < 0.0005   | < 0.0010   |
|                 | <b>Lead</b>      | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  |
|                 | <b>Mercury</b>   | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  |
|                 | <b>Nickel</b>    | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  |
|                 | <b>Selenium</b>  | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   |
|                 | <b>Silver</b>    | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  |
|                 | <b>Thallium</b>  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  |
| <b>Vanadium</b> | < 0.0019         | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   |            |
| <b>Zinc</b>     | < 0.0085         | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   |            |

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical method detection limit (MDL) shown.
3. J indicates the constituent 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.
4. Appendix III - indicator parameters evaluated during Detection Monitoring.
5. NA indicates constituent was not analyzed.

**Table 5**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 1 2 and 9 10**

| Constituent     | Well ID          |            |            |            |            |            |            |            |            |
|-----------------|------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                 | GWA-4RZ          |            | GWA-39Z    |            | GWA-39RZ   |            | GWA-40     |            |            |
|                 | 2/3/2022         | 8/17/2022  | 1/31/2022  | 8/10/2022  | 2/2/2022   | 8/16/2022  | 1/31/2022  | 10/12/2022 |            |
| Appendix III    | <b>Boron</b>     | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   |
|                 | <b>Calcium</b>   | 57.7       | 54.7       | 12.7       | 8.7        | 32.6       | 32.0       | 18.5       | 18.5       |
|                 | <b>Chloride</b>  | 2.6        | 2.6        | 1.0        | 0.93 J     | 1.5        | 1.6        | 0.71 J     | < 0.60     |
|                 | <b>Fluoride</b>  | 0.15       | 0.11       | < 0.05     | 0.075 J    | < 0.05     | < 0.050    | < 0.05     | 0.068 J    |
|                 | <b>pH</b>        | 7.2        | 6.49       | 6.41       | 6.07       | 6.89       | 7.45       | 6.85       | 6.83       |
|                 | <b>Sulfate</b>   | 20.7       | 18.1       | 1.2        | 1.3        | 4.5        | 4.5        | 1.2        | 1.2        |
|                 | <b>TDS</b>       | 243        | 226        | 61         | 50.0       | 143        | 125        | 81         | 91.0       |
| Appendix I      | <b>Antimony</b>  | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078  | 0.0010 J   | 0.0014 J   | < 0.00078  |
|                 | <b>Arsenic</b>   | 0.0034 J   | < 0.0022   | 0.0021 J   | < 0.0022   | < 0.0011   | < 0.0022   | < 0.0011   | < 0.0022   |
|                 | <b>Barium</b>    | 0.063      | 0.034      | 0.013      | 0.010      | 0.013      | 0.013      | 0.0081     | 0.0076     |
|                 | <b>Beryllium</b> | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 |
|                 | <b>Cadmium</b>   | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  |
|                 | <b>Chromium</b>  | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   | 0.0012 J   | < 0.0011   | < 0.0011   | < 0.0011   |
|                 | <b>Cobalt</b>    | 0.0059     | 0.015      | < 0.0011   | < 0.0011   | 0.0012 J   | < 0.0011   | < 0.0011   | < 0.0011   |
|                 | <b>Copper</b>    | < 0.0005   | < 0.0010   | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  |
|                 | <b>Lead</b>      | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  |
|                 | <b>Mercury</b>   | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  |
|                 | <b>Nickel</b>    | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  |
|                 | <b>Selenium</b>  | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   |
|                 | <b>Silver</b>    | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  |
|                 | <b>Thallium</b>  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  |
| <b>Vanadium</b> | < 0.0019         | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   |            |
| <b>Zinc</b>     | < 0.0085         | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   |            |

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical method detection limit (MDL) shown.
3. J indicates the constituent 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.
4. Appendix III - indicator parameters evaluated during Detection Monitoring.
5. NA indicates constituent was not analyzed.

**Table 5**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 1 2 and 9 10**

| Constituent     | Well ID          |            |            |            |            |           |           |            |            |
|-----------------|------------------|------------|------------|------------|------------|-----------|-----------|------------|------------|
|                 | GWA-41           |            | GWA-41R    |            | GWA-42     |           | GWA-43    |            |            |
|                 | 1/31/2022        | 8/11/2022  | 1/31/2022  | 8/11/2022  | 1/31/2022  | 8/10/2022 | 1/31/2022 | 8/11/2022  |            |
| Appendix III    | <b>Boron</b>     | < 0.0086   | < 0.0086   | 0.016 J    | < 0.0086   | < 0.0086  | < 0.0086  | < 0.0086   | < 0.0086   |
|                 | <b>Calcium</b>   | 14.5       | 16.2       | 39.3       | 39.7       | 37.3      | 40.5      | 2.2        | 4.8        |
|                 | <b>Chloride</b>  | 1.0        | 1.3        | 1.0        | 1.4        | 2.0       | 1.8       | 1.1        | 1.4        |
|                 | <b>Fluoride</b>  | < 0.05     | < 0.050    | < 0.05     | < 0.050    | < 0.05    | 0.068 J   | < 0.05     | < 0.050    |
|                 | <b>pH</b>        | 6.02       | 6.29       | 6.63       | 7.12       | 7.17      | 7.26      | 5.71       | 5.64       |
|                 | <b>Sulfate</b>   | 1.8        | 1.9        | 8.5        | 4.7        | 1.1       | 1.0       | < 0.5      | < 0.50     |
|                 | <b>TDS</b>       | 63         | 73.0       | 184        | 170        | 132       | 134       | 25         | 28.0       |
| Appendix I      | <b>Antimony</b>  | < 0.00078  | < 0.00078  | 0.0011 J   | < 0.00078  | < 0.00078 | < 0.00078 | < 0.00078  | < 0.00078  |
|                 | <b>Arsenic</b>   | < 0.0011   | < 0.0022   | < 0.0011   | < 0.0022   | < 0.0011  | < 0.0022  | 0.0013 J   | < 0.0022   |
|                 | <b>Barium</b>    | 0.022      | 0.022      | 0.031      | 0.019      | 0.0063    | 0.0063    | 0.014      | 0.016      |
|                 | <b>Beryllium</b> | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | 0.00014 J | 0.00016 J | < 0.000054 | 0.000076 J |
|                 | <b>Cadmium</b>   | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | 0.00018 J | 0.00034 J | < 0.00011  | < 0.00011  |
|                 | <b>Chromium</b>  | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011  | < 0.0011  | < 0.0011   | < 0.0011   |
|                 | <b>Cobalt</b>    | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011  | < 0.0011  | < 0.0011   | < 0.0011   |
|                 | <b>Copper</b>    | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039 | < 0.00039 | < 0.00039  | < 0.00039  |
|                 | <b>Lead</b>      | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089 | < 0.00089 | < 0.00089  | < 0.00089  |
|                 | <b>Mercury</b>   | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013 | < 0.00013 | < 0.00013  | < 0.00013  |
|                 | <b>Nickel</b>    | < 0.00071  | 0.00083 J  | 0.00091 J  | < 0.00071  | 0.0011 J  | 0.0016 J  | 0.00077 J  | < 0.00071  |
|                 | <b>Selenium</b>  | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014  | < 0.0014  | < 0.0014   | < 0.0014   |
|                 | <b>Silver</b>    | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044 | < 0.00044 | < 0.00044  | < 0.00044  |
|                 | <b>Thallium</b>  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018 | < 0.00018 | < 0.00018  | < 0.00018  |
| <b>Vanadium</b> | < 0.0019         | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019  | < 0.0019  | < 0.0019   |            |
| <b>Zinc</b>     | < 0.0085         | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | 0.0089 J  | < 0.0085  | < 0.0085   |            |

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical method detection limit (MDL) shown.
3. J indicates the constituent 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.
4. Appendix III - indicator parameters evaluated during Detection Monitoring.
5. NA indicates constituent was not analyzed.

**Table 5**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 1 2 and 9 10**

| Constituent     | Well ID          |            |            |            |            |            |            |           |           |           |
|-----------------|------------------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|
|                 | GWA-43R          |            | GWA-50     |            | GWA-50R    |            | GWC-5      |           |           |           |
|                 | 1/31/2022        | 8/10/2022  | 2/1/2022   | 8/16/2022  | 2/2/2022   | 8/17/2022  | 2/2/2022   | 4/28/2022 | 8/16/2022 |           |
| Appendix III    | <b>Boron</b>     | 0.011 J    | 0.010 J    | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086  | NA        | < 0.0086  |
|                 | <b>Calcium</b>   | 30.6       | 33.1       | 1.5        | 1.6 J      | 0.93 J     | 3.8        | 3.7       | NA        | 3.7 J     |
|                 | <b>Chloride</b>  | 1.7        | 1.7        | 0.91 J     | 0.69 J     | 0.7 J      | < 0.60     | 0.66 J    | NA        | < 0.60    |
|                 | <b>Fluoride</b>  | < 0.05     | 0.062 J    | < 0.05     | 0.060 J    | < 0.05     | 0.063 J    | < 0.05    | NA        | 0.062 J   |
|                 | <b>pH</b>        | 8.04       | 7.72       | 5.61       | 5.29       | 5.17       | 5.70       | 5.9       | 5.78      | 5.84      |
|                 | <b>Sulfate</b>   | 2.5        | 2.5        | < 0.5      | < 0.50     | 0.53 J     | 0.55 J     | 1.0       | NA        | 1.0       |
|                 | <b>TDS</b>       | 128        | 145        | 21         | < 10.0     | 15         | 18.0 J     | 32        | NA        | < 10.0    |
| Appendix I      | <b>Antimony</b>  | < 0.00078  | < 0.00078  | 0.0015 J   | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078 | NA        | < 0.00078 |
|                 | <b>Arsenic</b>   | < 0.0011   | < 0.0022   | < 0.0011   | < 0.0022   | < 0.0011   | < 0.0022   | < 0.0011  | NA        | < 0.0022  |
|                 | <b>Barium</b>    | 0.0076     | 0.0066     | 0.0065     | 0.0072     | 0.009      | 0.0091     | 0.012     | NA        | 0.013     |
|                 | <b>Beryllium</b> | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | 0.000055 J | < 0.000054 | 0.00075   | 0.00078   | 0.00060   |
|                 | <b>Cadmium</b>   | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011 | NA        | < 0.00011 |
|                 | <b>Chromium</b>  | 0.0011 J   | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011  | NA        | < 0.0011  |
|                 | <b>Cobalt</b>    | 0.0011 J   | < 0.0011   | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039 | NA        | < 0.00039 |
|                 | <b>Copper</b>    | < 0.00039  | < 0.00039  | 0.0017 J   | 0.0014 J   | 0.0033 J   | 0.0098     | 0.024     | NA        | 0.021     |
|                 | <b>Lead</b>      | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089 | NA        | < 0.00089 |
|                 | <b>Mercury</b>   | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013 | NA        | < 0.00013 |
|                 | <b>Nickel</b>    | < 0.00071  | < 0.00071  | 0.0008 J   | 0.00071 J  | 0.00089 J  | 0.0011 J   | 0.0088    | NA        | 0.0087    |
|                 | <b>Selenium</b>  | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014  | NA        | < 0.0014  |
|                 | <b>Silver</b>    | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | 0.0012 J   | 0.0021 J   | < 0.00044 | NA        | < 0.00044 |
|                 | <b>Thallium</b>  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018 | NA        | < 0.00018 |
| <b>Vanadium</b> | < 0.0019         | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | NA        | < 0.0019  |           |
| <b>Zinc</b>     | < 0.0085         | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | 0.034      | NA        | 0.030     |           |

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical method detection limit (MDL) shown.
3. J indicates the constituent 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.
4. Appendix III - indicator parameters evaluated during Detection Monitoring.
5. NA indicates constituent was not analyzed.



**Table 5**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 1 2 and 9 10**

| Constituent  | Well ID          |            |            |           |            |            |            |            |            |
|--------------|------------------|------------|------------|-----------|------------|------------|------------|------------|------------|
|              | GWC-6            |            | GWC-6RZ    |           | GWC-7Z     |            | GWC-8RR    |            |            |
|              | 2/2/2022         | 8/17/2022  | 2/2/2022   | 8/17/2022 | 2/2/2022   | 8/17/2022  | 2/2/2022   | 8/17/2022  |            |
| Appendix III | <b>Boron</b>     | < 0.0086   | < 0.0086   | < 0.0086  | < 0.0086   | < 0.0086   | 0.011 J    | < 0.0086   | < 0.0086   |
|              | <b>Calcium</b>   | 15.5       | 15.8       | 10.5      | 10         | 26.9       | 27.2       | 23.9       | 24.0       |
|              | <b>Chloride</b>  | 1.1        | 0.89 J     | 1.3       | 0.99 J     | 0.76 J     | < 0.60     | 0.77 J     | < 0.60     |
|              | <b>Fluoride</b>  | < 0.05     | 0.064 J    | < 0.05    | 0.070 J    | < 0.05     | 0.073 J    | < 0.05     | 0.062 J    |
|              | <b>pH</b>        | 7.4        | 7.30       | 6.8       | 6.64       | 7.54       | 7.34       | 8.13       | 7.87       |
|              | <b>Sulfate</b>   | 1.7        | 1.6        | 1.5       | 1.2        | 1.3        | 0.91 J     | 0.72 J     | 0.53 J     |
|              | <b>TDS</b>       | 73         | 53.0       | 51        | 33.0       | 115        | 83.0       | 102        | 89.0       |
| Appendix I   | <b>Antimony</b>  | < 0.00078  | < 0.00078  | < 0.00078 | < 0.00078  | 0.00093 J  | 0.0011 J   | 0.0015 J   | < 0.00078  |
|              | <b>Arsenic</b>   | < 0.0011   | < 0.0022   | 0.0012 J  | < 0.0022   | 0.002 J    | < 0.0022   | 0.0013 J   | < 0.0022   |
|              | <b>Barium</b>    | 0.0064     | 0.0065     | 0.0066    | 0.0068     | 0.015      | 0.014      | 0.013      | 0.013      |
|              | <b>Beryllium</b> | < 0.000054 | < 0.000054 | 0.00007 J | 0.000098 J | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 |
|              | <b>Cadmium</b>   | < 0.00011  | < 0.00011  | < 0.00011 | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  |
|              | <b>Chromium</b>  | 0.0026 J   | 0.0025 J   | 0.0024 J  | 0.0024 J   | < 0.0011   | < 0.0011   | 0.0015 J   | 0.0011 J   |
|              | <b>Cobalt</b>    | < 0.00039  | < 0.00039  | < 0.00039 | < 0.00039  | 0.00042 J  | < 0.00039  | < 0.00039  | < 0.00039  |
|              | <b>Copper</b>    | < 0.0005   | < 0.0010   | < 0.0005  | < 0.0010   | < 0.0005   | < 0.0010   | < 0.0005   | < 0.0010   |
|              | <b>Lead</b>      | < 0.00089  | < 0.00089  | < 0.00089 | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  |
|              | <b>Mercury</b>   | < 0.00013  | < 0.00013  | < 0.00013 | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  |
|              | <b>Nickel</b>    | < 0.00071  | < 0.00071  | < 0.00071 | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  |
|              | <b>Selenium</b>  | < 0.0014   | < 0.0014   | < 0.0014  | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   |
|              | <b>Silver</b>    | < 0.00044  | < 0.00044  | < 0.00044 | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  |
|              | <b>Thallium</b>  | < 0.00018  | < 0.00018  | < 0.00018 | < 0.00018  | < 0.00018  | 0.00024 J  | < 0.00018  | < 0.00018  |
|              | <b>Vanadium</b>  | < 0.0019   | < 0.0019   | < 0.0019  | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   |
| <b>Zinc</b>  | < 0.0085         | < 0.0085   | < 0.0085   | < 0.0085  | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   |            |

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical method detection limit (MDL) shown.
3. J indicates the constituent 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.
4. Appendix III - indicator parameters evaluated during Detection Monitoring.
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**Table 5**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 1 2 and 9 10**

| Constituent     | Well ID          |            |           |           |           |           |           |           |            |            |
|-----------------|------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|
|                 | GWC-8Z           |            |           | GWC-9     |           | GWC-10    |           | GWC-10R   |            |            |
|                 | 2/2/2022         | 4/28/2022  | 8/17/2022 | 2/2/2022  | 8/17/2022 | 2/4/2022  | 8/17/2022 | 2/4/2022  | 8/18/2022  |            |
| Appendix III    | <b>Boron</b>     | < 0.0086   | NA        | 0.012 J   | < 0.0086  | < 0.0086  | < 0.0086  | < 0.0086  | < 0.0086   | < 0.0086   |
|                 | <b>Calcium</b>   | 20.8       | NA        | 10.4      | 2.2       | 2.5       | 21.3      | 36.7      | 46.3       | 48.5       |
|                 | <b>Chloride</b>  | 1.4        | NA        | 1.3       | 2.1       | 1.9       | 1.9       | 1.6       | 2.2        | 2.5 J      |
|                 | <b>Fluoride</b>  | < 0.05     | NA        | 0.062 J   | < 0.05    | 0.067 J   | < 0.05    | 0.094 J   | < 0.05     | 0.051 J    |
|                 | <b>pH</b>        | 8.92       | 6.91      | 6.36      | 4.81      | 4.57      | 6.53      | 7.01      | 7.69       | 7.52       |
|                 | <b>Sulfate</b>   | 0.72 J     | NA        | 0.58 J    | 2.5       | 2.5       | 1.2       | 1.1       | 1.1        | 1.5 J      |
|                 | <b>TDS</b>       | 85         | NA        | 41.0      | 21        | 25.0      | 102       | 128       | 156        | 135        |
| Appendix I      | <b>Antimony</b>  | < 0.00078  | NA        | 0.0010 J  | < 0.00078 | < 0.00078 | < 0.00078 | < 0.00078 | 0.0016 J   | < 0.00078  |
|                 | <b>Arsenic</b>   | 0.0011 J   | NA        | < 0.0022  | 0.0013 J  | < 0.0022  | 0.0023 J  | < 0.0022  | 0.0019 J   | < 0.0022   |
|                 | <b>Barium</b>    | 0.024      | NA        | 0.017     | 0.044     | 0.047     | 0.022     | 0.016     | 0.028      | 0.025      |
|                 | <b>Beryllium</b> | 0.000064 J | NA        | 0.00010 J | 0.00018 J | 0.00017 J | 0.00021 J | 0.00070 J | < 0.000054 | < 0.000054 |
|                 | <b>Cadmium</b>   | < 0.00011  | NA        | < 0.00011 | < 0.00011 | < 0.00011 | < 0.00011 | 0.00018 J | < 0.00011  | < 0.00011  |
|                 | <b>Chromium</b>  | 0.0021 J   | NA        | 0.0014 J  | < 0.0011  | < 0.0011  | < 0.0011  | 0.0013 J  | < 0.0011   | < 0.0011   |
|                 | <b>Cobalt</b>    | < 0.00039  | NA        | < 0.00039 | 0.00043 J | 0.00043 J | 0.0018 J  | 0.00051 J | < 0.00039  | < 0.00039  |
|                 | <b>Copper</b>    | < 0.0005   | NA        | < 0.0010  | < 0.0005  | < 0.0010  | < 0.0005  | < 0.0010  | < 0.0005   | < 0.0010   |
|                 | <b>Lead</b>      | < 0.00089  | NA        | < 0.00089 | < 0.00089 | < 0.00089 | < 0.00089 | < 0.00089 | < 0.00089  | < 0.00089  |
|                 | <b>Mercury</b>   | < 0.00013  | NA        | < 0.00013 | < 0.00013 | < 0.00013 | < 0.00013 | < 0.00013 | < 0.00013  | < 0.00013  |
|                 | <b>Nickel</b>    | < 0.00071  | NA        | < 0.00071 | 0.0011 J  | 0.0011 J  | 0.0014 J  | < 0.00071 | < 0.00071  | < 0.00071  |
|                 | <b>Selenium</b>  | < 0.0014   | NA        | < 0.0014  | < 0.0014  | < 0.0014  | < 0.0014  | < 0.0014  | < 0.0014   | < 0.0014   |
|                 | <b>Silver</b>    | < 0.00044  | NA        | < 0.00044 | < 0.00044 | < 0.00044 | < 0.00044 | < 0.00044 | < 0.00044  | < 0.00044  |
|                 | <b>Thallium</b>  | < 0.00018  | NA        | < 0.00018 | < 0.00018 | < 0.00018 | < 0.00018 | < 0.00018 | < 0.00018  | < 0.00018  |
| <b>Vanadium</b> | < 0.0019         | NA         | < 0.0019  | < 0.0019  | < 0.0019  | < 0.0019  | < 0.0019  | < 0.0019  | < 0.0019   |            |
| <b>Zinc</b>     | < 0.0085         | NA         | < 0.0085  | < 0.0085  | < 0.0085  | < 0.0085  | < 0.0085  | < 0.0085  | < 0.0085   |            |

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical method detection limit (MDL) shown.
3. J indicates the constituent 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.
4. Appendix III - indicator parameters evaluated during Detection Monitoring.
5. NA indicates constituent was not analyzed.

**Table 5**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 1 2 and 9 10**

| Constituent  | Well ID   |            |            |            |            |            |           |            |            |            |
|--------------|-----------|------------|------------|------------|------------|------------|-----------|------------|------------|------------|
|              | GWC-11    |            | GWC-11R    |            | GWC-12     |            |           | GWC-13     |            |            |
|              | 2/4/2022  | 8/18/2022  | 2/4/2022   | 8/18/2022  | 2/2/2022   | 4/28/2022  | 8/18/2022 | 2/17/2022  | 8/18/2022  |            |
| Appendix III | Boron     | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | NA        | < 0.0086   | 0.015 J    | < 0.0086   |
|              | Calcium   | 19.2       | 10.2       | 34.8       | 36.9       | 8.4        | NA        | 9.2        | 29.3       | 33.0       |
|              | Chloride  | 1.1        | 1.2        | 1.4        | 1.7        | 0.79 J     | NA        | 1.0        | 3.1        | 3.4        |
|              | Fluoride  | < 0.05     | < 0.050    | < 0.05     | < 0.050    | < 0.05     | NA        | 0.052 J    | < 0.05     | 0.061 J    |
|              | pH        | 7.2        | 6.08       | 7.58       | 7.57       | 6.35       | 6.33      | 6.03       | 7.24       | 6.95       |
|              | Sulfate   | 1.7        | 1.6        | 1.5        | 1.9        | < 0.5      | NA        | < 0.50     | 6.9        | 16.0       |
|              | TDS       | 120        | 59.0       | 157        | 141        | 54         | NA        | 48.0       | 119        | 132        |
| Appendix I   | Antimony  | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078  | NA        | < 0.00078  | < 0.00078  | < 0.00078  |
|              | Arsenic   | 0.0023 J   | < 0.0022   | 0.0035 J   | < 0.0022   | 0.0027 J   | NA        | 0.0037 J   | < 0.0011   | < 0.0022   |
|              | Barium    | 0.01       | 0.0078     | 0.021      | 0.019      | 0.023      | NA        | 0.022      | 0.02       | 0.021      |
|              | Beryllium | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | NA        | < 0.000054 | 0.000089 J | < 0.000054 |
|              | Cadmium   | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | 0.0012     | 0.00067   | 0.00052    | < 0.00011  | < 0.00011  |
|              | Chromium  | 0.0071     | < 0.0011   | 0.0042 J   | 0.0046 J   | < 0.0011   | NA        | < 0.0011   | 0.0053     | 0.0044 J   |
|              | Cobalt    | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | 0.0034 J   | NA        | 0.0028 J   | < 0.00039  | < 0.00039  |
|              | Copper    | < 0.0005   | < 0.0010   | < 0.0005   | < 0.0010   | < 0.0005   | NA        | < 0.0010   | < 0.0005   | < 0.0010   |
|              | Lead      | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | NA        | < 0.00089  | < 0.00089  | < 0.00089  |
|              | Mercury   | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | NA        | < 0.00013  | < 0.00013  | < 0.00013  |
|              | Nickel    | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | 0.0025 J   | NA        | 0.0023 J   | < 0.00071  | < 0.00071  |
|              | Selenium  | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | NA        | < 0.0014   | < 0.0014   | < 0.0014   |
|              | Silver    | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | NA        | < 0.00044  | < 0.00044  | < 0.00044  |
|              | Thallium  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | NA        | < 0.00018  | < 0.00018  | < 0.00018  |
| Vanadium     | < 0.0019  | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | NA         | < 0.0019  | < 0.0019   | < 0.0019   |            |
| Zinc         | < 0.0085  | < 0.0085   | < 0.0085   | < 0.0085   | 0.019 J    | NA         | 0.014 J   | < 0.0085   | < 0.0085   |            |

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical method detection limit (MDL) shown.
3. J indicates the constituent 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.
4. Appendix III - indicator parameters evaluated during Detection Monitoring.
5. NA indicates constituent was not analyzed.

**Table 5**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 1 2 and 9 10**

| Constituent     |                  | Well ID    |            |           |           |            |            |            |            |
|-----------------|------------------|------------|------------|-----------|-----------|------------|------------|------------|------------|
|                 |                  | GWC-13RZ   |            | GWC-14Z   |           | GWC-15R    |            | GWC-15Z    |            |
|                 |                  | 2/4/2022   | 8/19/2022  | 2/4/2022  | 8/18/2022 | 2/4/2022   | 8/19/2022  | 2/7/2022   | 8/19/2022  |
| Appendix III    | <b>Boron</b>     | 0.017 J    | 0.015 J    | < 0.0086  | < 0.0086  | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   |
|                 | <b>Calcium</b>   | 43.9       | 47.3       | 14.3      | 14.7      | 41.7       | 40.4       | 26.1       | 28.1       |
|                 | <b>Chloride</b>  | 6.1        | 6.4        | 3.6       | 4.3       | 1.2        | 1.4        | 0.6 J      | 0.88 J     |
|                 | <b>Fluoride</b>  | 0.13       | 0.14       | < 0.05    | < 0.050   | < 0.05     | 0.054 J    | < 0.05     | 0.053 J    |
|                 | <b>pH</b>        | 7.46       | 6.66       | 6.06      | 5.95      | 7.61       | 7.50       | 7.83       | 7.60       |
|                 | <b>Sulfate</b>   | 63.1       | 65.7       | 6.4       | 9.2       | 8.3        | 6.9        | 0.64 J     | 0.87 J     |
|                 | <b>TDS</b>       | 262        | 243 J      | 92        | 83.0      | 162        | 152 J      | 121        | 112 J      |
| Appendix I      | <b>Antimony</b>  | < 0.00078  | < 0.00078  | < 0.00078 | < 0.00078 | < 0.00078  | 0.0011 J   | < 0.00078  | < 0.00078  |
|                 | <b>Arsenic</b>   | 0.0035 J   | < 0.0022   | 0.0019 J  | < 0.0022  | 0.0026 J   | < 0.0022   | 0.0025 J   | < 0.0022   |
|                 | <b>Barium</b>    | 0.11       | 0.10       | 0.014     | 0.014     | 0.017      | 0.016      | 0.012      | 0.011      |
|                 | <b>Beryllium</b> | < 0.000054 | < 0.000054 | 0.00011 J | 0.00011 J | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 |
|                 | <b>Cadmium</b>   | < 0.00011  | < 0.00011  | < 0.00011 | < 0.00011 | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  |
|                 | <b>Chromium</b>  | < 0.0011   | < 0.0011   | < 0.0011  | < 0.0011  | < 0.0011   | < 0.0011   | 0.0011 J   | < 0.0011   |
|                 | <b>Cobalt</b>    | < 0.00039  | < 0.00039  | < 0.00039 | < 0.00039 | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  |
|                 | <b>Copper</b>    | < 0.0005   | < 0.0010   | < 0.0005  | < 0.0010  | < 0.0005   | < 0.0010   | < 0.0005   | < 0.0010   |
|                 | <b>Lead</b>      | < 0.00089  | < 0.00089  | < 0.00089 | < 0.00089 | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  |
|                 | <b>Mercury</b>   | < 0.00013  | < 0.00013  | < 0.00013 | < 0.00013 | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  |
|                 | <b>Nickel</b>    | < 0.00071  | < 0.00071  | < 0.00071 | < 0.00071 | 0.00093 J  | < 0.00071  | < 0.00071  | < 0.00071  |
|                 | <b>Selenium</b>  | < 0.0014   | < 0.0014   | < 0.0014  | < 0.0014  | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   |
|                 | <b>Silver</b>    | < 0.00044  | < 0.00044  | < 0.00044 | < 0.00044 | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  |
|                 | <b>Thallium</b>  | < 0.00018  | < 0.00018  | < 0.00018 | < 0.00018 | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  |
| <b>Vanadium</b> | < 0.0019         | < 0.0019   | < 0.0019   | < 0.0019  | < 0.0019  | < 0.0019   | < 0.0019   | < 0.0019   |            |
| <b>Zinc</b>     | < 0.0085         | < 0.0085   | < 0.0085   | < 0.0085  | < 0.0085  | < 0.0085   | < 0.0085   | < 0.0085   |            |

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical method detection limit (MDL) shown.
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4. Appendix III - indicator parameters evaluated during Detection Monitoring.
5. NA indicates constituent was not analyzed.

**Table 5**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 1 2 and 9 10**

| Constituent     | Well ID          |            |            |          |            |            |            |            |            |            |
|-----------------|------------------|------------|------------|----------|------------|------------|------------|------------|------------|------------|
|                 | GWC-44           |            |            | GWC-45   |            | GWC-45R    |            | GWC-46R    |            |            |
|                 | 1/31/2022        | 8/15/2022  | 10/11/2022 | 2/1/2022 | 8/12/2022  | 2/1/2022   | 8/12/2022  | 1/31/2022  | 8/15/2022  |            |
| Appendix III    | <b>Boron</b>     | 0.015 J    | 0.011 J    | NA       | 0.019 J    | < 0.0086   | 0.022 J    | < 0.0086   | < 0.0086   | < 0.0086   |
|                 | <b>Calcium</b>   | 11.2       | 10.6       | NA       | 1.1        | 1.1        | 43.9       | 43.3       | 39.9       | 38.7       |
|                 | <b>Chloride</b>  | 4.2        | 5.1        | 2.9      | 0.79 J     | < 0.60     | 4.3        | 3.0        | 1.7        | 3.0        |
|                 | <b>Fluoride</b>  | < 0.05     | 0.056 J    | NA       | < 0.05     | < 0.050    | < 0.05     | 0.063 J    | < 0.05     | 0.060 J    |
|                 | <b>pH</b>        | 4.78       | 4.30       | 4.13     | 4.88       | 4.70       | 7.15       | 7.08       | 7.48       | 7.58       |
|                 | <b>Sulfate</b>   | 29.7       | 27.6       | NA       | < 0.5      | < 0.50     | 6.1        | 3.6        | 5.2        | 5.6        |
|                 | <b>TDS</b>       | 63         | 50.0       | NA       | 70         | 14.0       | 201        | 159        | 197        | 187        |
| Appendix I      | <b>Antimony</b>  | < 0.00078  | < 0.00078  | NA       | 0.002 J    | 0.0072     | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078  |
|                 | <b>Arsenic</b>   | < 0.0011   | < 0.0022   | NA       | < 0.0011   | < 0.0022   | < 0.0011   | < 0.0022   | < 0.0011   | < 0.0022   |
|                 | <b>Barium</b>    | 0.047      | 0.040      | NA       | 0.0072     | 0.0064     | 0.026      | 0.022      | 0.011      | 0.0098     |
|                 | <b>Beryllium</b> | 0.000065 J | 0.000057 J | NA       | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 |
|                 | <b>Cadmium</b>   | < 0.00011  | < 0.00011  | NA       | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  |
|                 | <b>Chromium</b>  | < 0.0011   | < 0.0011   | NA       | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   | 0.0051     | 0.0060     |
|                 | <b>Cobalt</b>    | < 0.0011   | < 0.0011   | NA       | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   | 0.0051     | 0.0060     |
|                 | <b>Copper</b>    | 0.0017 J   | 0.0014 J   | NA       | 0.0013 J   | 0.0011 J   | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  |
|                 | <b>Lead</b>      | < 0.00089  | < 0.00089  | NA       | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  |
|                 | <b>Mercury</b>   | < 0.00013  | < 0.00013  | NA       | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  |
|                 | <b>Nickel</b>    | < 0.00071  | < 0.00071  | NA       | 0.0011 J   | 0.00086 J  | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  |
|                 | <b>Selenium</b>  | 0.0018 J   | < 0.0014   | NA       | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   |
|                 | <b>Silver</b>    | < 0.00044  | < 0.00044  | NA       | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  |
|                 | <b>Thallium</b>  | < 0.00018  | < 0.00018  | NA       | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  |
| <b>Vanadium</b> | < 0.0019         | < 0.0019   | NA         | < 0.0019 | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   |            |
| <b>Zinc</b>     | < 0.0085         | < 0.0085   | NA         | < 0.0085 | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   |            |

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical method detection limit (MDL) shown.
3. J indicates the constituent 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.
4. Appendix III - indicator parameters evaluated during Detection Monitoring.
5. NA indicates constituent was not analyzed.

**Table 5**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 1 2 and 9 10**

| Constituent     |                  | Well ID    |            |            |            |           |           |           |            |
|-----------------|------------------|------------|------------|------------|------------|-----------|-----------|-----------|------------|
|                 |                  | GWC-47     |            | GWC-47R    |            | GWC-48    |           |           |            |
|                 |                  | 2/1/2022   | 8/15/2022  | 2/1/2022   | 8/15/2022  | 1/31/2022 | 4/28/2022 | 8/15/2022 | 10/21/2022 |
| Appendix III    | <b>Boron</b>     | 0.011 J    | < 0.0086   | 0.01 J     | < 0.0086   | < 0.0086  | NA        | < 0.0086  | NA         |
|                 | <b>Calcium</b>   | 21.3       | 33.7 J     | 29.4       | 22.3       | 2.8       | NA        | 5.6       | NA         |
|                 | <b>Chloride</b>  | 2.0        | 2.4        | 2.3        | 2.2        | 4.8       | 5.0       | 5.4       | 5.9        |
|                 | <b>Fluoride</b>  | < 0.05     | 0.058 J    | < 0.05     | 0.069 J    | < 0.05    | NA        | 0.065 J   | NA         |
|                 | <b>pH</b>        | 7.55       | 7.43       | 7.54       | 7.35       | 4.86      | 5.0       | 4.89      | 4.79       |
|                 | <b>Sulfate</b>   | 4.3        | 8.4 J      | 9.4        | 4.3        | 1.2       | NA        | 10.4      | NA         |
|                 | <b>TDS</b>       | 107        | 141 J      | 157        | 104        | 31        | NA        | 37.0      | NA         |
| Appendix I      | <b>Antimony</b>  | < 0.00078  | 0.0022 J   | 0.0024 J   | < 0.00078  | < 0.00078 | NA        | < 0.00078 | NA         |
|                 | <b>Arsenic</b>   | < 0.0011   | < 0.0022   | < 0.0011   | < 0.0022   | < 0.0011  | NA        | < 0.0022  | NA         |
|                 | <b>Barium</b>    | 0.0081     | 0.0074     | 0.0077     | 0.0077     | 0.038     | NA        | 0.045     | NA         |
|                 | <b>Beryllium</b> | < 0.000054 | < 0.000054 | < 0.000054 | 0.000065 J | 0.00036 J | NA        | 0.00037 J | NA         |
|                 | <b>Cadmium</b>   | 0.00014 J  | < 0.00011  | < 0.00011  | 0.00016 J  | 0.0002 J  | NA        | 0.00022 J | NA         |
|                 | <b>Chromium</b>  | 0.0015 J   | 0.0015 J   | 0.0022 J   | 0.0013 J   | 0.002 J   | NA        | 0.0019 J  | NA         |
|                 | <b>Cobalt</b>    | 0.0015 J   | 0.0015 J   | 0.0022 J   | 0.0013 J   | 0.002 J   | NA        | 0.0019 J  | NA         |
|                 | <b>Copper</b>    | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | 0.0021 J  | NA        | 0.0027 J  | NA         |
|                 | <b>Lead</b>      | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089 | NA        | < 0.00089 | NA         |
|                 | <b>Mercury</b>   | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | 0.00039   | 0.0004    | 0.00038   | NA         |
|                 | <b>Nickel</b>    | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | 0.0052    | NA        | 0.0056    | NA         |
|                 | <b>Selenium</b>  | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014  | NA        | < 0.0014  | NA         |
|                 | <b>Silver</b>    | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044 | NA        | < 0.00044 | NA         |
|                 | <b>Thallium</b>  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018 | NA        | < 0.00018 | NA         |
| <b>Vanadium</b> | < 0.0019         | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | NA        | < 0.0019  | NA        |            |
| <b>Zinc</b>     | 0.038            | 0.027 J    | 0.029      | 0.040      | < 0.0085   | NA        | 0.0094 J  | NA        |            |

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical method detection limit (MDL) shown.
3. J indicates the constituent 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.
4. Appendix III - indicator parameters evaluated during Detection Monitoring.
5. NA indicates constituent was not analyzed.

**Table 5**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 1 2 and 9 10**

| Constituent  |                  | Well ID    |            |            |            |
|--------------|------------------|------------|------------|------------|------------|
|              |                  | GWC-49R    |            | GWC-49Z    |            |
|              |                  | 2/1/2022   | 8/15/2022  | 2/1/2022   | 8/15/2022  |
| Appendix III | <b>Boron</b>     | < 0.0086   | < 0.0086   | 0.0087 J   | < 0.0086   |
|              | <b>Calcium</b>   | 26         | 25.4       | 0.62 J     | 0.70 J     |
|              | <b>Chloride</b>  | 1.1        | 1.3        | 0.93 J     | 1.2        |
|              | <b>Fluoride</b>  | < 0.05     | < 0.050    | < 0.05     | < 0.050    |
|              | <b>pH</b>        | 7.63       | 7.81       | 5.0        | 5.06       |
|              | <b>Sulfate</b>   | 2.5        | 2.5        | 0.93 J     | 0.98 J     |
|              | <b>TDS</b>       | 125        | 103        | 27         | < 10.0     |
| Appendix I   | <b>Antimony</b>  | < 0.00078  | 0.0012 J   | 0.00097 J  | < 0.00078  |
|              | <b>Arsenic</b>   | < 0.0011   | < 0.0022   | < 0.0011   | < 0.0022   |
|              | <b>Barium</b>    | 0.011      | 0.0098     | 0.003 J    | 0.0041 J   |
|              | <b>Beryllium</b> | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 |
|              | <b>Cadmium</b>   | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  |
|              | <b>Chromium</b>  | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   |
|              | <b>Cobalt</b>    | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   |
|              | <b>Copper</b>    | < 0.00039  | < 0.00039  | 0.00066 J  | 0.0015 J   |
|              | <b>Lead</b>      | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  |
|              | <b>Mercury</b>   | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  |
|              | <b>Nickel</b>    | < 0.00071  | < 0.00071  | 0.0014 J   | 0.0022 J   |
|              | <b>Selenium</b>  | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   |
|              | <b>Silver</b>    | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  |
|              | <b>Thallium</b>  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  |
|              | <b>Vanadium</b>  | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   |
| <b>Zinc</b>  | < 0.0085         | < 0.0085   | < 0.0085   | < 0.0085   |            |

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical method detection limit (MDL) shown.
3. J indicates the constituent 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.
4. Appendix III - indicator parameters evaluated during Detection Monitoring.
5. NA indicates constituent was not analyzed.

**Table 6**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 3 4**

| Constituent     | Well ID          |            |            |            |            |            |            |            |            |
|-----------------|------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                 | GWA-36A          |            | GWA-36RA   |            | GWA-37     |            | GWA-38     |            |            |
|                 | 4/6/2022         | 8/8/2022   | 1/26/2022  | 8/8/2022   | 1/26/2022  | 8/8/2022   | 1/25/2022  | 8/5/2022   |            |
| Appendix III    | <b>Boron</b>     | 0.032 J    | 0.023 J    | 0.012 J    | 0.018 J    | < 0.0086   | < 0.0086   | < 0.0086   | 0.0090 J   |
|                 | <b>Calcium</b>   | 48.7       | 53.1       | 41         | 54.8       | 0.7 J      | 0.74 J     | 1.1        | 1.3 J      |
|                 | <b>Chloride</b>  | 2.4        | 2.7        | 2.4        | 2.6        | 0.88 J     | 0.64 J     | 3.2        | 3.1        |
|                 | <b>Fluoride</b>  | < 0.05     | 0.063 J    | < 0.05     | 0.062 J    | < 0.05     | 0.061 J    | < 0.05     | < 0.050    |
|                 | <b>pH</b>        | 6.82       | 6.79       | 7.01       | 7.11       | 4.69       | 5.16       | 5.14       | 4.98       |
|                 | <b>Sulfate</b>   | 21.2       | 23.4       | 7.5        | 19.2       | < 0.5      | < 0.50     | 0.58 J     | < 0.50     |
|                 | <b>TDS</b>       | 238        | 232 J      | 184        | 232 J      | 26         | 19.0 J     | 27         | 27.0       |
| Appendix I      | <b>Antimony</b>  | < 0.00078  | < 0.00078  | < 0.00078  | 0.0015 J   | < 0.00078  | 0.0018 J   | < 0.00078  | < 0.00078  |
|                 | <b>Arsenic</b>   | 0.0018 J   | < 0.0022   | < 0.0011   | < 0.0022   | 0.0019 J   | < 0.0022   | < 0.0011   | < 0.0022   |
|                 | <b>Barium</b>    | 0.041      | 0.037      | 0.035      | 0.038      | 0.0046 J   | 0.0035 J   | 0.012      | 0.012      |
|                 | <b>Beryllium</b> | 0.000061 J | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 |
|                 | <b>Cadmium</b>   | < 0.00011  | < 0.00011  | < 0.00011  | 0.00016 J  | < 0.00011  | 0.00032 J  | < 0.00011  | < 0.00011  |
|                 | <b>Chromium</b>  | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   | 0.0014 J   | < 0.0011   |
|                 | <b>Cobalt</b>    | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | 0.0011 J   | 0.00095 J  |
|                 | <b>Copper</b>    | < 0.0005   | < 0.0010   | < 0.0005   | < 0.0010   | 0.013      | 0.0087     | < 0.0005   | < 0.0010   |
|                 | <b>Lead</b>      | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  |
|                 | <b>Mercury</b>   | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  |
|                 | <b>Nickel</b>    | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | 0.016      | 0.0097     | 0.00093 J  | 0.00085 J  |
|                 | <b>Selenium</b>  | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   |
|                 | <b>Silver</b>    | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  |
|                 | <b>Thallium</b>  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  |
| <b>Vanadium</b> | < 0.0019         | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   |            |
| <b>Zinc</b>     | 0.012 J          | 0.011 J    | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   |            |

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical reporting detection limit (RDL) shown.
3. J indicates the constituent 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.
4. Appendix III - indicator parameters evaluated during Detection Monitoring.
5. NA indicates constituent was not analyzed.



**Table 6**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 3 4**

| Constituent     | Well ID          |            |            |            |            |           |            |            |            |
|-----------------|------------------|------------|------------|------------|------------|-----------|------------|------------|------------|
|                 | GWA-51RZ         |            | GWA-52     |            | GWA-53     |           | GWA-53R    |            |            |
|                 | 1/26/2022        | 8/9/2022   | 1/25/2022  | 8/5/2022   | 1/26/2022  | 8/8/2022  | 1/26/2022  | 8/8/2022   |            |
| Appendix III    | <b>Boron</b>     | 0.0088 J   | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086  | < 0.0086   | < 0.0086   | < 0.0086   |
|                 | <b>Calcium</b>   | 50.5       | 46.1       | 28.6       | 29.2       | 29.6      | 30.4       | 30.4       | 31.8       |
|                 | <b>Chloride</b>  | 2.9        | 2.4        | 1.5        | 1.0        | 2.2       | 2.0        | 2.4        | 2.2        |
|                 | <b>Fluoride</b>  | < 0.05     | 0.072 J    | < 0.05     | 0.065 J    | < 0.05    | 0.067 J    | < 0.05     | 0.066 J    |
|                 | <b>pH</b>        | 7.78       | 7.25       | 7.44       | 7.35       | 7.72      | 7.66       | 7.78       | 7.61       |
|                 | <b>Sulfate</b>   | 22.2       | 22.3       | 8.6        | 4.4        | 1.4       | 1.3        | 1.6        | 1.5        |
|                 | <b>TDS</b>       | 190        | 208        | 136        | 123        | 131       | 137 J      | 144        | 136 J      |
| Appendix I      | <b>Antimony</b>  | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078 | < 0.00078  | < 0.00078  | < 0.00078  |
|                 | <b>Arsenic</b>   | 0.0047 J   | < 0.0022   | 0.003 J    | < 0.0022   | < 0.0011  | < 0.0022   | < 0.0011   | < 0.0022   |
|                 | <b>Barium</b>    | 0.034      | 0.015      | 0.023      | 0.019      | 0.013     | 0.011      | 0.014      | 0.013      |
|                 | <b>Beryllium</b> | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | 0.00007 J | < 0.000054 | < 0.000054 | < 0.000054 |
|                 | <b>Cadmium</b>   | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011 | 0.00040 J  | < 0.00011  | 0.00022 J  |
|                 | <b>Chromium</b>  | < 0.0011   | < 0.0011   | 0.0012 J   | 0.0012 J   | < 0.0011  | < 0.0011   | < 0.0011   | < 0.0011   |
|                 | <b>Cobalt</b>    | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039 | < 0.00039  | < 0.00039  | < 0.00039  |
|                 | <b>Copper</b>    | < 0.0005   | < 0.0010   | < 0.0005   | < 0.0010   | < 0.0005  | < 0.0010   | < 0.0005   | < 0.0010   |
|                 | <b>Lead</b>      | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089 | < 0.00089  | < 0.00089  | < 0.00089  |
|                 | <b>Mercury</b>   | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013 | < 0.00013  | < 0.00013  | < 0.00013  |
|                 | <b>Nickel</b>    | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071 | < 0.00071  | < 0.00071  | < 0.00071  |
|                 | <b>Selenium</b>  | < 0.0014   | 0.0051     | < 0.0014   | < 0.0014   | < 0.0014  | < 0.0014   | < 0.0014   | < 0.0014   |
|                 | <b>Silver</b>    | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044 | < 0.00044  | < 0.00044  | < 0.00044  |
|                 | <b>Thallium</b>  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018 | < 0.00018  | < 0.00018  | < 0.00018  |
| <b>Vanadium</b> | < 0.0019         | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019  | < 0.0019   | < 0.0019   |            |
| <b>Zinc</b>     | < 0.0085         | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085  | < 0.0085   | < 0.0085   |            |

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical reporting detection limit (RDL) shown.
3. J indicates the constituent 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.
4. Appendix III - indicator parameters evaluated during Detection Monitoring.
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**Table 6**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 3 4**

| Constituent     | Well ID          |            |            |            |            |            |            |            |            |
|-----------------|------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                 | GWA-54           |            | GWA-55     |            | GWA-55R    |            | GWA-56     |            |            |
|                 | 1/25/2022        | 8/5/2022   | 1/26/2022  | 8/8/2022   | 1/27/2022  | 8/8/2022   | 1/26/2022  | 8/5/2022   |            |
| Appendix III    | <b>Boron</b>     | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | 0.014 J    | 0.015 J    |
|                 | <b>Calcium</b>   | 24.3       | 23.8       | 53.2       | 52.3       | 44.4       | 47.0       | 37.6       | 38.0       |
|                 | <b>Chloride</b>  | 0.81 J     | 0.96 J     | 5.8        | 4.9        | 4.5        | 4.0        | 5.2        | 5.4        |
|                 | <b>Fluoride</b>  | < 0.05     | 0.073 J    | < 0.05     | 0.078 J    | < 0.05     | 0.070 J    | 0.076 J    | 0.094 J    |
|                 | <b>pH</b>        | 7.38       | 7.32       | 7.21       | 7.10       | 7.27       | 7.26       | 7.45       | 7.60       |
|                 | <b>Sulfate</b>   | 1.4        | 1.4        | 32.5       | 30.0       | 20.7       | 23.5       | 47.1       | 42.9       |
|                 | <b>TDS</b>       | 113        | 106        | 244        | 240 J      | 207        | 209 J      | 278        | 271        |
| Appendix I      | <b>Antimony</b>  | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078  |
|                 | <b>Arsenic</b>   | < 0.0011   | < 0.0022   | < 0.0011   | < 0.0022   | 0.0019 J   | < 0.0022   | 0.0015 J   | < 0.0022   |
|                 | <b>Barium</b>    | 0.031      | 0.030      | 0.026      | 0.026      | 0.032      | 0.027      | 0.032      | 0.033      |
|                 | <b>Beryllium</b> | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 |
|                 | <b>Cadmium</b>   | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  |
|                 | <b>Chromium</b>  | 0.0013 J   | 0.0016 J   | < 0.0011   | 0.0011 J   | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   |
|                 | <b>Cobalt</b>    | < 0.00039  | < 0.00039  | 0.0035 J   | 0.00084 J  | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  |
|                 | <b>Copper</b>    | < 0.0005   | < 0.0010   | < 0.0005   | < 0.0010   | < 0.0005   | < 0.0010   | < 0.0005   | < 0.0010   |
|                 | <b>Lead</b>      | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  |
|                 | <b>Mercury</b>   | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  |
|                 | <b>Nickel</b>    | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | 0.00082 J  |
|                 | <b>Selenium</b>  | < 0.0014   | < 0.0014   | 0.0025 J   | 0.0024 J   | 0.0016 J   | 0.0015 J   | < 0.0014   | < 0.0014   |
|                 | <b>Silver</b>    | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  |
|                 | <b>Thallium</b>  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  |
| <b>Vanadium</b> | < 0.0019         | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   |            |
| <b>Zinc</b>     | < 0.0085         | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   |            |

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical reporting detection limit (RDL) shown.
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4. Appendix III - indicator parameters evaluated during Detection Monitoring.
5. NA indicates constituent was not analyzed.

**Table 6**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 3 4**

| Constituent     | Well ID          |            |            |            |            |            |            |            |            |
|-----------------|------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                 | GWC-16R          |            | GWC-17R    |            | GWC-18     |            | GWC-18R    |            |            |
|                 | 1/28/2022        | 8/11/2022  | 1/28/2022  | 8/11/2022  | 1/28/2022  | 8/10/2022  | 1/27/2022  | 8/10/2022  |            |
| Appendix III    | <b>Boron</b>     | 0.021 J    | 0.013 J    | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   |
|                 | <b>Calcium</b>   | 68.5       | 71.6       | 64.7       | 70.8       | 19.1       | 18.9       | 29.3       | 33.6       |
|                 | <b>Chloride</b>  | 1.6        | 1.4        | 4.6        | 4.7        | 2.1        | 2.3        | 2.3        | 2.6        |
|                 | <b>Fluoride</b>  | 0.17       | 0.12       | < 0.05     | 0.051 J    | < 0.05     | 0.060 J    | < 0.05     | < 0.050    |
|                 | <b>pH</b>        | 7.31       | 7.05       | 7.34       | 7.27       | 6.6        | 6.53       | 7.76       | 7.59       |
|                 | <b>Sulfate</b>   | 11.9       | 5.0        | 7.6        | 6.6        | 1.6        | 1.7        | 2.1        | 2.3        |
|                 | <b>TDS</b>       | 317        | 306        | 302        | 296        | 99         | 86.0       | 146        | 147        |
| Appendix I      | <b>Antimony</b>  | 0.027      | 0.0099     | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078  |
|                 | <b>Arsenic</b>   | < 0.0011   | < 0.0022   | < 0.0011   | < 0.0022   | < 0.0011   | < 0.0022   | < 0.0011   | < 0.0022   |
|                 | <b>Barium</b>    | 0.049      | 0.034      | 0.018      | 0.017      | 0.044      | 0.013      | 0.014      | 0.014      |
|                 | <b>Beryllium</b> | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | 0.000055 J | 0.000056 J |
|                 | <b>Cadmium</b>   | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  |
|                 | <b>Chromium</b>  | 0.0011 J   | < 0.0011   | < 0.0011   | < 0.0011   | 0.0014 J   | 0.0014 J   | 0.0015 J   | < 0.0011   |
|                 | <b>Cobalt</b>    | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  |
|                 | <b>Copper</b>    | 0.00088 J  | < 0.0010   | < 0.0005   | < 0.0010   | < 0.0005   | < 0.0010   | < 0.0005   | < 0.0010   |
|                 | <b>Lead</b>      | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  |
|                 | <b>Mercury</b>   | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  |
|                 | <b>Nickel</b>    | 0.0063     | 0.0077     | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  |
|                 | <b>Selenium</b>  | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   |
|                 | <b>Silver</b>    | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  |
|                 | <b>Thallium</b>  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  |
| <b>Vanadium</b> | < 0.0019         | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   |            |
| <b>Zinc</b>     | 0.026            | 0.036 J    | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   |            |

**Notes:**

1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical reporting detection limit (RDL) shown.
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**Table 6**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 3 4**

| Constituent     | Well ID          |            |            |            |            |            |            |            |            |
|-----------------|------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                 | GWC-19R          |            | GWC-20R    |            | GWC-21R    |            | GWC-22R    |            |            |
|                 | 1/27/2022        | 8/9/2022   | 1/27/2022  | 8/9/2022   | 1/28/2022  | 8/10/2022  | 1/27/2022  | 8/10/2022  |            |
| Appendix III    | <b>Boron</b>     | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   | 0.011 J    | < 0.0086   | < 0.0086   | < 0.0086   |
|                 | <b>Calcium</b>   | 33.2       | 34.6       | 36.2       | 38.7       | 60         | 67.7       | 36.9       | 36.0       |
|                 | <b>Chloride</b>  | 2.5        | 2.3        | 1.9        | 1.7        | 4.6        | 4.1        | 2.5        | 2.7        |
|                 | <b>Fluoride</b>  | < 0.05     | 0.067 J    | < 0.05     | 0.072 J    | < 0.05     | 0.057 J    | < 0.05     | 0.055 J    |
|                 | <b>pH</b>        | 7.74       | 7.77       | 7.73       | 7.81       | 6.69       | 6.98       | 7.28       | 7.10       |
|                 | <b>Sulfate</b>   | 3.9        | 3.7        | 1.7        | 1.6        | 13.7       | 10.5       | 1.3        | 1.6        |
|                 | <b>TDS</b>       | 149        | 102        | 176        | 171        | 290        | 286        | 167        | 162        |
| Appendix I      | <b>Antimony</b>  | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078  | 0.0061     | 0.0081 J   | < 0.00078  | < 0.00078  |
|                 | <b>Arsenic</b>   | < 0.0011   | < 0.0022   | < 0.0011   | < 0.0022   | 0.0031 J   | 0.0025 J   | 0.0045 J   | 0.0035 J   |
|                 | <b>Barium</b>    | 0.016      | 0.014      | 0.028      | 0.029      | 0.037      | 0.030      | 0.06       | 0.042      |
|                 | <b>Beryllium</b> | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 |
|                 | <b>Cadmium</b>   | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  |
|                 | <b>Chromium</b>  | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   | 0.0023 J   | < 0.0011   | < 0.0011   |
|                 | <b>Cobalt</b>    | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  | 0.0011 J   | 0.00078 J  |
|                 | <b>Copper</b>    | < 0.0005   | < 0.0010   | < 0.0005   | < 0.0010   | < 0.0005   | < 0.0010   | < 0.0005   | < 0.0010   |
|                 | <b>Lead</b>      | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  |
|                 | <b>Mercury</b>   | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  |
|                 | <b>Nickel</b>    | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  | 0.0014 J   | 0.0014 J   | 0.00076 J  | < 0.00071  |
|                 | <b>Selenium</b>  | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   |
|                 | <b>Silver</b>    | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  |
|                 | <b>Thallium</b>  | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  | 0.00021 J  | 0.00031 J  | < 0.00018  | < 0.00018  |
| <b>Vanadium</b> | < 0.0019         | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   | < 0.0019   |            |
| <b>Zinc</b>     | < 0.0085         | < 0.0085   | < 0.0085   | < 0.0085   | < 0.0085   | 0.016 J    | < 0.0085   | < 0.0085   |            |

Notes:

1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical reporting detection limit (RDL) shown.
3. J indicates the constituent 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.
4. Appendix III - indicator parameters evaluated during Detection Monitoring.
5. NA indicates constituent was not analyzed.

**Table 6**  
**Groundwater Analytical Data Summary**  
**Landfill Cells 3 4**

| Constituent     |                  | Well ID    |            |           |            |            |            |            |
|-----------------|------------------|------------|------------|-----------|------------|------------|------------|------------|
|                 |                  | GWC-23R    |            |           | GWC-24R    |            | GWC-25R    |            |
|                 |                  | 1/28/2022  | 8/11/2022  | 11/3/2022 | 1/28/2022  | 8/9/2022   | 1/27/2022  | 8/9/2022   |
| Appendix III    | <b>Boron</b>     | < 0.0086   | < 0.0086   | NA        | < 0.0086   | < 0.0086   | < 0.0086   | < 0.0086   |
|                 | <b>Calcium</b>   | 64.9       | 67.0       | NA        | 34.4       | 33.8       | 34.4       | 37.1       |
|                 | <b>Chloride</b>  | 1.7        | 2.1        | NA        | 2.2        | 2.0        | 2.4        | 2.2        |
|                 | <b>Fluoride</b>  | < 0.05     | 0.073 J    | NA        | < 0.05     | 0.072 J    | < 0.05     | 0.068 J    |
|                 | <b>pH</b>        | 7.38       | 7.37       | NA        | 7.68       | 7.48       | 7.46       | 7.60       |
|                 | <b>Sulfate</b>   | 98.4       | 143        | 137       | 2.3        | 2.1        | 2.0        | 1.9        |
|                 | <b>TDS</b>       | 454        | 586        | 573       | 159        | 149        | 168        | 164        |
| Appendix I      | <b>Antimony</b>  | < 0.00078  | < 0.00078  | NA        | < 0.00078  | < 0.00078  | < 0.00078  | < 0.00078  |
|                 | <b>Arsenic</b>   | 0.0026 J   | < 0.0022   | NA        | 0.0021 J   | < 0.0022   | < 0.0011   | < 0.0022   |
|                 | <b>Barium</b>    | 0.036      | 0.034      | NA        | 0.025      | 0.015      | 0.017      | 0.015      |
|                 | <b>Beryllium</b> | < 0.000054 | < 0.000054 | NA        | < 0.000054 | < 0.000054 | < 0.000054 | < 0.000054 |
|                 | <b>Cadmium</b>   | < 0.00011  | < 0.00011  | NA        | < 0.00011  | < 0.00011  | < 0.00011  | < 0.00011  |
|                 | <b>Chromium</b>  | < 0.0011   | < 0.0011   | NA        | < 0.0011   | < 0.0011   | < 0.0011   | < 0.0011   |
|                 | <b>Cobalt</b>    | < 0.00039  | < 0.00039  | NA        | < 0.00039  | < 0.00039  | < 0.00039  | < 0.00039  |
|                 | <b>Copper</b>    | 0.00068 J  | < 0.0010   | NA        | < 0.0005   | < 0.0010   | < 0.0005   | < 0.0010   |
|                 | <b>Lead</b>      | < 0.00089  | < 0.00089  | NA        | < 0.00089  | < 0.00089  | < 0.00089  | < 0.00089  |
|                 | <b>Mercury</b>   | < 0.00013  | < 0.00013  | NA        | < 0.00013  | < 0.00013  | < 0.00013  | < 0.00013  |
|                 | <b>Nickel</b>    | < 0.00071  | < 0.00071  | NA        | < 0.00071  | < 0.00071  | < 0.00071  | < 0.00071  |
|                 | <b>Selenium</b>  | < 0.0014   | < 0.0014   | NA        | < 0.0014   | < 0.0014   | < 0.0014   | < 0.0014   |
|                 | <b>Silver</b>    | < 0.00044  | < 0.00044  | NA        | < 0.00044  | < 0.00044  | < 0.00044  | < 0.00044  |
|                 | <b>Thallium</b>  | < 0.00018  | < 0.00018  | NA        | < 0.00018  | < 0.00018  | < 0.00018  | < 0.00018  |
| <b>Vanadium</b> | < 0.0019         | < 0.0019   | NA         | < 0.0019  | < 0.0019   | < 0.0019   | < 0.0019   |            |
| <b>Zinc</b>     | 0.0099 J         | < 0.0085   | NA         | < 0.0085  | < 0.0085   | < 0.0085   | < 0.0085   |            |

Notes:

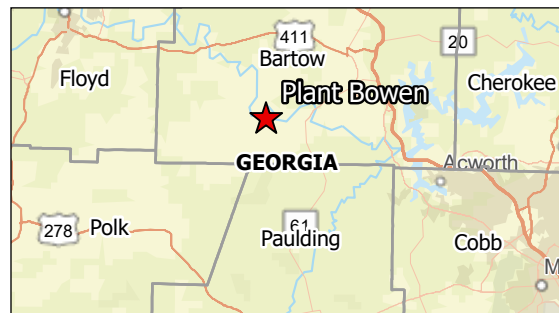
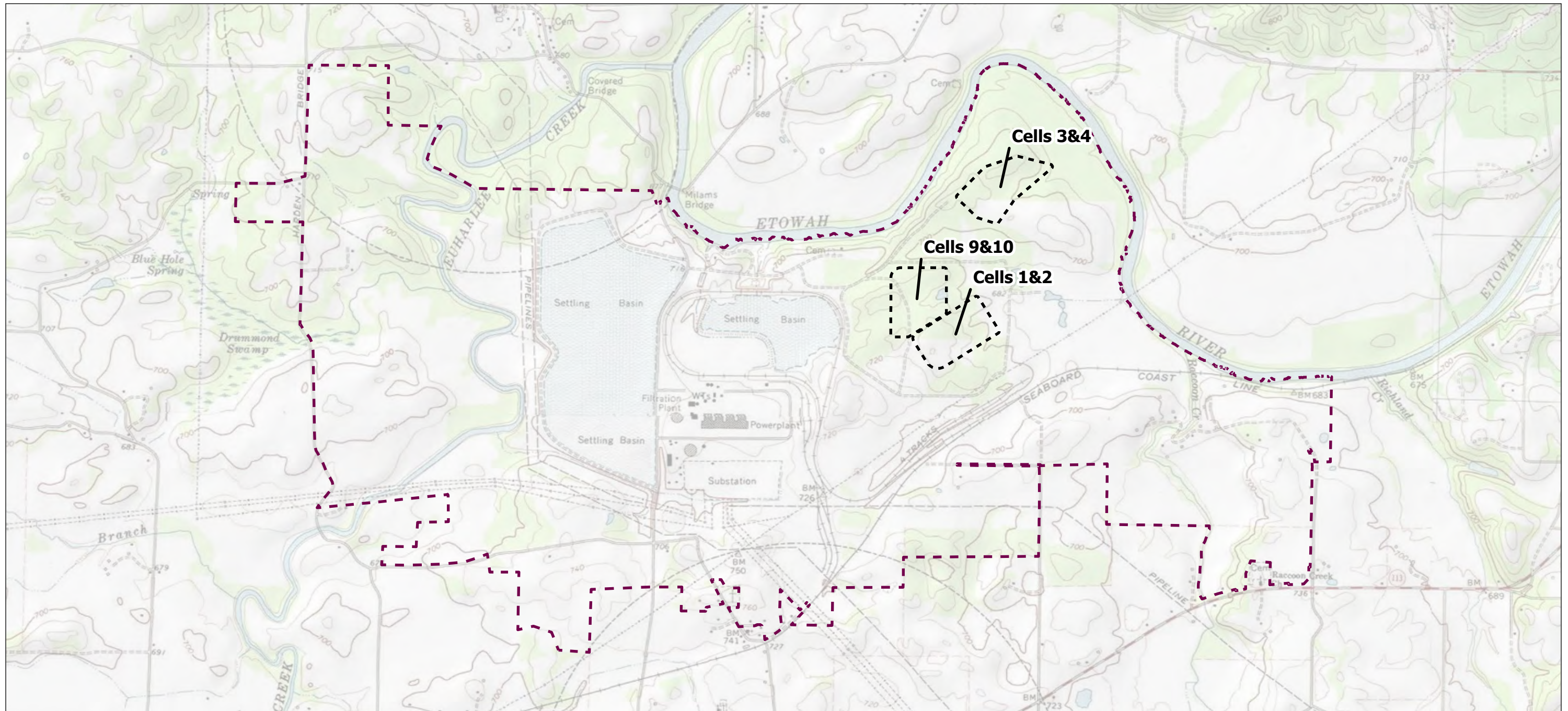
1. Results for constituents are reported in milligrams per liter (mg/L). pH reported in standard units (s.u.).
2. < indicates the constituent was not detected above the analytical reporting detection limit (RDL) shown.
3. J indicates the constituent was detected at such low levels that the precision 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.
4. Appendix III - indicator parameters evaluated during Detection Monitoring.
5. NA indicates constituent was not analyzed.

**TABLE 7  
STATISTICAL METHOD SUMMARY**

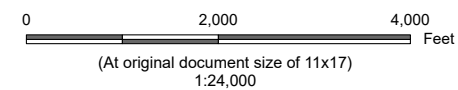
|                         |                                       |   |
|-------------------------|---------------------------------------|---|
| Statistical Methodology | Data Screening on Proposed Background | Evaluate outliers, trends, and seasonality when sufficient data are available   |
|                         | Statistical Limits                    | Interwell statistical limits are applied on a parameter basis, depending on the appropriateness of the method as determined by the Analysis of Variance.<br><br>Intrawell statistical limits are applied on a parameter basis, depending on the appropriateness of the method.  |
|                         | Prediction Limits                     | When data contain between 15-50% non-detects the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.<br><br>Non-parametric means data sets contain greater than 50% non-detects or data are not normally or transformed-normally distributed.  |
|                         | Management of Non-Detects             | When data contain less than 15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the practical quantitation limit (PQL) as reported by the laboratory.<br><br>When data contain between 15-50% non-detects the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.                      |
|                         | Confidence Intervals                  | Used in Assessment and Corrective Action monitoring.  |
|                         | No Statistical Testing                | Statistical testing is not required for parameters containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).   |
|                         | Verification Resample Plan            | Optional 1-of-2 with minimum of 8 samples per well for interwell testing.<br><br>Optional 1-of-3 or 1-of-2 with minimum of 8 samples per well for intrawell testing.  |
|                         | Optional                              | <ul style="list-style-type: none"> <li>▪ Interwell statistical methods may be used as a second step to determine if an apparent statistically significant increase (SSI) identified by intrawell statistical methods is below sitewide background.</li> <li>▪ Initial statistical exceedance warrants independent resampling within 90 days.</li> <li>▪ If resample passes, well/parameter is not a confirmed SSI.</li> <li>▪ If resample exceeds, well/parameter has a confirmed SSI.</li> <li>▪ If no resample is collected, the original result is deemed verified.</li> </ul> |

# **FIGURES**





- Legend**
- Approximate Site Boundary
  - Landfill Cell Boundary (Approximate)





**Stantec**



**Georgia Power**

---

*Project Location*  
Euharlee, Georgia

*Client/Project*  
Georgia Power  
2022 Annual Groundwater Monitoring and Corrective Action Report - Plant Bowen Cells 1 & 2, 3 & 4, and 9 & 10

*Figure No.*  
**1**

*Title*  
**Site Location Map**

**Notes**

1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
2. Data Sources: Site and Landfill Boundaries provided by Southern Company Services and Wood Environment & Infrastructure Solutions
3. Background: Copyright © 2013 National Geographic Society, i-cubed, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

Prepared by DMB on 9/28/2022  
TR by MP on 9/28/2022  
IR by MD on 9/28/2022

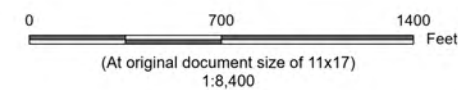
172678190





- Legend**
- ⊕ Detection Monitoring Well (Overburden)
  - △ Water Level Piezometer (Overburden)
  - ⊕ Detection Monitoring Well (Bedrock)
  - △ Water Level Piezometer (Bedrock)
  - Ephemeral Spring Location
  - Approximate Site Boundary
  - Landfill Cell Boundary (Approximate)

GWA-36 abandoned 3/15/2022.  
 GWA-4 abandoned 3/14/2022.  
 GWA-36A installed 3/18/2022.  
 GWA-51RZ abandoned 12/2022.  
 GWA-52 abandoned 12/2022.  
 GWA-53 abandoned 12/2022.  
 GWA-53R abandoned 12/2022.  
 GWA-54 abandoned 12/2022.  
 GWA-55 abandoned 12/2022.  
 GWA-55R abandoned 12/2022.  
 GWA-56 abandoned 12/2022.



Project Location  
 Etowah, Georgia

Prepared by CA on 1/19/2023  
 TR by MP on 1/19/2023  
 IR by MD on 1/19/2023

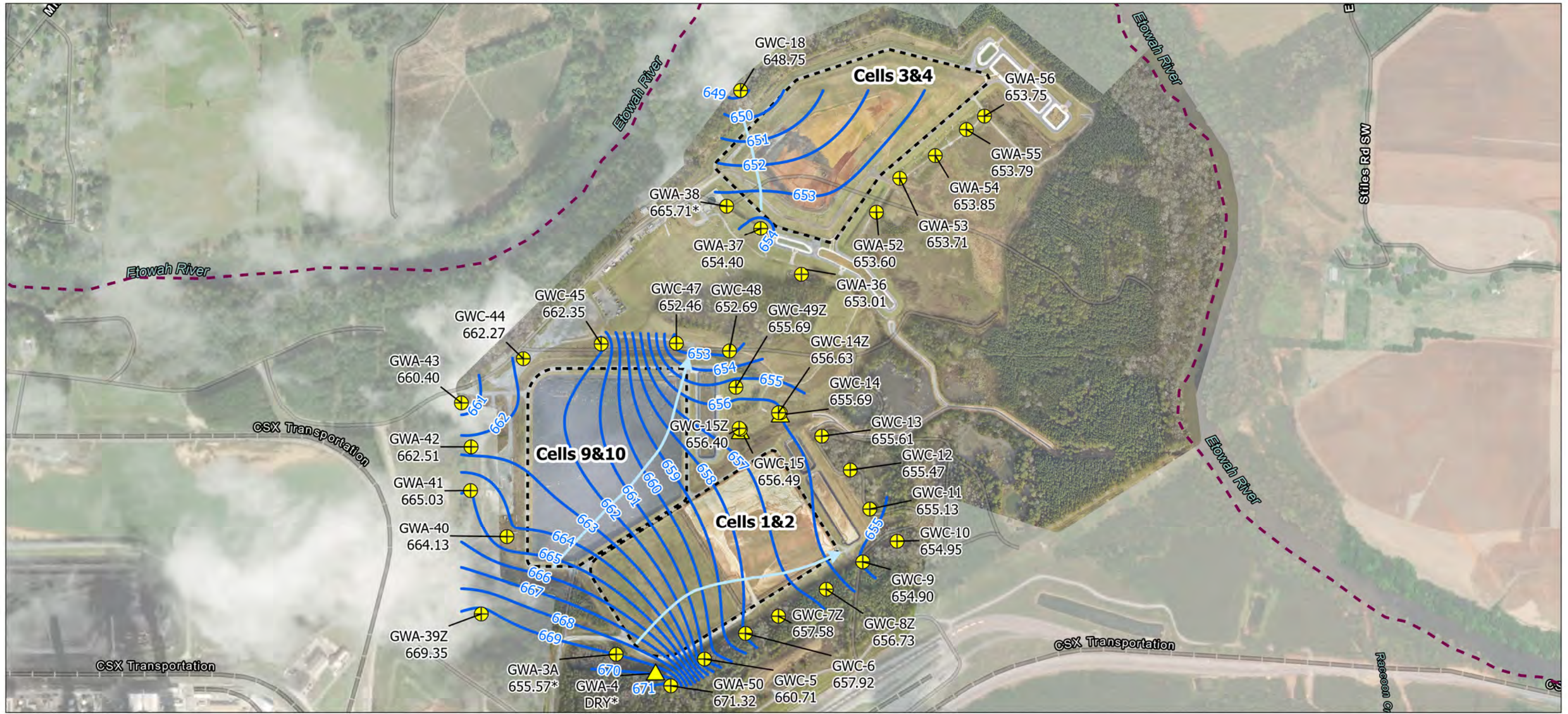
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 2022 Annual Groundwater Monitoring and Corrective  
 Action Report - Plant Bowen Cells 1 & 2, 3 & 4, and 9 & 10

Figure No.  
 2

Title  
 Detection Monitoring System

**Notes**

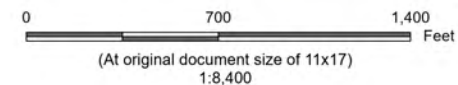
1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet  
 2. Data Sources: Landfill Boundaries, Site Boundary, and Monitoring Well locations provided by Southern Company Services and Wood Environment & Infrastructure Solutions  
 3. Plant Imagery provided by client. Supplemental Background: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS



- Legend**
- ⊕ Detection Monitoring Well (Overburden)
  - ▲ Water Level Piezometer (Overburden)
  - Interpreted Groundwater Flow Direction
  - Potentiometric Surface Contour Jan 2022 (feet (ft) NAVD88)
  - - - Approximate Site Boundary
  - - - Landfill Cell Boundary (Approximate)
- 669.35 Groundwater Elevation (ft NAVD88)

\* Indicates groundwater elevation in wells GWA-3A, GWA-4, and GWA-38 were not used in contouring.

**Note**  
 1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet  
 2. Data Sources: Landfill Boundaries, Site Boundary, Monitoring Well, Flow Arrow, and Contour locations provided by Southern Company Services and Wood Environment & Infrastructure Solutions.  
 3. Plant Imagery provided by client. Supplemental Background: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USGS, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS



Project Location  
 Etowah, Georgia

Prepared by CA on 1/19/2023  
 TR by MP on 1/19/2023  
 IR by MD on 1/19/2023

Client/Project  
 Georgia Power  
 2022 Annual Groundwater Monitoring and Corrective  
 Action Report - Plant Bowen Cells 1 & 2, 3 & 4, and 9 & 10

Figure No.  
**3**

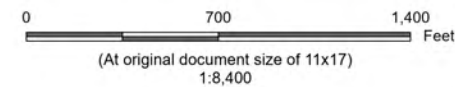
Title  
**Potentiometric Surface -  
 Overburden Wells January 2022**



- Legend**
- Detection Monitoring Well (Overburden)
  - Water Level Piezometer (Overburden)
  - Potentiometric Surface Contour Aug 2022 (feet (ft) NAVD88)
  - Interpreted Groundwater Flow Direction
  - Approximate Site Boundary
  - Landfill Cell Boundary (Approximate)

669.35 Groundwater Elevation (ft NAVD88)

\* Indicates groundwater elevation in wells GWA-3A and GWA-38 were not used in contouring.



Project Location  
Euharlee, Georgia

Prepared by CA on 1/19/2023  
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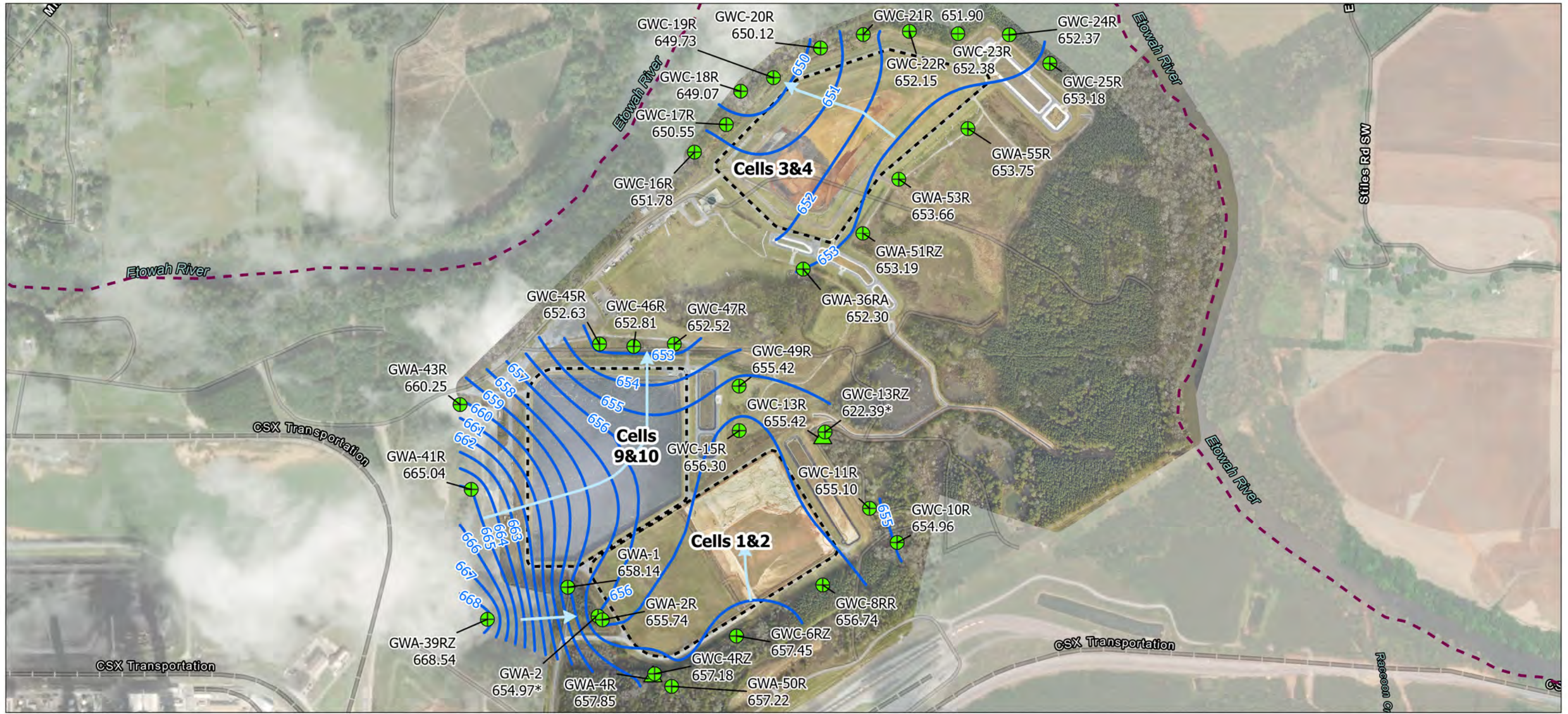
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Georgia Power  
2022 Annual Groundwater Monitoring and Corrective  
Action Report - Plant Bowen Cells 1 & 2, 3 & 4, and 9 & 10

Figure No.  
**4**

Title  
**Potentiometric Surface -  
Overburden Wells August 2022**

**Notes**

1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
2. Data Sources: Landfill Boundaries, Site Boundary, Monitoring Well, Flow Arrow, and Contour locations provided by Southern Company Services and Wood Environment & Infrastructure Solutions.
3. Plant Imagery provided by client. Supplemental Background: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USGS, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

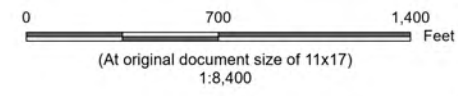


- Legend**
- Detection Monitoring Well (Bedrock)
  - ▲ Water Level Piezometer (Bedrock)
  - Interpreted Groundwater Flow Direction
  - Potentiometric Surface Contour Jan 2022 (feet (ft) NAVD88)
  - - - Approximate Site Boundary
  - - - Landfill Cell Boundary (Approximate)
  - 668.54 Groundwater Elevation (ft NAVD88)

\* Indicates groundwater elevation in wells GWA-2 and GWC-13RZ were not used in contouring.

**Notes**

1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
2. Data Sources: Landfill Boundaries, Site Boundary, Monitoring Well, Flow Arrow, and Contour locations provided by Southern Company Services and Wood Environment & Infrastructure Solutions.
3. Plant Imagery provided by client. Supplemental Background: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS



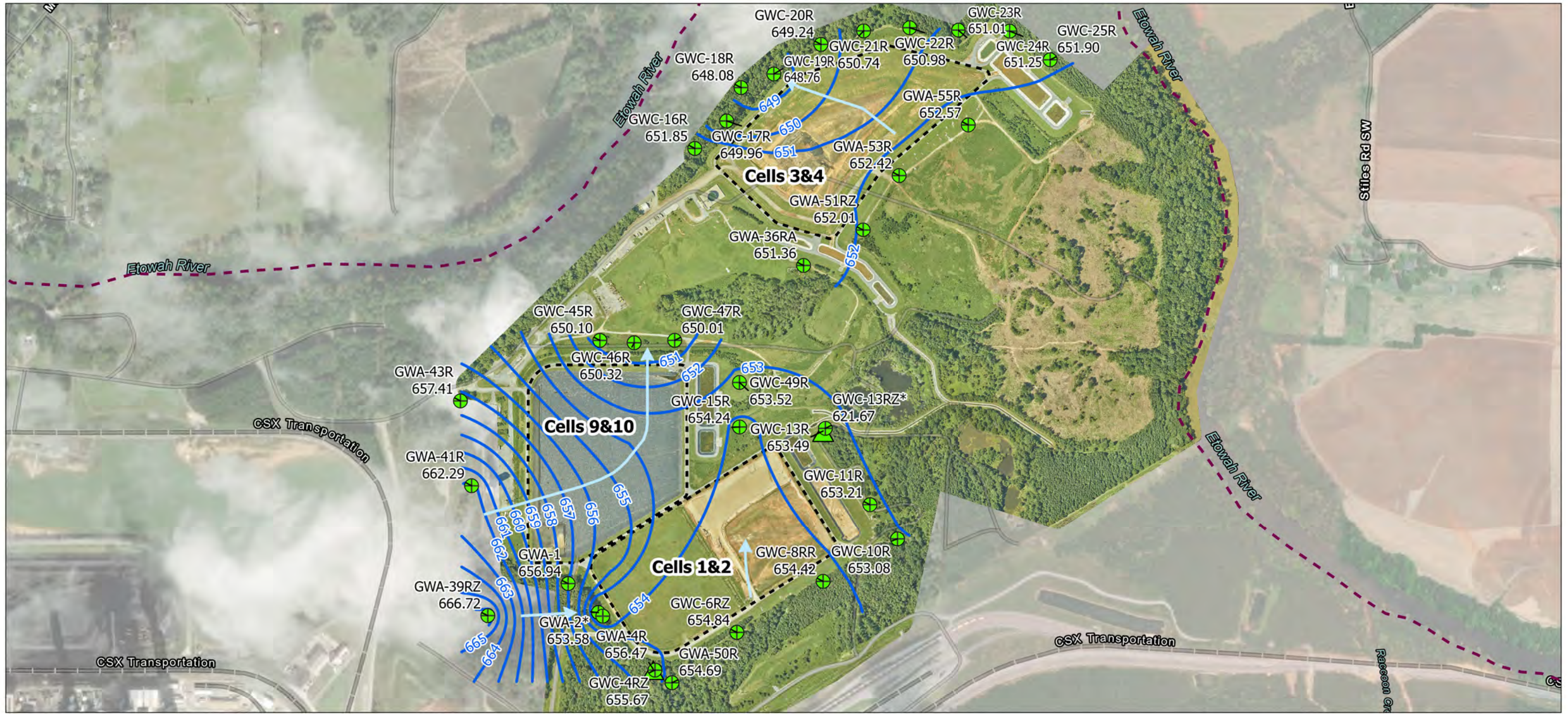
Project Location  
Euharlee, Georgia

Prepared by CA on 1/19/2023  
TR by MP on 1/19/2023  
IR by MD on 1/19/2023

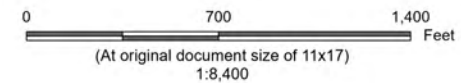
Client/Project  
Georgia Power  
2022 Annual Groundwater Monitoring and Corrective  
Action Report - Plant Bowen Cells 1 & 2, 3 & 4, and 9 & 10

Figure No.  
**5**

Title  
**Potentiometric Surface - Bedrock  
Wells January 2022**



- Legend**
- Detection Monitoring Well (Bedrock)
  - ▲ Water Level Piezometer (Bedrock)
  - Potentiometric Surface Contour Aug 2022 (feet (ft) NAVD88)
  - Interpreted Groundwater Flow Direction
  - Approximate Site Boundary
  - Landfill Cell Boundary (Approximate)



---

*Project Location*  
Euharlee, Georgia

*Client/Project*  
Georgia Power  
2022 Annual Groundwater Monitoring and Corrective  
Action Report - Plant Bowen Cells 1 & 2, 3 & 4, and 9 & 10

*Figure No.*  
**6**

*Title*  
**Potentiometric Surface - Bedrock  
Wells August 2022**

*Prepared by CA on 1/19/2023  
TR by MP on 1/19/2023  
IR by MD on 1/19/2023*

*172678190*

**Notes**

1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
2. Data Sources: Landfill Boundaries, Site Boundary, Monitoring Well, Flow Arrow, and Contour locations provided by Southern Company Services and Wood Environment & Infrastructure Solutions.
3. Plant Imagery provided by client. Supplemental Background: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

668.54 Groundwater Elevation (ft NAVD88)  
\* Indicates groundwater elevation in well GWC-13RZ was not used in contouring.

**APPENDIX A  
WELL INSPECTIONS  
(INCLUDED AS SEPERATE PDF)**



# **APPENDIX B WELL INSTALLATION AND ABANDONMENT REPORTS**



# **Groundwater Monitoring Well Installation for GWA-36A and Abandonment Report for GWA-4 and GWA-36**

**Georgia Power Company – Plant Bowen**

Landfill Cells 1 & 2, 3 & 4, and 9 & 10

Project No.: 6122160287

Prepared for:



Atlanta, Georgia

5/6/2022

---



### Professional Groundwater Scientist Certification

I certify that I am a qualified ground-water scientist who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and have sufficient training and experience in groundwater hydrology and related fields, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport. I further certify that this report was prepared by myself or by a subordinate working under my direction. We certify that the information included is to the best of our knowledge and belief, true, accurate and complete. In preparing this report, we have relied on information provided by Southern Company Services and Georgia Power.



Gregory J. Wrenn, P.E.  
Registered Professional Engineer  
Professional Engineer No. 025565



Rhonda N. Quinn, P.G.  
Registered Professional Geologist  
Georgia Registration No. 1031

Date: *May 6, 2022*

Date: *May 6, 2022*

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## 1.0 INTRODUCTION

Georgia Power's Plant Bowen solid waste disposal facility (Site) is located in Bartow County off State Highway 113, approximately 7 miles west-southwest of Cartersville and 20 miles southeast of Rome. The disposal facility is approximately 300 acres located on a previously undeveloped, contiguous portion of the plant property. The Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10 are located on the northeast portion of the Plant Bowen property. The disposal facility receives coal combustion by-products, coal ash and gypsum, from coal power generating processes at the Site. The landfill cells are lined in accordance with Solid Waste Permit No. 008-018D (LI). A well network around each of the active disposal cells monitors the groundwater conditions at the Site. The monitoring well locations are shown in **Figure 1: Location of Replacement Well GWA-36A**.

This report provides details for the installation of monitoring well GWA-36A and abandonment of monitoring wells GWA-4 and GWA-36. Well construction details are included in **Table 1: Summary of Monitoring Well Construction** and locations are shown in **Figure 1**. The surveyed coordinates and elevations of GWA-36A are provided in a certified well survey report in **Appendix A: Well Survey Document**.

GWA-36 exhibited persistent high turbidity during the January-February 2022 semi-annual groundwater sampling event and did not decrease below 5 Nephelometric Turbidity Units (NTUs) after several attempts of redevelopment. Further investigation identified possible filter pack sand in the pump used for purging and sampling GWA-36. The existing well GWA-36 was abandoned and replaced by new well GWA-36A due to likely well construction issues. Replacement well GWA-36A was located less than 50 feet adjacent to GWA-36. The well screen of GWA-36A was placed to intercept a water-bearing zone in the overburden similar to GWA-36.

Groundwater level measurements in GWA-4, GWA-4R, and GWA-4RZ from March 2016 through January 2022 indicate that the potentiometric surface in the upper aquifer is consistently measured at a lower elevation than the screened interval of GWA-4. Per the Georgia EPD Solid Waste Management Rule 391-3-4-.10(6)(g), monitoring wells require replacement after two dry sampling events. Well GWA-4 was abandoned without replacement due to the lack of continuous and persistent groundwater present in the overburden. GWA-4R and GWA-4RZ water levels will continue to be measured and represent the groundwater elevation at this location in the upper aquifer.

## 2.0 DRILLING AND WELL INSTALLATION

The following sections provide details and description of drilling methodology, materials and installation procedures used in constructing the monitoring well GWA-36A. Monitoring well construction details are summarized in **Table 1**.

### 2.1 Drilling Method

Wood provided oversight and documented the drilling and installation of monitoring well GWA-36A by Cascade Drilling, under contract with Southern Company, from March 16 through 18, 2022. A copy of the Water Well Contractor's performance bond is provided in **Appendix B: Well Construction and Boring Logs**. The drilling was performed using roto-sonic technology with a Terra Sonic, compact, track-mounted drill rig. A hand-auger was used to check the upper 10 feet of the well location to provide clearance of potential underground utilities.

Following subsurface clearance, a 4-inch diameter sampling core barrel and tooling, followed by a 6-inch override (outer) casing, was advanced via sonic methodology to a final depth of 102.9 feet (577.7 feet above North America Vertical Datum of 1988 (NAVD88)) for the purpose of collecting soil and rock for lithologic characterization and subsequent well installation. Soil and/or rock were collected continuously, in core runs up to 10 feet, from near the ground surface to the boring termination depth. Upon completion of a core run, prior to retracting the core barrel, 6-inch override (outer) casing was advanced over the 4-inch core barrel and tooling to maintain borehole integrity. Once the override casing was in place, the core barrel was retracted from the borehole and the soil and/or rock sample were extruded into a plastic sleeve and provided to the Wood field representative for characterization, documentation, photographing, and archival in wooden sample storage boxes (see **Appendix B**). After sample retrieval, the core barrel was advanced, and another core run was completed. This process was continued until the target depth was reached where bedrock was encountered.

Upon reaching the target depth, the 6-inch override casing was used to flush/clean-out the borehole and left in place for well construction. The well was installed directly through the override casing. The screen and casing (riser) were placed in the override casing and the annular space was filled (i.e., emplacement of the filter pack, bentonite, and grout) as the override casing was retracted.

### 2.2 Screened Interval

Well GWA-36A is screened in the overburden and was constructed with ten feet of well screen as shown in the Well Construction Log provided in **Appendix B**. The former well, GWA-36, was constructed with a screened interval depth of 65.7 to 75.7 feet below ground surface (bgs) (616.19-606.19 feet, NAVD88) which was a shallower elevation than GWA-36A screened interval

(588.80-578.80 feet, NAVD88). Well GWA-36A was installed to a greater depth due to the depth to bedrock being deeper at the new well location than the GWA-36 location.

### 2.3 Well Casing and Screens

The monitoring well is constructed of 2-inch inside diameter Schedule 40 polyvinyl chloride (PVC) casing (riser) and pre-packed Number 10 slot (0.010-inch aperture) screen. The pre-pack screens are comprised of a 10-foot-long section of slotted PVC “U-pack” pre-pack screen. Each pre-pack screen used in the construction of the well was manually filled with sand and then attached to the riser section of the well casing. Well construction materials are designed to be sufficiently durable to resist chemical and physical degradation and not interfere with the quality of groundwater samples. The casing and screen sections were flush-threaded and did not require the use of solvent or adhesive to construct the well.

The well was designed and constructed to:

- 1) allow sufficient groundwater flow to the well for sampling;
- 2) minimize the passage of formation materials (turbidity) into the well; and,
- 3) ensure sufficient structural integrity to prevent collapse of the well.

### 2.4 Filter Pack

The filter pack material is designed to be chemically inert, clean, well-graded, well-rounded, dimensionally stable, silica (quartz) sand of which the 80 to 90 percent retained size is 0.010-inch diameter (the screen aperture). The filter pack sand used for the construction of the monitoring well was the 20/40 mesh sand from the supplier (Covia). The pre-pack screen was filled with the filter pack sand prior to insertion into the borehole. The filter pack material was mixed with water and emplaced in the annular space between the outside of the pre-pack screen and borehole wall to ensure an adequate thickness of filter pack material between the well and the formation. The filter pack was extended approximately three feet above the top of the screen. After installing the filter pack, the well was pumped to allow settlement of the filter pack material, prior to installing the annular seal. The filter pack depth/interval is documented in the well construction log provided in **Appendix B**.

### 2.5 Annular Seal

After installing the filter pack, a bentonite seal was constructed to a thickness coinciding with the observed elevation of the water table during drilling. Bentonite pellets and chips were emplaced in the annular space directly above the filter pack to seal the annulus and prevent vertical flow of water along the well casing. The non-coated bentonite pellets were placed from the top of the filter pack to a thickness of approximately 2.4 feet. The bentonite used for the

construction of the well was 3/8-inch, non-coated pellets (PDS Pel-Plug). The bentonite pellets were allowed to hydrate for eighteen hours and settle in accordance with the manufacturer's recommendations prior to adding more well sealing materials into the annular space above the pellets. The bentonite seal was subsequently extended from the top of the pellets to near the water table at approximately 29 feet below ground surface by the addition of 3/8-inch bentonite chips (Haliburton Hole-plug). The bentonite chips were hydrated. The bentonite seal was extended up to the water table to reduce the potential of the grout impacting nearby well GWA-36RA.

After the bentonite chips were adequately hydrated, the remaining annular space was sealed using AQUAGUARD by Baroid Industrial Drilling Products, a sodium bentonite blended grout. The grout was prepared in accordance with manufacturer's instructions and emplaced from the top of the bentonite seal to the near ground surface via tremie method. The grout was injected at a low velocity as to not displace the bentonite seal and the tremie pipe was raised as grout filled the annular space. Grout was injected via tremie method from a depth of approximately 29 feet to within two feet of ground surface.

A concrete seal extends from approximately two feet below ground surface to grade and was formed into a slightly mounded cement apron extending outward to help direct rainwater run-off away from the well. The well pad dimensions were 4 feet by 4 feet with a thickness of 4 inches.

## 2.6 Cap and Protective Casing

Well GWA-36A was fitted with a sealable cap and a lockable, 4-inch square, aluminum, above-grade (stick-up) protective casing installed over the well to protect the PVC riser from damage and secure it from unauthorized access. The annular space between the well riser and protective casing was filled with pea-size gravel and a small weephole was drilled near the base to allow for drainage from inside the protective casing. Additionally, bollards were installed at the corners of the concrete pad to protect the well. Prior to leaving the site, the well was secured with a padlock, keyed specific to the site. Well construction details are documented in **Appendix B**.

### 3.0 WELL DEVELOPMENT

GWA-36A was developed using an electric submersible pump to restore the natural hydraulic conductivity of the formation and to remove fine-grained sediment to help ensure low-turbidity groundwater samples. The well was alternately surged and purged until visually clear of particulates. Groundwater quality parameters turbidity, pH, specific conductivity, temperature, dissolved oxygen (DO), and oxidation-reduction potential (ORP) were recorded during development to ensure that the well was fully developed.

Development of the groundwater monitoring well continued until criteria indicating adequate development was achieved. Development is generally recognized as being complete when the well yields water with a turbidity less than 5 NTUs and the pH and specific conductivity has stabilized (i.e., pH within 0.1 standard unit and specific conductivity within 5% over three consecutive measurements). The development forms are included in **Appendix C: Well Development Forms**.

Prior to deploying the development pump into the well, the pump was decontaminated and fitted with new disposable tubing. New disposable, nitrile gloves were worn throughout the development process, including when initially deploying the pump, handling the pump and tubing while surging, and during decontamination activities.

## 4.0 SURVEY

Well location, top of casing (TOC) elevation, and ground surface elevation were surveyed by Donaldson Garrett & Associates, Inc. Northings and easting are in feet relative to Georgia State Plane, West Zone, North America Datum of 1983 (NAD 83) and surveyed with a horizontal accuracy of 0.5 feet. TOC and ground surface elevations are in feet relative to North American Vertical Datum of 1988 (NAVD88) and surveyed with a vertical accuracy of 0.01 feet. Survey data are included in **Table 1**. Well survey documents are provided in **Appendix A: Well Survey Document**.



## 5.0 WELL ABANDONMENT

Wells GWA-4 and GWA-36 were abandoned following USEPA Region 4 guidance for well abandonment procedures. Well GWA-4 was constructed approximately 20 feet into bedrock. The well was abandoned by filling the screened interval and up to the soil-bedrock interface with bentonite chips and hydrated. The well casing was overdrilled from the ground surface to the soil-bedrock interface with the six-inch overdrive casing. The well casing above the soil-bedrock interface was removed. The overdrilled interval was filled with bentonite chips up to the water table at approximately 41 feet, bgs. AQUAGUARD by Baroid Industrial Drilling Products, a sodium bentonite blended grout, was emplaced from the top of the bentonite chips to the ground surface utilizing the tremie method. The grout was prepared in accordance with manufacturer's instructions and emplaced from the top of the bentonite seal to the ground surface via tremie method. The grout was injected at a low velocity as to not displace the bentonite seal and the tremie pipe was raised as grout filled the annular space. Grouting ceased when the grout mixture daylighted at the surface as visible grout.

Well GWA-36 was constructed to the top of bedrock. The well screen was found to be filled with about seven feet of sediment, primarily filter pack sand. The sediment could not be pumped or flushed from the well screen. Well GWA-36 was overdrilled from the ground surface to the bottom of the well. The well screen and casing were removed from the borehole. Bentonite chips were placed from the bottom of the borehole to the top of the water table and hydrated. The bentonite chips were used to prevent the grout from potentially impacting nearby wells. The interval from the ground surface to the top of the bentonite was filled with AQUAGUARD by Baroid Industrial Drilling Products, a sodium bentonite blended grout via tremie method. The grout was injected at a low velocity as to not displace the bentonite seal and the tremie pipe was raised as grout filled the annular space. Grouting ceased when the grout mixture daylighted at the surface as visible grout. For details on the abandonment of GWA-4 and GWA-36, see **Appendix D: Well Abandonment Documents**.

## 6.0 GENERAL REFERENCES

Southern Company Services, Inc., 2016, Draft Monitoring Well Development Procedures, Birmingham, Alabama, March 2016.

United States Environmental Protection Agency, Region 4 Science and Ecosystem Support Division, January 16, 2018. Operating Procedure for Design and Installation of Monitoring Wells. SESDGUID-101-R2.

United States Environmental Protection Agency, Region 4 Laboratory Services and Applied Science Division, June 22, 2020. Operating Procedure for Field Equipment Cleaning and Decontamination. LSASDPROC-205-R4.

# TABLE

**TABLE 1**  
**SUMMARY OF MONITORING WELL CONSTRUCTION**  
**Plant Bowen**  
**Landfill Cells 1 & 2, 3 & 4, and 9 & 10**  
**Bartow County, Georgia**

| Well    | Installation Date | Northing <sup>(1)</sup> | Easting <sup>(1)</sup> | Top of Casing Elevation (feet NAVD88) <sup>(2)</sup> | Ground Surface Elevation (feet NAVD88) <sup>(2)</sup> | Top of Screen Elevation (feet NAVD88) <sup>(3)</sup> | Bottom of Screen Elevation (feet NAVD88) <sup>(3)</sup> | Screen Length (feet) | Total Well Depth on Construction Log (feet below land surface) | Total Well Depth Measured at Development (feet below TOC) <sup>(4)</sup> | Groundwater Zone Screened | Hydraulic Location and Purpose          |
|---------|-------------------|-------------------------|------------------------|--|---|--|---|----------------------|--|--|---------------------------|---|
| GWA-36A | 3/18/2022         | 1505026.95              | 2073357.46             | 683.75   | 680.63  | 588.80   | 578.80  | 10.00                | 102.16   | 105.08   | Overburden                | Cells 3 & 4 - Upgradient <sup>(5)</sup> |
| GWA-36  | 6/16/2011         | 1505057.77              | 2073384.03             | 684.50   | 681.89  | 616.19   | 606.19  | 10.00                | 76.00  | 81.77  | Overburden                | Cells 3 & 4 - Upgradient <sup>(6)</sup> |
| GWA-4   | 3/14/2007         | 1502241.02              | 2072318.24             | 743.06   | 740.40  | 680.91   | 670.91  | 10.00                | 69.64  | 72.37  | Overburden                | Cells 1 & 2 - Upgradient <sup>(7)</sup> |

Notes:

- (1) Horizontal locations referenced to Georgia State Plane West, North American Datum of 1983 (NAD 83)
- (2) Elevations are in feet referenced to North American Vertical Datum of 1988 (NAVD88)
- (3) Screen elevations calculated using depth below land surface and ground surface elevations from the March 2021 re-survey and March 2022 survey of new well.
- (4) TOC indicates top of casing
- (5) Monitoring well is measured for water levels and sampled for groundwater quality.
- (6) GWA-36 was abandoned on 3/16/2022 and was replaced with new well GWA-36A, completed on 3/18/2022 with installation of protective cover and pad.
- (7) GWA-4 was abandoned on 3/15/2022.

Groundwater Monitoring Well Installation for GWA-36A and Abandonment Report for GWA-4 and GWA-36

# FIGURE

# Legend

Spring Sampling Location

## Well Location

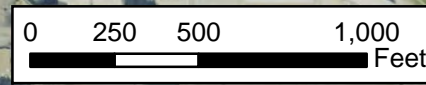
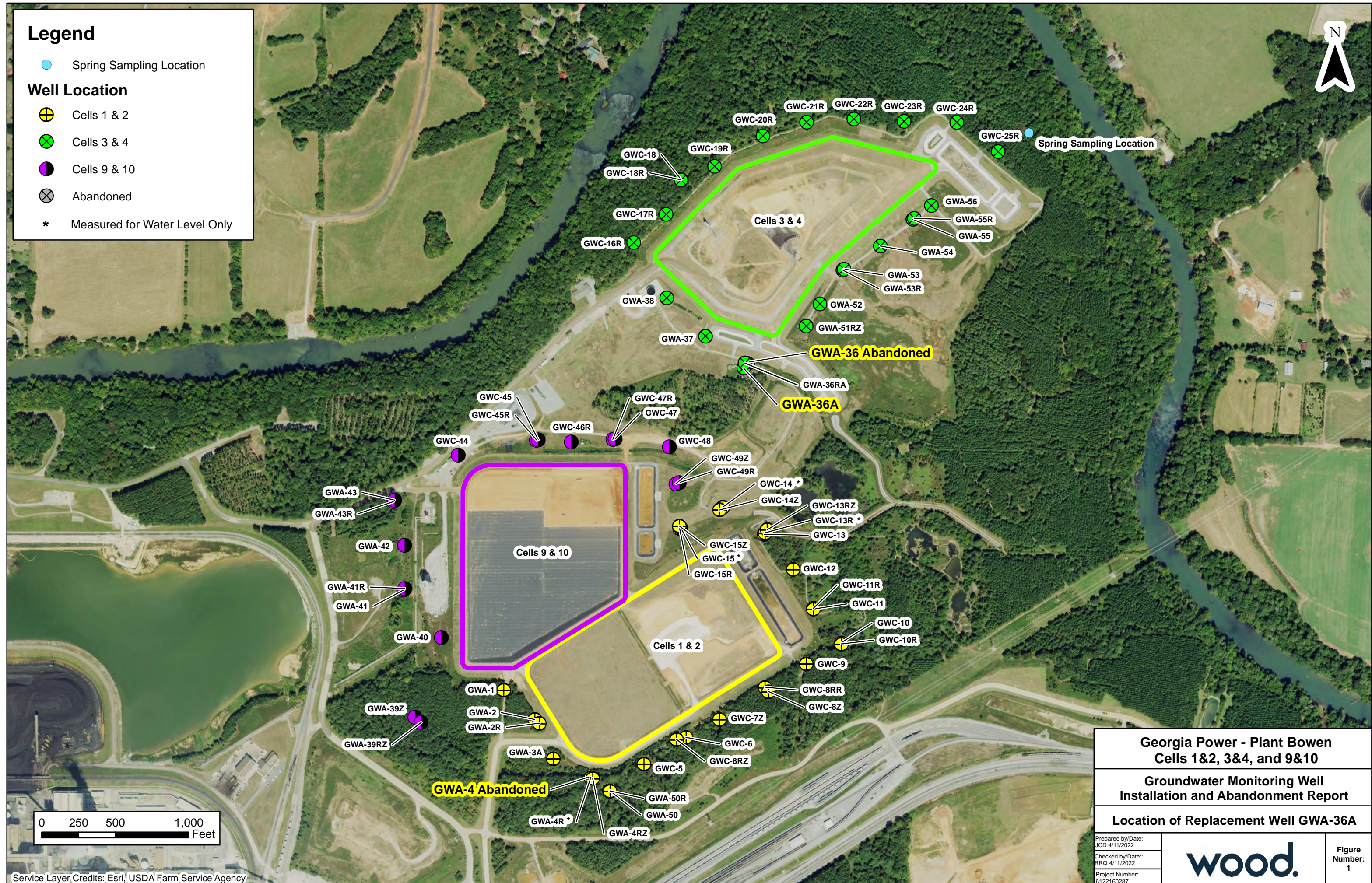
Cells 1 & 2

Cells 3 & 4

Cells 9 & 10

Abandoned

\* Measured for Water Level Only



|   |  |
|---|--|
| <b>Georgia Power - Plant Bowen<br/>Cells 1&amp;2, 3&amp;4, and 9&amp;10</b> |  |
| <b>Groundwater Monitoring Well<br/>Installation and Abandonment Report</b>  |  |
| <b>Location of Replacement Well GWA-36A</b>                                 |  |
| Prepared by/Date:<br>JCD 4/11/2022  |  |
| Checked by/Date:<br>RRQ 4/11/2022   |  |
| Project Number:<br>6122160287   |  |
| Figure Number:<br>1   |  |

# **APPENDIX A**

## **WELL SURVEY DOCUMENT**

Wood PLC  
 Plant Bowen-Euharlee, Ga.  
 MONITORING WELL SURVEY DATA  
 March 22, 2022  
 DGA JOB # 6620-003-D1, C1399

| WELL ID  | NORTHING   | EASTING    | ELEVATIONS       |                  |                 |               |
|--|------------|------------|------------------|------------------|-----------------|---------------|
|  |            |            | GROUND ELEVATION | NAIL IN CONCRETE | TOP OF WELL PAD | TOP OF CASING |
| GWA-36A  | 1505026.95 | 2073357.46 | 680.63           | 680.85           | n/a             | 683.75        |
|  |            |            |                  |                  |                 |               |
| COORDINATES ARE GA STATE PLANE, WEST ZONE, NAD 83. |            |            |                  |                  |                 |               |
| ELEVATIONS ARE BASED ON NAVD 88 DATUM.             |            |            |                  |                  |                 |               |

Survey data shown below has a horizontal positional tolerance of +/-0.5 feet and a vertical positional tolerance of +/- 0.01 feet at the 95% level of confidence.  
 Equipment used to obtain horizontal and vertical coordinates was a LEICA SYSTEM 1200 GPS RECEIVER WITH A LEICA RX1200 DATA COLLECTOR.  
 Benchmark used to establish horizontal and vertical positions was established from LEICA SMARTNET REAL TIME NETWORK.



## **APPENDIX B**

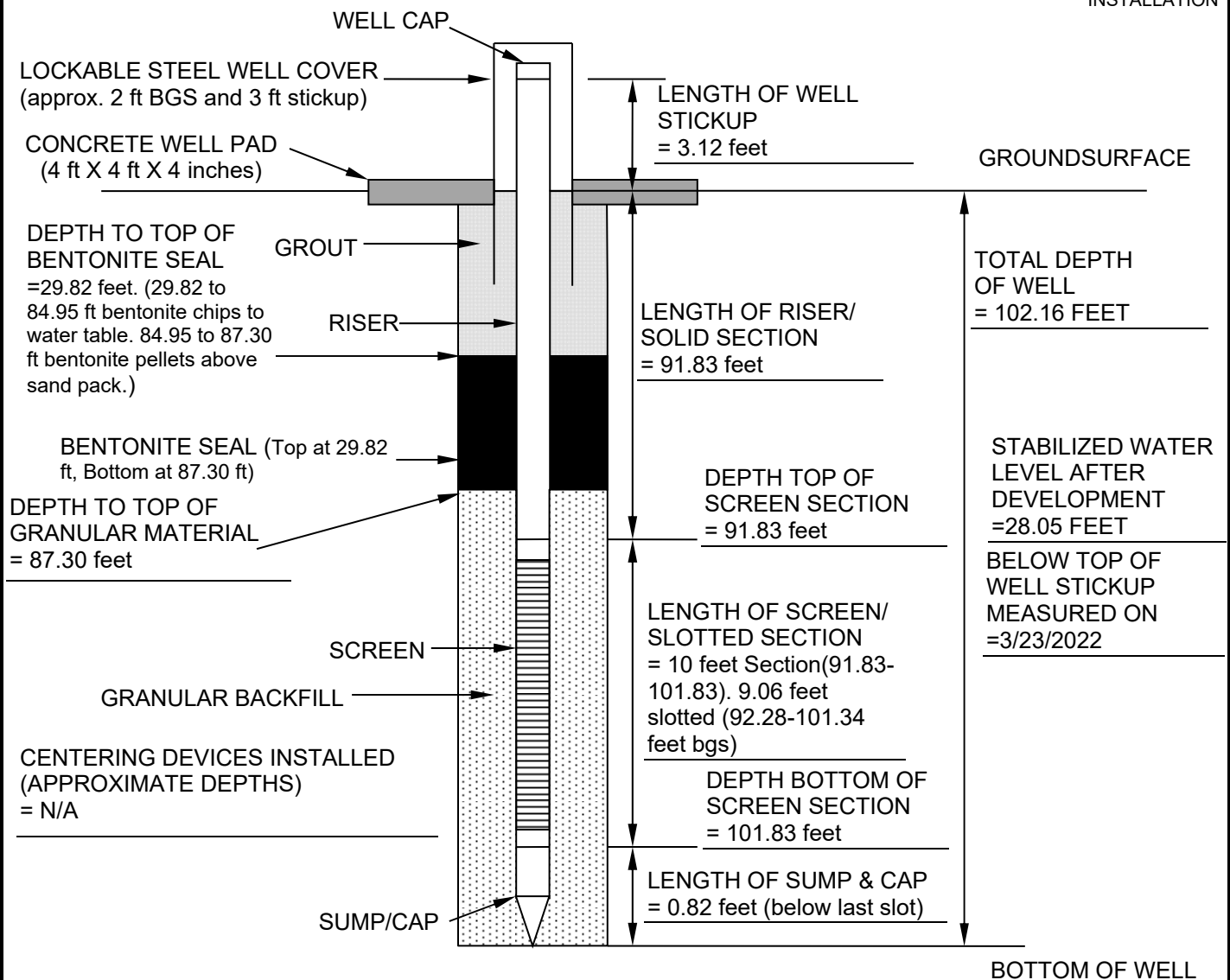
# **WELL CONSTRUCTION AND BORING LOGS**

## WELL INSTALLATION RECORD

|  |  |
|--|--|
| JOB NAME <b>Plant Bowen Cells 3 &amp; 4</b>                          | PROJECT NO. <b>6122-16-0287</b>                      |
| WELL NUMBER <b>GWA-36A</b>   | INSTALLATION DATE <b>3/18/2022</b>                   |
| LOCATION* <b>NORTH: 1505026.95 EAST: 2073357.46</b>                  | <b>GROUND ELEV: 680.63 feet NAVD88</b>               |
| WOOD FIELD REPRESENTATIVE <b>T. Parker</b>                           | DRILLER/ CONTRACTOR <b>C. Franklin/Cascade</b>       |
| GRANULAR BACKFILL MATERIAL <b>20/40 mesh Silica Filter Sand</b>      | DRILLING TECHNIQUE <b>Rotosonic</b>                  |
| SCREEN MATERIAL <b>2-inch I.D. Flush Joint Slotted PVC (Sch. 40)</b> | BOREHOLE DIAMETER <b>± 6 inch</b>                    |
| SLOT SIZE <b>0.010-inch Machine Cut</b>                              | REFERENCE POINT** ELEVATION* <b>683.75 ft NAVD88</b> |
| RISER MATERIAL <b>2-inch I.D. Flush joint Solid PVC (Sch. 40)</b>    | LOCK TYPE/KEY CODE <b>Master</b>                     |

\* Preliminary-Final location/elevation to be determined by As-Built Survey  
 \*\* Reference point is notch cut in the top of PVC casing

NOTE: NOT TO SCALE, ALL DEPTHS RECORDED ARE RELATIVE TO EXISTING GROUND SURFACE AT TIME OF INSTALLATION



**wood.**

Notes:  
 Sand – 6.5 bags of 20/40 mesh sand for prepack & screen interval  
 Bentonite – 3 buckets 3/8" uncoated pellets for bentonite seal above the sand filter pack; 7 bags of 3/8" chips added to bring level up to water table  
 Grout – 2 bags of Aqua-guard® bentonite/grout mix with ~40 gals water

Review: RNQ Date: 3/27/2022

**Well Installation Record**

**GWA-36A**



# GWA-36A BORING LOG

|   |   |   |
|---|---|---|
| <b>PROJECT NUMBER</b> 6122160287<br><b>PROJECT NAME</b> Plant Bowen<br><b>CLIENT</b> Georgia Power<br><b>ADDRESS</b> 317 Covered Bridge Rd., Euharlee GA<br><b>LOCATION</b> Cells 3 & 4 | <b>DRILLING COMPANY</b> Cascade Drilling<br><b>DRILLER</b> Cory Franklin<br><b>RIG TYPE/METHOD</b> Terrasonic CC150/SONIC<br><b>CASING DIA.</b> 2-in I.D. PVC<br><b>BORING DEPTH</b> 102.9 ft | <b>COORDINATES</b> N 1505026.95, E 2073357.46<br><b>COORD SYS</b> Ga State Plane West (NAD 83)<br><b>COMPLETION</b> Stick-up w/ protective casing<br><b>GROUND SURFACE ELEV.</b> 680.63 ft NAVD 88<br><b>WELL TOC ELEVATION</b> 683.75 ft NAVD 88 |
|---|---|---|

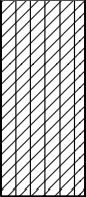
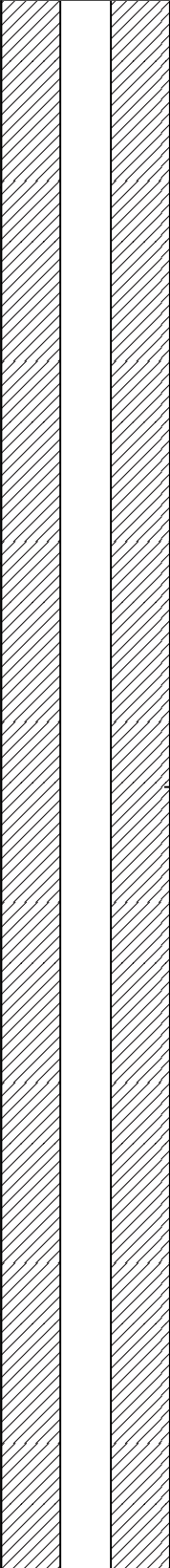
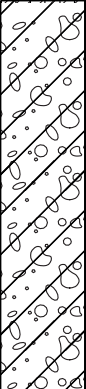


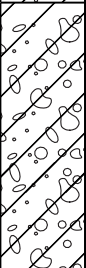
**COMMENTS** Start drilling on 3/16/2022 and complete drilling on 3/16/2022. Well construction completed on 3/18/2022 with installation of well cover and concrete pad. Well surveyed on 3/22/2022.


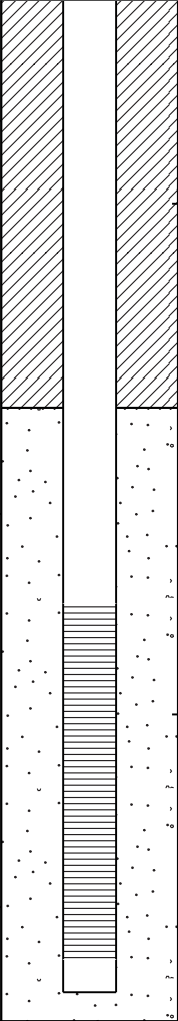
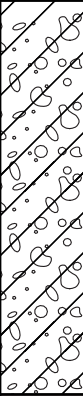
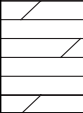
**LOGGED BY** T. Parker  
**CHECKED BY** R. Quinn

| Depth (ft) | Samples | Sample Run (Recovery) | Graphic Log | Material Description  | USCS | Well Diagram | Elevation (ft) |
|------------|---------|-----------------------|-------------|---|------|--------------|----------------|
| 0-10       |         | #1<br>(96%)           |             | Fine grain silty CLAY, moist, mottled light brown/yellow/orange. Low to med. plasticity with white weathered limestone fragments (<3%), 1 to 5 mm, subangular to subrounded.  | CL   |              | 680            |
| 2          |         |                       |             |   |      |              | 678            |
| 4          |         |                       |             |   |      |              | 676            |
| 6          |         |                       |             |   |      |              | 674            |
| 8          |         |                       |             |   |      |              | 672            |
| 10         |         |                       |             |   |      |              | 670            |
| 10-20      |         | #2<br>(76%)           |             | Fine grained silty CLAY, mottled light brown at top, transitioning to mottled orange/red silty clay at 12.1 ft to 14.3 ft and then back to mottled light yellow/orange silty clay, stiffening in lower 1 ft. Low plasticity. ~5% limestone/chert fragments and rocks, 2 to 60 mm. | CL   |              | 668            |
| 12         |         |                       |             |   |      |              | 666            |
| 14         |         |                       |             |   |      |              | 664            |
| 16         |         |                       |             |   |      |              | 662            |
| 18         |         |                       |             |   |      |              | 660            |
| 20         |         |                       |             |   |      |              | 658            |
| 20-30      |         | #3<br>(100%)          |             | Fine silty CLAY, mottled light brown to yellow/orange with some light tan and red/orange and more clayey (28 ft - 30 ft). ~5% weathered limestone (white) fragments and rocks, 2-20 mm, subrounded.   | CL   |              | 656            |
| 22         |         |                       |             |   |      |              | 654            |
| 24         |         |                       |             |   |      |              | 652            |
| 26         |         |                       |             |   |      |              | 650            |
| 28         |         |                       |             |   |      |              | 648            |
| 30         |         |                       |             |   |      |              | 646            |
| 30-35      |         | #4<br>(100%)          |             | Fine silty mottled CLAY, higher moisture content with high plasticity and 25-35% weathered limestone and chert, 2-80 mm. Cobble at 35 ft.   | CL   |              | 650            |
| 32         |         |                       |             |   |      |              | 648            |
| 34         |         |                       |             |   |      |              | 646            |

Bentonite grout mix

Bentonite seal (chips 29.82-84.95 ft, pellets 84.95-87.30 ft, both prior to hydration).

| Depth (ft) | Samples | Sample Run (Recovery) | Graphic Log   | Material Description   | USCS | Well Diagram  | Elevation (ft) |
|------------|---------|-----------------------|---|--|------|---|----------------|
| 36         | 35-40   | #4<br>(100%)          |    | Fine silty mottled CLAY, higher moisture content with high plasticity and 25-35% weathered limestone and chert, 2-80 mm. Cobble at 35 ft.  | CL   |  <p>Bentonite seal (chips 29.82-84.95 ft, prior to hydration, pellets 84.95-87.30 ft, prior to hydration). Top of bentonite seal at 27.00 ft after hydration.</p> | 644            |
| 38         |         |                       |   |  |      |   | 642            |
| 40         | 40-50   | #5<br>(100%)          |    | Gravelly, silty CLAY, mottled light brown and yellow, medium stiff, slight plasticity, ~50% fine gravel/gravel/cobble mix of weathered limestone and chert up to 140 mm (at 45.5 ft). Moisture increased and core is wet from 49 ft to 50 ft.  | CL   |   | 640            |
| 42         |         |                       |   |  |      |   | 638            |
| 44         |         |                       |   |  |      |   | 636            |
| 46         |         |                       |   |  |      |   | 634            |
| 48         |         |                       |   |  |      |   | 632            |
| 50         | 50-60   | #6<br>(20%)           |   | Gravelly fine silty CLAY, wet, yellow/white/tan, soft with ~50% fine gravel/ gravel/cobble. No plasticity. Angular limestone/chert fragments throughout, fine to coarse angular chert gravel and angular to subrounded cobble up to 140 mm. Poor recovery (2 ft out of a 10 ft run). | CL   |   | 630            |
| 52         |         |                       |   |  |      | 628   |                |
| 54         |         |                       |   |  |      | 626   |                |
| 56         |         |                       |   |  |      | 624   |                |
| 58         |         |                       |   |  |      | 622   |                |
| 60         | 60-70   | #7<br>(80%)           |  | Gravelly fine silty CLAY, upper 4 ft mottled yellow/orange/white, 4 to 8 ft brown/orange/white. Upper 2 ft of recovered core very wet, 2 to 8 ft recovered core is moist. ~50% fine gravel/gravel mix of weathered limestone, dolomite and chert.                                    | CL   | 620   |                |
| 62         |         |                       |   |  |      | 618   |                |
| 64         |         |                       |   |  |      | 616   |                |
| 66         |         |                       |   |  |      | 614   |                |
| 68         |         |                       |   |  |      | 612   |                |
| 70         | 70-80   | #8<br>(98%)           |  | Gravelly fine silty CLAY, mottled yellow/light to dark brown. Very soft, high plasticity. 50% gravel and cobbles up to 110 mm. Angular dark grey/black chert 70-80 ft. Manganese lens at 79.5 ft of recovered core. Upper 1 ft very wet then moist then wet at about 77 - 78 ft.     | CL   | 610   |                |
| 72         |         |                       |   |  |      | 608   |                |
| 74         |         |                       |   |  |      | 606   |                |
| 76         |         |                       |   |  |      | 604   |                |

| Depth (ft) | Samples   | Sample Run (Recovery) | Graphic Log   | Material Description  | USCS  | Well Diagram  | Elevation (ft) |
|------------|-----------|-----------------------|---|---|-------|---|----------------|
| 78         |           |                       |    |   |       |  <p>Bentonite seal (chips 29.82-84.95 ft, prior to hydration, pellets 84.95-87.30 ft, prior to hydration). Top of bentonite seal at 27.00 ft after hydration.</p> <p>Sand filter pack and pre-pack screen</p> | 602            |
| 80         | 80-90     | #9<br>(0%)            |   | No recovery.  |       |   | 600            |
| 82         |           |                       |   |   |       |   | 598            |
| 84         |           |                       |   |   |       | 596   |                |
| 86         |           |                       |   |   |       | 594   |                |
| 88         |           |                       |   |   |       | 592   |                |
| 90         | 90-100    | #10<br>(10%)          |   | Gravelly SILT yellow/light brown, wet with >50% mix of fine gravel and gravel up to 60 mm, composed of angular chert, minor quartz, and dolomite. Bedrock at 100.5 ft | ML-GM | 590   |                |
| 92         |           |                       |   |   |       | 588   |                |
| 94         |           |                       |   |   |       | 586   |                |
| 96         |           |                       |   |   |       | 584   |                |
| 98         |           |                       |   |   |       | 582   |                |
| 100        | 100-102.9 | #11<br>(34%)          |  | 100.0 - 100.5 ft Gravelly SILT. 100.5 - 102.9 ft Dolomite, light gray, no fines.  | Rock  | 580   |                |
| 102        |           |                       |   |   |       | 578   |                |
| 104        |           |                       |   | Boring terminated at 102.9 feet in bedrock  |       |   | 576            |
| 106        |           |                       |   |   |       |   | 574            |
| 108        |           |                       |   |   |       |   | 572            |
| 110        |           |                       |   |   |       |   | 570            |
| 112        |           |                       |   |   |       |   | 568            |
| 114        |           |                       |   |   |       |   | 566            |
| 116        |           |                       |   |   |       |   | 564            |
| 118        |           |                       |   |   |       |   | 562            |



# Power of Attorney

KNOW ALL MEN BY THESE PRESENTS, that ATLANTIC SPECIALTY INSURANCE COMPANY, a New York corporation with its principal office in Plymouth, Minnesota, does hereby constitute and appoint: **Deanna M. French, Susan B. Larson, Elizabeth R. Hahn, Jana M. Roy, Scott McGilvray, Mindee L. Rankin, Ronald J. Lange, John R. Claeys, Roger Kaltenbach, Guy Armfield, Scott Fisher, Andrew P. Larsen, Nicholas Fredrickson, William M. Smith, Derek Sabo, Charla M. Boadle**, each individually if there be more than one named, its true and lawful Attorney-in-Fact, to make, execute, seal and deliver, for and on its behalf as surety, any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof; provided that no bond or undertaking executed under this authority shall exceed in amount the sum of: **unlimited** and the execution of such bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof in pursuance of these presents, shall be as binding upon said Company as if they had been fully signed by an authorized officer of the Company and sealed with the Company seal. This Power of Attorney is made and executed by authority of the following resolutions adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the President, any Senior Vice President or Vice-President (each an "Authorized Officer") may execute for and in behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and affix the seal of the Company thereto; and that the Authorized Officer may appoint and authorize an Attorney-in-Fact to execute on behalf of the Company any and all such instruments and to affix the Company seal thereto; and that the Authorized Officer may at any time remove any such Attorney-in-Fact and revoke all power and authority given to any such Attorney-in-Fact.

Resolved: That the Attorney-in-Fact may be given full power and authority to execute for and in the name and on behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed and sealed by an Authorized Officer and, further, the Attorney-in-Fact is hereby authorized to verify any affidavit required to be attached to bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof.

This power of attorney is signed and sealed by facsimile under the authority of the following Resolution adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the signature of an Authorized Officer, the signature of the Secretary or the Assistant Secretary, and the Company seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing an Attorney-in-Fact for purposes only of executing and sealing any bond, undertaking, recognizance or other written obligation in the nature thereof, and any such signature and seal where so used, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

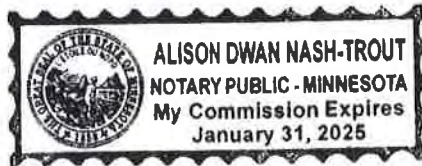
IN WITNESS WHEREOF, ATLANTIC SPECIALTY INSURANCE COMPANY has caused these presents to be signed by an Authorized Officer and the seal of the Company to be affixed this twenty-seventh day of April, 2020.



By *Paul J. Brehm*  
Paul J. Brehm, Senior Vice President

STATE OF MINNESOTA  
HENNEPIN COUNTY

On this twenty-seventh day of April, 2020, before me personally came Paul J. Brehm, Senior Vice President of ATLANTIC SPECIALTY INSURANCE COMPANY, to me personally known to be the individual and officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, that he is the said officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the seal of said Company and that the said seal and the signature as such officer was duly affixed and subscribed to the said instrument by the authority and at the direction of the Company.



*Alison Nash-Trout*  
Notary Public

I, the undersigned, Secretary of ATLANTIC SPECIALTY INSURANCE COMPANY, a New York Corporation, do hereby certify that the foregoing power of attorney is in full force and has not been revoked, and the resolutions set forth above are now in force.

Signed and sealed. Dated 12 day of April, 2021.

This Power of Attorney expires  
January 31, 2025



*Kara Barrow*  
Kara Barrow, Secretary

CONTINUATION  
CERTIFICATE

Atlantic Specialty Insurance Company

, Surety upon

a certain Bond No. 800033976

dated effective 09/27/2017  
(MONTH-DAY-YEAR)

on behalf of Ricky Davis / Cascade Drilling, L.P.  
(PRINCIPAL)

and in favor of Department of Natural Resources, State of Georgia  
(OBLIGEE)

Issued on 9/27/2017  
Expires on 6/30/2021  
Renewed on 4/12/2021  
Expires on 6/30/2023

does hereby continue said bond in force for the further period

beginning on 06/30/2021  
(MONTH-DAY-YEAR)

and ending on 06/30/2023  
(MONTH-DAY-YEAR)

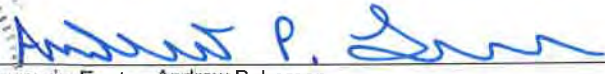
Amount of bond Thirty Thousand and 00/100 Dollars (\$30,000.00)

Description of bond Performance Bond for Water Well Contractors

**PROVIDED: That this continuation certificate does not create a new obligation and is executed upon the express condition and provision that the Surety's liability under said bond and this and all Continuation Certificates issued in connection therewith shall not be cumulative and that the said Surety's aggregate liability under said bond and this and all such Continuation Certificates on account of all defaults committed during the period (regardless of the number of years) said bond had been and shall be in force, shall not in any event exceed the amount of said bond as hereinbefore set forth.**

Signed and dated on April 12th, 2021  
(MONTH-DAY-YEAR)

Atlantic Specialty Insurance Company

By   
Attorney-in-Fact Andrew P. Larsen

Parker, Smith & Feek, Inc.

Agent  
2233 112th Ave NE Bellevue, WA 98004

Address of Agent

425-709-3600

Telephone Number of Agent

# **APPENDIX C**

## **WELL DEVELOPMENT FORMS**



# Low-Flow Test Report:

**Test Date / Time:** 3/23/2022 9:40:33 AM

**Project:** Plant Bowen LF March 2022

**Operator Name:** Meredith Duncan

|   |   |  |
|---|---|--|
| <b>Location Name: GWA-36A</b><br><b>Well Diameter: 2 in</b><br><b>Casing Type: PVC</b><br><b>Screen Length: 10 ft</b><br><b>Top of Screen: 95.08 ft</b><br><b>Total Depth: 105.08 ft</b><br><b>Initial Depth to Water: 28.05 ft</b> | <b>Pump Type: GeoTech Reclaimer</b><br><b>Tubing Type: LDPE</b><br><b>Pump Intake From TOC: 100.08 ft</b><br><b>Estimated Total Volume Pumped: 80000 ml</b><br><b>Flow Cell Volume: 90 ml</b><br><b>Final Flow Rate: 2000 ml/min</b><br><b>Final Draw Down: 0.03 ft</b> | <b>Instrument Used: Aqua TROLL 400</b><br><b>Serial Number: 893479</b> |
|---|---|--|

## Test Notes:

prepurged 606 L from 03/22/22 to 03/23/22. TD after development: 105.11ft

## Low-Flow Readings:

| Date Time          | Elapsed Time | pH      | Temperature | Specific Conductivity | RDO Concentration | Turbidity | ORP        | Depth to Water | Salinity   | Flow           |
|--------------------|--------------|---------|-------------|-----------------------|-------------------|-----------|------------|----------------|------------|----------------|
|                    |              | +/- 0.1 | +/- 1000 %  | +/- 5 %               | +/- 10 %          | +/- 5     | +/- 1000 % | +/- 0.3        | +/- 1000 % |                |
| 3/23/2022 9:40 AM  | 00:00        | 6.98 pH | 16.66 °C    | 424.61 µS/cm          | 3.05 mg/L         | 9.13 NTU  | 86.9 mV    | 28.05 ft       | 0.21 PSU   | 2,000.0 ml/min |
| 3/23/2022 9:44 AM  | 04:00        | 6.97 pH | 16.65 °C    | 444.33 µS/cm          | 3.04 mg/L         | 6.65 NTU  | 80.1 mV    | 28.04 ft       | 0.22 PSU   | 2,000.0 ml/min |
| 3/23/2022 9:48 AM  | 08:00        | 6.97 pH | 16.52 °C    | 446.97 µS/cm          | 3.06 mg/L         | 6.35 NTU  | 78.6 mV    | 28.04 ft       | 0.22 PSU   | 2,000.0 ml/min |
| 3/23/2022 9:52 AM  | 12:00        | 6.98 pH | 16.59 °C    | 448.40 µS/cm          | 3.07 mg/L         | 6.49 NTU  | 77.7 mV    | 28.04 ft       | 0.22 PSU   | 2,000.0 ml/min |
| 3/23/2022 9:56 AM  | 16:00        | 6.98 pH | 16.66 °C    | 446.21 µS/cm          | 3.14 mg/L         | 8.04 NTU  | 77.2 mV    | 28.05 ft       | 0.22 PSU   | 2,000.0 ml/min |
| 3/23/2022 10:00 AM | 20:00        | 6.99 pH | 16.70 °C    | 445.54 µS/cm          | 3.14 mg/L         | 14.80 NTU | 77.4 mV    | 28.05 ft       | 0.22 PSU   | 2,000.0 ml/min |
| 3/23/2022 10:04 AM | 24:00        | 6.98 pH | 16.78 °C    | 444.39 µS/cm          | 3.20 mg/L         | 11.90 NTU | 78.0 mV    | 28.04 ft       | 0.22 PSU   | 2,000.0 ml/min |
| 3/23/2022 10:08 AM | 28:00        | 6.98 pH | 16.70 °C    | 443.88 µS/cm          | 3.16 mg/L         | 8.05 NTU  | 78.6 mV    | 28.04 ft       | 0.22 PSU   | 2,000.0 ml/min |
| 3/23/2022 10:12 AM | 32:00        | 6.98 pH | 16.72 °C    | 444.22 µS/cm          | 3.15 mg/L         | 8.01 NTU  | 79.1 mV    | 28.05 ft       | 0.22 PSU   | 2,000.0 ml/min |
| 3/23/2022 10:16 AM | 36:00        | 6.98 pH | 16.80 °C    | 443.47 µS/cm          | 3.16 mg/L         | 5.17 NTU  | 79.3 mV    | 28.07 ft       | 0.21 PSU   | 2,000.0 ml/min |
| 3/23/2022 10:20 AM | 40:00        | 6.98 pH | 16.84 °C    | 441.81 µS/cm          | 3.18 mg/L         | 4.91 NTU  | 80.2 mV    | 28.08 ft       | 0.21 PSU   | 2,000.0 ml/min |

## Samples

| Sample ID: | Description: |
|------------|--------------|
|------------|--------------|

**EQUIPMENT CALIBRATION LOG**

|   |                                       |                                 |                                   |
|---|---------------------------------------|---------------------------------|-----------------------------------|
| Field Technician: <u>Meredith Duncan</u>  | Date: <u>3/23/22</u>                  | Time (Calibration): <u>0820</u> | Time (Mid-day Check): <u>1026</u> |
| Aqua Troll SN: <u>893479</u>              | Turbidity Meter Type: <u>la motte</u> | SN: <u>7042-3818</u>            |                                   |
| Project: <u>Bowen LF Well Development</u> | Weather Conditions: <u>65° rainy</u>  |                                 |                                   |

**Calibration Log**

|   | Standard Lot # / Date of Expiration | Temp of Standard (°C) | Value of Standard | Instrument Reading at Calibration | Comments |
|---|-------------------------------------|-----------------------|-------------------|-----------------------------------|----------|
| DO (%)<br>(1pt, 100% water saturated air cal) |                                     |                       |                   | <u>94.07</u>                      |          |
| Specific Conductance (µS/cm)                  | <u>21470032 04/23</u>               | <u>19.73</u>          | <u>4490</u>       | <u><del>33</del>4496.8</u>        |          |
| pH (4)  | <u>21470032 04/24</u>               | <u>19.80</u>          | <u>4</u>          | <u>3.96</u>                       |          |
| pH (7)  | <u>21380102 04/23</u>               | <u>20.00</u>          | <u>7</u>          | <u>7.01</u>                       |          |
| pH (10)                                       | <u>20080056 04/23</u>               | <u>20.18</u>          | <u>10</u>         | <u>9.99</u>                       |          |
| ORP (mV)                                      | <u>21140143 04/23</u>               | <u>20.18</u>          | <u>228</u>        | <u>234</u>                        |          |

|                  |  | Value of Standard | Instrument Reading | Acceptable Range   | Pass?  | Comments |
|------------------|--|-------------------|--------------------|--------------------|--------|----------|
| Turbidity 0 NTU  |  | <u>0</u>          | <u>0.00</u>        | <u>+/-0.5 NTU</u>  | Yes No |          |
| Turbidity 1 NTU  |  | <u>1</u>          | <u>1.10</u>        | <u>+/- 0.5 NTU</u> | Yes No |          |
| Turbidity 10 NTU |  | <u>10</u>         | <u>9.59</u>        | <u>+/- 0.5 NTU</u> | Yes No |          |

|                       | Temp of Standard (°C) | Value of Standard | Post Calibration Reading | Acceptable Range  | Pass?  | Comments |
|-----------------------|-----------------------|-------------------|--------------------------|-------------------|--------|----------|
| Mid-Day pH (4) check  | <u>20.85</u>          | <u>4</u>          | <u>4.11</u>              | <u>+/- 0.1 SU</u> | Yes No |          |
| Mid-Day pH (7) check  | <u>20.64</u>          | <u>7</u>          | <u>7.18</u>              | <u>+/- 0.1 SU</u> | Yes No |          |
| Mid-Day pH (10) check | <u>20.43</u>          | <u>10</u>         | <u>10.19</u>             | <u>+/- 0.1 SU</u> | Yes No |          |

# **APPENDIX D**

## **WELL ABANDONMENT DOCUMENTS**

# MONITORING WELL ABANDONMENT RECORD



WELL NO.: GWA-4

PROJECT NAME: GP-Plant Bowen Landfill

PROJECT NO.: 6122 16 0287

DATE: 3/14/2022

Name of Property Owner: Georgia Power Company

Address of Property: 317 Covered Bridge Road Euharlee, Bartow County, Georgia

Original Purpose of Well Installation: Monitoring well for water quality and levels in overburden upgradient of Cells 1&2

Total Depth of Well

(Measured from Top of Riser): 72.30 ft btoc

Total Well Depth: 69.64 ft bgs

Total

Boring Depth: 69.5 ft bgs

Well Diameter: 2 inches

Screen Slot Size: 0.01 - inch

Length of Screen: 10 ft (59.49 to 69.49 ft bgs)

Depth to Water/Date

(Measure from Top of Riser): well is dry, no water

Description of Well Abandonment Method: Filled well screen and riser up to 47 ft bgs with Haliburton Hole-plug bentonite chips 3/8"-size and hydrated. Overdrilled from ground surface to soil-bedrock interface and removed well casing.

Filled interval from ground surface to soil-bedrock interface with bentonite chips and Aqua-guard bentonite blend grout.

Type and Volume of Materials Used to Plug Well/Borehole: Bentonite chips and Aqua-guard Gallons of: 160 gal Aqua-guard

Riser and Screen Removed or Left in Place: Screen and riser from 49 to 69.6 ft bgs left in place. Casing from ground surface down to soil-bedrock interface at 49 ft bgs removed.

Drilling Contractor Cascade

Driller's Name Cory Franklin

Additional Notes: Initiated well abandonment by removing the protective cover and well pad and bollards. Top of bedrock was at 49 ft bgs. Well screen and casing below soil-bedrock interface at 49 ft bgs filled with bentonite chips (1 bag) and casing left in-place. Overdrilled and removed casing from ground surface to soil-bedrock interface at about 49 ft bgs. Initial application of Aqua guard did not bring the grout level up to the surface. Added 2.5 bags of Hole-plug bentonite chips to overdrilled interval and hydrated. Bentonite chips brought up to 41 ft bgs. Tremie-grouted more Aqua-guard into overdrilled interval and brought the level up to the ground surface.

Wood Environment & Infrastructure Solutions Field Representative

Terrell Parker

Date Well Abandonment Completed: 3/15/2022

# MONITORING WELL ABANDONMENT RECORD



WELL NO.: GWA-36

PROJECT NAME: GP-Plant Bowen Landfill

PROJECT NO.: 6122 16 0287

DATE: 3/15/2022

Name of Property Owner: Georgia Power Company

Address of Property: 317 Covered Bridge Road Euharlee, Bartow County, Georgia

Original Purpose of Well Installation: Monitoring well for water quality and levels in overburden upgradient of Cells 3&4

Total Depth of Well (Measured from Top of Riser): 69.1 ft btoc      Total Well Depth: 76.0 ft bgs      Total Boring Depth: 76.0 ft bgs

Well Diameter: 2 inches

Screen Slot Size: 0.01 - inch

Length of Screen: 10 ft      (65.7 to 75.7 ft bgs)

Depth to Water/Date (Measure from Top of Riser): 30.8 ft btoc

Description of Well Abandonment Method: Overdrilled well casing to 76 ft bgs and removed screen and casing. Filled overdrilled interval from 76 ft bgs to about 30.2 ft bgs with Haliburton Hole-plug bentonite chips 3/8"-size and hydrated overnight. Tremie-grouted with Aqua-guard bentonite blend grout from ground surface to 30.2 ft bgs.

Type and Volume of Materials Used to Plug Well/Borehole: Bentonite chips and Aqua-guard Gallons of: 60 gal Aqua-guard About 9 bags of bentonite chips and 2 five-gallon buckets of bentonite pellets.

Riser and Screen Removed or Left in Place: Screen and riser from 0 to 76 ft bgs removed.

Drilling Contractor Cascade      Driller's Name Cory Franklin

Additional Notes: Initiated well abandonment by removing the protective cover and well pad and bollards. Overdrilled and removed screen and casing from ground surface to 76 ft bgs. The well screen was filled with about 7 feet of sediment that could not be flushed or pumped out of the well. Filter-pack sand was found in the sampling pump in the well during the January 2022 sampling event. Emplaced about 9 bags of Hole-plug bentonite chips and 2 five-gallon buckets of bentonite pellets from 76 ft bgs to about 30.2 ft bgs and hydrated after well casing was overdrilled. Bentonite chips brought up to top of water table. Tremie-grouted Aqua-guard bentonite blend grout from 30.2 ft bgs up to the ground surface.

Wood Environment & Infrastructure Solutions Field Representative      Terrell Parker

Date Well Abandonment Completed: 3/16/2022



**2023 WELL ABANDONMENT REPORT –  
PLANT BOWEN CELLS 3 & 4**

Plant Bowen  
Cells 3 & 4  
Solid Waste Disposal Facility  
Permit No. 008-018D (LI)

January 31, 2023

Prepared for:



Prepared by:  
Stantec Consulting Services Inc.  
10745 Westside Way, Suite 250  
Alpharetta, Georgia 30009-7640

**2023 Well Abandonment Report – Plant Bowen Cells 3 & 4  
Plant Bowen Landfill Cells 3 & 4**

**CERTIFICATION STATEMENT**

I hereby certify that this *2023 Well Abandonment Report – Plant Bowen Cells 3 & 4* has been prepared by, or under the direct supervision of, a Qualified Groundwater Scientist with Stantec Consulting Services, Inc. and is in compliance with the United States Environmental Protection Agency Coal Combustion Residual Rule [40 Code of Federal Regulations 257 Subpart D], specifically §257.91(e)(1), and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10.

According to 391-3-4-.01(57), a Qualified Groundwater Scientist is “a professional engineer or geologist registered to practice in Georgia who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields that enable individuals to make sound professional judgments regarding groundwater monitoring, contaminant fate and transport, and corrective action.”



\_\_\_\_\_  
Brian Steele, P.G.  
Senior Geologist



January 31, 2023  
Date



## Table of Contents

|   |                       |     |
|---|-----------------------|-----|
| 1 | INTRODUCTION.....     | 1.1 |
| 2 | WELL ABANDONMENT..... | 2.2 |
| 3 | REFERENCES.....       | 3.3 |

### TABLE

Table 1          Summary of Monitoring Well Construction

### FIGURE

Figure 1        Location of Abandoned Wells

### LIST OF APPENDICES

Appendix A      Well Abandonment Tech Memo  
Appendix B      Well Abandonment Documents  
Appendix C      Cascade Drilling Bond





# 1 Introduction

Stantec Consulting Services Inc. (Stantec) is submitting this Well Abandonment Report to Southern Company Services, Inc. (SCS) and Georgia Power Company (Georgia Power), which documents the abandonment of eight monitoring wells at Plant Bowen in Euharlee, Georgia.

The Plant Bowen Landfill (Site) is a Georgia Power-owned property located in Bartow County off State Highway 113, approximately 7 miles west-southwest of Cartersville, Georgia, and 20 miles southeast of Rome, Georgia (Figure 1). The disposal facility is approximately 300 acres located on a previously undeveloped, contiguous portion of the plant property. The Plant Bowen active Landfill Cells 1 & 2, 3 & 4, and 9 & 10 are located on the northeast portion of the Plant Bowen property. The disposal facility receives coal combustion by-products, coal ash and gypsum, from coal power generating processes at Plant Bowen. The landfill cells are lined in accordance with Solid Waste Permit No. 008-018D (LI). Cells 3 & 4 have a leachate collection system. Gypsum placement in disposal Cells 1 & 2 began in November 2008, whereas ash placement in disposal Cells 3 & 4 began in February 2015. Waste placement operations were initiated in Cells 9 & 10 in November 2015. Cells 9 & 10 are only used to store non-marketable gypsum. Site clearance for Cells 5, 6, 7, and 8 has begun in preparation of cell construction in 2023.

Groundwater monitoring for the Landfill was previously conducted under the requirements of the Georgia Solid Waste Permit No. 008-018D (LI) and in accordance with the specifications in the Design and Operation (D&O) Plan. EPD issued CCR Permit No. 008-018D (CCR) on December 8, 2022, which replaces Georgia Solid Waste Permit No. 0008-018D(LI). Routine groundwater monitoring and reporting is conducted at the Site pursuant to the Groundwater Monitoring Plan in the new permit.

Georgia Power Company is preparing to expand its Plant Bowen Coal Combustion By-Product (CCB) Disposal Facility landfill to the southeast of current Cells 3 & 4 with the construction of Cells 5 through 8.

This report provides details for the abandonment of eight monitoring wells upgradient of Cells 3 & 4 that are located in the footprint of the future landfill expansion. Three of the wells were screened in carbonate bedrock (GWA-51RZ, GWA-53R, GWA-55R) and the remaining five wells were screened in the overburden, which includes partially weathered rock (GWA-52, GWA-53, GWA-54, GWA-55, GWA-56). The local geology of the area is generally comprised of unconsolidated overburden soils (i.e., silt and clays) overlying carbonate bedrock. Depending on the variability of weathering characteristics, the groundwater surface may occur in the overburden and/or carbonate bedrock. This local karst geology features massive limestone and dolostone beds with chert, calcite, and fractures and void spaces that were observed during well installation activities.

Well construction details are included in Table 1, and locations are shown in Figure 1. The abandonment procedure is discussed below and in the Well Abandonment Technical Memo, included in Appendix A.



## 2 Well Abandonment

Monitoring wells GWA-51RZ, GWA-52, GWA-53, GWA-54, GWA-53R, GWA-55, GWA-55R, and GWA-56 were abandoned in general accordance with the Georgia Water Well Standards Act (OCGA § 12-5-120 through 138) and the U.S. Environmental Protection Agency (USEPA) Science and Ecosystem Support Division guidance document Design and Installation of Monitoring Wells (SESDGUID-101-R2) for well abandonment procedures, in addition to the procedures outlined in the approved Groundwater Monitoring Plan sheet dated March 31, 2013, of the Plant Bowen Design & Operating Plan and Well Abandonment Technical Memo (Appendix A).

Overburden groundwater monitoring wells GWA-52, GWA-53, and GWA-55 were abandoned by over-drilling using rotary bits, such that the casing grout, and seal were removed completely and pumping a cement/bentonite grout into the over-drilled borehole through the end of a PVC tremie pipe placed at the bottom of the well. The tremie pipe was raised as the grout rose to 10 feet below the base of the landfill. The remaining borehole below the base of the landfill was filled with hydrated bentonite and above the maximum depth of waste, the annular space was backfilled with soil.

As presented in the Well Abandonment Technical Memo (Appendix A), Georgia Power recommended that the well abandonment approach for the six wells screened in bedrock (GWA-51RZ, GWA-53, GWA-53R, GWA-55, GWA-55R, and GWA-56) refrained from including over-drilling into the karst geology given the potential to increase secondary porosities, which also agreed with the abandonment procedure referenced in the approved Groundwater Monitoring Plan sheet dated March 31, 2013, of the Plant Bowen Design & Operating Plan. The abandonment approach for these wells included the following steps:

1. *Tremie cement/bentonite grout into the well casing and screen section from the bottom of the casing up to the top of the rock.*
2. *Over-drill the well using rotary bits, such that the casing, grout, and seal are removed down to the top of rock.*
3. *Tremie cement/bentonite grout into the over-drilled borehole from the bottom of the over-drilled section to 10 feet below the base of the landfill. The remaining borehole below the base of the landfill was filled with hydrated bentonite. Above the maximum depth of waste, the annular space was backfilled with soil.*

Prior to the abandonment of each well, all bollards and well vaults were removed. In some instances, bentonite was used to prevent grout loss, prevent the increase of secondary porosities, and to provide structural integrity of the borehole. The specific abandonment methods for each well are shown in Appendix B. The wells were abandoned by Cascade Drilling, LP, who was contracted through SCS, at the Site, between November 28 and December 14, 2022. Cascade had a current and valid bond with the Water Wells Standards Advisory Council for the state of Georgia at the time of abandonment (Appendix C).



## 3 References

US EPA, 2017. Groundwater Sampling; Science and Ecosystem Support Division, United States Environmental Protection Agency (US EPA) Region 4, SESDPROC-301-R4, April 26, 2017.



# TABLE



**TABLE 1**  
**Summary of Monitoring Well Construction**

**Georgia Power Company - Plant Bowen**  
**Landfill Cells 1&2, 3&4, and 9&10**  
**Bartow County, Georgia**

| Well Name | Installation Date | Northing (ft NAD83) <sup>(1)</sup> | Easting (ft NAD83) <sup>(1)</sup> | Ground Surface Elevation (ft, NAVD88) <sup>(2)</sup> | Top of Casing Elevation (ft, NAVD88) <sup>(2)</sup> | Top of Screen Depth (ft) | Bottom of Screen Depth (ft) | Top of Screen Elevation (ft, NAVD88) | Top of Screen Elevation (ft, NAVD88) | Bottom of Screen Elevation (ft, NAVD88) | Bottom of Screen Elevation (ft, NAVD88) | Well Depth (ft below ground surface) | Lithology Screened | Hydraulic Location and Purpose |
|-----------|-------------------|------------------------------------|-----------------------------------|--|---|--------------------------|-----------------------------|--------------------------------------|--------------------------------------|---|---|--------------------------------------|--------------------|--------------------------------|
| GWA-51RZ  | 3/1/2016          | 1505310.36                         | 2073781.34                        | 705.81   | 708.58  | 80.70                    | 90.70                       | 625.11                               | 625.11                               | 615.11                                  | 615.11                                  | 91.00                                | Bedrock            | Cells 3 & 4 - Upgradient       |
| GWA-52    | 4/21/2015         | 1505459.85                         | 2073876.00                        | 706.56   | 709.77  | 70.60                    | 80.60                       | 635.96                               | 635.96                               | 625.96                                  | 625.96                                  | 80.96                                | Overburden         | Cells 3 & 4 - Upgradient       |
| GWA-53    | 4/10/2015         | 1505695.52                         | 2074038.90                        | 707.61   | 710.99  | 107.50                   | 117.50                      | 600.11                               | 600.11                               | 590.11                                  | 590.06                                  | 117.85                               | Overburden         | Cells 3 & 4 - Upgradient       |
| GWA-53R   | 4/10/2015         | 1505689.06                         | 2074032.00                        | 708.38   | 711.58  | 154.10                   | 165.10                      | 554.28                               | 553.38                               | 543.28                                  | 543.24                                  | 165.44                               | Bedrock            | Cells 3 & 4 - Upgradient       |
| GWA-54    | 4/14/2015         | 1505853.39                         | 2074286.28                        | 701.23   | 704.23  | 62.90                    | 72.90                       | 638.33                               | 638.23                               | 628.33                                  | 628.36                                  | 73.17                                | Overburden         | Cells 3 & 4 - Upgradient       |
| GWA-55    | 4/15/2015         | 1506034.69                         | 2074507.04                        | 693.43   | 696.72  | 52.10                    | 62.10                       | 641.33                               | 641.33                               | 631.33                                  | 631.31                                  | 62.42                                | Overburden         | Cells 3 & 4 - Upgradient       |
| GWA-55R   | 4/15/2015         | 1506041.22                         | 2074517.62                        | 693.28   | 696.53  | 92.50                    | 102.50                      | 600.78                               | 600.78                               | 590.78                                  | 590.75                                  | 102.83                               | Bedrock            | Cells 3 & 4 - Upgradient       |
| GWA-56    | 4/16/2015         | 1506128.38                         | 2074633.08                        | 689.14   | 692.17  | 72.60                    | 82.60                       | 616.54                               | 616.48                               | 606.54                                  | 606.48                                  | 82.96                                | Overburden         | Cells 3 & 4 - Upgradient       |

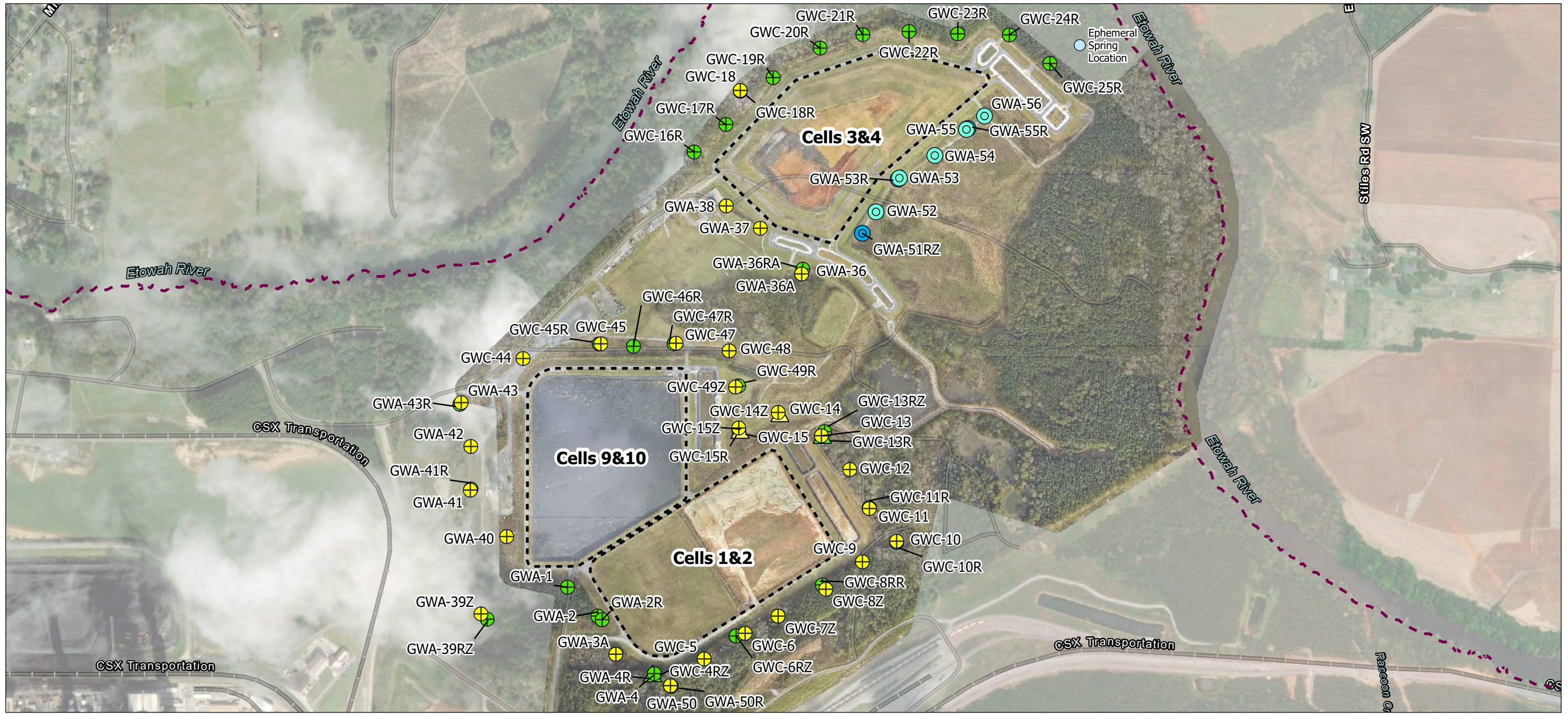
Notes:

(1) NAD83 indicates elevation in feet (ft) referenced to the North American Datum of 1983. Coordinates are from March 2021 re-survey of the Landfill wells by Donaldson & Garret Associates, Inc.

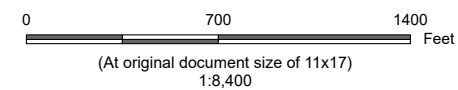
(2) NAVD88 indicates elevation in ft referenced to the North American Vertical Datum 1988. Elevations are from March 2021 re-survey of the Landfill wells by Donaldson & Garret Associates, Inc.

# **FIGURE**





- Legend**
- Groundwater Monitoring Well (Overburden)
  - Water Level Piezometer (Overburden)
  - Abandoned Groundwater Monitoring Well (Overburden)
  - Groundwater Monitoring Well (Bedrock)
  - Water Level Piezometer (Bedrock)
  - Abandoned Groundwater Monitoring Well (Bedrock)
  - Ephemeral Spring Location
  - Approximate Site Boundary
  - Landfill Cell Boundary (Approximate)
- GWA-36 abandoned 3/16/2022.  
 GWA-4 abandoned 3/15/2022.  
 GWA-36A installed 3/18/2022.





**Project Location**  
Euharlee, Georgia

**Client/Project**  
Georgia Power  
2023 Well Abandonment Report - Plant Bowen Cells 3 & 4

**Figure No.**  
**1**

**Title**  
**Location of Abandoned Wells**

Prepared by DMB on 12/16/2022  
TR by MP on 12/16/2022  
IR by MD on 12/16/2022  
172678190

**Notes**

1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
2. Data Sources: Landfill Boundaries, Site Boundary, and Monitoring Well locations provided by Southern Company Services and Wood Environment & Infrastructure Solutions
3. Plant imagery provided by client. Supplemental Background: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

# **APPENDIX A WELL ABANDONMENT TECHNICAL MEMO**





To: Georgia Power Company  
241 Ralph McGill Blvd NE, Bin 10160  
Atlanta, Georgia 30308

From: Brian Steele  
Stantec Consulting Services Inc.  
10745 Westside Way Suite 250  
Alpharetta, Georgia 30009-7640

Project/File: Georgia Power Plant Bowen Coal  
Combustion Residuals (CCR) Landfill

Date: 12 January 2023

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## Background

Georgia Power Company is preparing to expand its Plant Bowen Coal Combustion By-Product (CCB) Disposal Facility landfill to the southeast of current Cells 3 & 4 with the construction of Cells 5 through 8. Eight existing monitoring wells upgradient of Cells 3 & 4 are located in the footprint of the future landfill expansion and will need to be abandoned. Six of the wells are screened in carbonate bedrock (GWA-51RZ, GWA-53, GWA-53R, GWA-55, GWA-55R, GWA-56), and two wells are screened in the overburden material (GWA-52 and GWA-54). The local geology of the area is generally comprised of unconsolidated overburden soils (i.e., silt and clays) overlying carbonate bedrock. This local karst geology features massive limestone and dolostone beds with chert, calcite, and fractures and void spaces that were observed during well installation activities.

Currently, there is no specific procedure outlined for abandonment of monitoring wells installed and screened in carbonate rock where secondary porosity features, such as voids, fractures, and solution cavities, are present inside the footprint of the future landfill expansion at the plant. The abandonment procedure discussed below is consistent with the abandonment procedure referenced in the Groundwater Monitoring Plan sheet dated March 31, 2013, of the Plant Bowen Design & Operating Plan, which is included as Attachment A. In addition, the proposed abandonment procedure is referenced in the correspondence between Georgia Power and the Georgia Environmental Protection Division (GA EPD) dated June 24, 2005 included as Attachment B. At Georgia Power's request, Stantec has prepared this memorandum to provide the technical rationale and feasibility for the proposed abandonment procedure to over-drilling for these bedrock wells.

## Review of Regulations

Current Georgia Regulations (Water Well Standards Act - Standards for Wells and Boreholes O.C.G.A. 12-5-134) and U.S. Environmental Protection Agency Region 4 Guidance (Design and Installation of Monitoring Wells SESDGUID-101-R2) pertaining to well abandonment procedures do not require over-drilling of monitoring wells. For example, relevant language in the Water Well Standards Act indicates that: *"Any existing abandoned well or borehole shall be filled, sealed, and plugged by the present owner" O.C.G.A. 12-5-134 (1)(K), and "Abandoned engineering boreholes, geologic boreholes, dewatering wells, monitoring wells, and seismic shot holes shall be filled, sealed, and plugged under the direction of a registered professional geologist or registered professional engineer" O.C.G.A. 12-5-134 (6)(J).*

However, current Site Limitations defined for Plant Bowen Coal Combustion By-Product Disposal Facility in the EPD approved August 2022 Operations Plan concerning monitoring well abandonment procedures

**Reference: Plant Bowen Cells 3 & 4 Well Abandonment**

states the following:

*“10. All borings/ piezometers located in the proposed waste footprint shall be abandoned in accordance with the Water Well Standards Act. The well casing shall be removed, and the borings shall be over-drilled and filled with a non-shrinking cement/bentonite mixture via tremie pipe to within 10 feet of the maximum depth of the waste. Within 10 feet of the maximum depth of the waste, the boring can be filled with bentonite. Above the maximum depth of the waste, the annular space can be backfilled with soil. Borings/ piezometers located outside the proposed waste footprint may be abandoned by backfilling with bentonite. The abandonment of all on-site wells shall be supervised by a professional geologist (PG) or professional engineer (PE) registered to practice in the State of Georgia. The supervising PG/PE shall submit a report of the abandonment to EPD and certify that the borings/wells were abandoned in accordance with the Water Wells Standards Act.”*

This method does not consider the different abandonment procedures for overburden versus bedrock well abandonments to avoid increasing secondary porosities and possible downward migration of contamination during over-drilling of wells installed into bedrock.

### **Technical Discussion**

Wells at the site were installed in accordance with the Georgia Water Well Standards Act (O.C.G.A. 12-5-134). Annular spaces around the existing well casings were properly sealed with bentonite to the groundwater surface and grouted to “prevent the entrance of inter-formational pollutants after due consideration of the local soil conditions, local geology, and the intended purpose of the well” (O.C.G.A. 12-5-134). The existing well construction not only prevents the migration of groundwater from the overburden into the carbonate bedrock aquifer system(s), but was also designed to “not connect aquifers or zones which have differences in water quality” (O.C.G.A. 12-5-134) within the karst geology (i.e. secondary porosity features such as water-bearing voids and fractures and solution cavities). For the wells at Plant Bowen, the existing well screen filter pack and annular seal have successfully remained in place as evidenced by multiple groundwater sampling events, and the well construction continues to protect from groundwater migration between the overburden and bedrock aquifer systems. Boring logs for wells to be abandoned and screened in carbonate bedrock (GWA-51RZ, GWA-53, GWA-53R, GWA-55, GWA-55R, GWA-56) are included in Attachment C.

In using over-drilling as an abandonment method, there is concern that over-drilling the complete depth of the installed well into bedrock may alter the secondary porosity in the carbonate rock by potentially disturbing and reopening void spaces and fractures strengthened by well construction materials added during initial well construction activities. The horizontal extent of these void spaces is unknown, which adds an additional risk of introducing grout into variable and unpredictable directions when using an over-drilling method. Additionally, the cavities were secondarily filled with bentonite during well construction which provided additional structural protection and integrity that would only be weakened by using an over-drilling abandonment method. Therefore, It is recommended that the sections of well casing installed in the bedrock be left in the borehole undisturbed by over-drilling. It is more likely that tremie grouting a left-in-place well will result in less grout being lost into secondary porosity features, and the potential to re-open cavities or generating new ones, compared to completely over-drilling a boring due to well construction materials being left in place.

**Reference:** Plant Bowen Cells 3 & 4 Well Abandonment

### **Recommended Well Abandonment Approach**

Based on the above discussion, Georgia Power recommends that the well abandonment approach for the six wells screened in bedrock refrains from including over-drilling into the karst geology given the potential to increase secondary porosities. The abandonment approach for rock wells should instead include the following steps as stated in the abandonment procedure referenced in the approved Groundwater Monitoring Plan sheet dated March 31, 2013, of the Plant Bowen Design & Operating Plan, which is included as Attachment A.

1. *Tremie cement/bentonite grout into the well casing and screen section from the bottom of the casing up to the top of the rock.*
2. *Over-drill the well using either hollow stem augers, rotary bits, or a reaming device, such that the casing, grout, and seal are removed down to the top of rock.*
3. *Tremie cement/bentonite grout into the over-drilled borehole from the bottom of the over-drilled section to 10 feet below the base of the landfill. The remaining borehole below the base of the landfill shall be filled with hydrated bentonite. Above the maximum depth of waste, the annular space can be backfilled with soil.*

Stantec believes that this approach is equally or more protective of the aquifer and provides the best possible prevention for the downward migration of potential contaminants and therefore it is the most protective approach for abandonment activities of such wells and is consistent with the abandonment procedures documented in the site's Design & Operations plan and approved by EPD in correspondence dated June 24, 2005.

This memorandum has been provided and sealed by a qualified groundwater scientist registered to practice in the State of Georgia as referenced in GA EPD Solid Waste Rules Chapter 391-3-4.

Sincerely,

**STANTEC CONSULTING SERVICES INC.**



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**Reference: Plant Bowen Cells 3 & 4 Well Abandonment**

Attachments:

Attachment A: Groundwater Monitoring Plan sheet dated March 31, 2013, of the Plant Bowen Design & Operating Plan

Attachment B: Environmental Protection Division Response Letter to Georgia Power dated June 24, 2005 – Site Limitations; Solid waste Disposal Operation Known As Bartow County – Georgia Power, Plant Bowen Proposed Private Industrial Landfill, dated December 8, 2004

Attachment C: Well Construction and Boring Logs



**ATTACHMENT A: GROUNDWATER MONITORING PLAN SHEET DATED MARCH 31, 2013, OF THE  
PLANT BOWEN DESIGN & OPERATING PLAN**

# MONITORING WELL DESIGN AND CONSTRUCTION

## Introduction

Monitoring wells will be installed under the direction of a geologist or geotechnical engineer registered in the state of Georgia and who will certify to the EPD that the installation complies with the "Manual for Groundwater Monitoring", 1991. A signed certification statement will be included with documentation for the construction of the monitoring wells within 30 days of well development. Monitoring wells and piezometers currently located within the footprint of the cells shall be abandoned according to the proposed procedure detailed in the June 24, 2005 correspondence from Georgia Power Company to the EPD and in site limitation 10.

## Drilling Method

Hollow-stem continuous auger drilling and/or rock coring will be used to advance borings. Care will be taken so that the drilling methods minimize the disturbance of subsurface materials, and do not allow contamination of the groundwater. Drilling equipment will be steam-cleaned between each well.

## Soil and Rock Sampling

Split-spoon soil sampling will be performed to help determine the soil stratigraphy and geology in the vicinity of the monitoring well. Soil samples will be logged under the direction of a geologist or geotechnical engineer registered in the state of Georgia.

## Screened Interval

Reasonable efforts will be made to ensure that upgradient and downgradient wells in both the soil and rock are screened in the same water-bearing unit. Since no light nonaqueous phase constituents (LNAPLs) are expected to occur in the CCB, it is not necessary to screen across the water table.

## Well Casings and Screens

Well construction materials are sufficiently durable to resist chemical and physical degradation and yet not interfere with the quality of groundwater samples. Materials used for well casings, well screens, filter packs, and annular seals are discussed in this section. Wells will be constructed as shown in Figure 4-1, below.

ASTM, NSF-rated, Schedule 40, 2-inch PVC will be used for casing pipe and for screens at the site. Compounds which cause PVC to deteriorate will not be present in, or expected to escape from, the proposed disposal facility.

Plastic pipe sections are flush-threaded. No solvents or glues will be used in well construction. The casings and screens arrive pre-cleaned and packaged to prevent contamination.

## Well Intake Design

The monitoring wells are designed and constructed to: (1) allow sufficient groundwater flow to the well for sampling; (2) minimize the passage of formation materials (turbidity) into the wells; and (3) ensure sufficient structural integrity to prevent the collapse of the intake structure.

For wells completed in unconsolidated materials, the intake of the monitoring wells consists of a screen or slotted casing with openings sized to ensure that formation material is prohibited from passing through the well during development. Screen size will be selected to retain 90 percent of the filter pack and 40 percent of the formation material. Extraneous fine-grained material (clays and silts) that have been dislodged during drilling may be left on the screen, in the filter pack, and in the well water. These fines are removed from the screen and surrounding area during development. For quality control purposes, commercially manufactured screens or slotted casings are used.

The annular space between the face of the formation and the screen or slotted casing will be filled to minimize passage of formation materials into the wells. A filter pack of clean, well-rounded, quartz sand will be installed in each monitoring well.

## Screen Slot Size

A 0.01-inch slot size will be used for the well screens, which will retain at least 90 percent of the filter pack and 40 percent of the formation. A 0.01 inch slot sized screen will retain 100% of size 20/30 filter sand.

## Filter Pack

Pre-Pac® dual-wall well screens will be used in wells screened in unconsolidated materials. These well screens combine a centralized inner well screen, a developed filter sand pack, and an outer conductor screen in one integrated unit. The major advantage of the Pre-Pac® is that a complete and uniform filter pack is ensured. Where Pre-Pac® screens are used, additional filter pack material will be placed in the annular space outside the screen to ensure an adequate thickness of filter pack material in the well. The filter pack will be a well-graded, well-rounded, 20/30-size quartz (silica) sand. Fabric filter material will not be used as a filter pack. Volume of the annular space after drilling will be computed in the field, and sufficient filter material placed in the hole to ensure that no bridging occurs.

## Annular Sealant

The materials used to seal the annular space must prevent cross contamination between strata. The materials used are chemically resistant to ensure seal integrity during the life of the monitoring well and chemically inert so they do not affect the quality of the groundwater samples. A minimum of two feet of certified sodium bentonite will overlie the filter pack. A cement and bentonite grout will be used as the annular sealant in the vadose zone above the bentonite seal and below the frost line. A concrete seal will extend from a little below the frost line to the surface (Figure 4-1) and will blend into a rounded cement apron extending outward from the edge of the borehole to direct rainwater run-off away from the well.

The untreated sodium bentonite seal will be placed around the casing putting the bentonite between the casing and the inside of the auger stem. The remaining annular space is sealed with expanding cement to provide for security and an adequate surface seal. The interface between the cement and the bentonite-cement mixture is located 1/2 to 1 foot below the frost line to protect the well from damage due to frost heaving. The cement will be placed in the borehole using the tremie method.

## Cap and Protective Casing

The well riser will be fitted with a PVC cap and a protective anodized aluminum cover and lock (Figure 4-1). A one-quarter inch vent hole provides an avenue for the escape of gas. The protective cap guards the casing from damage and the locking cap serves as a security device to prevent well tampering. These construction details will be field verified by representatives of Georgia Power Company.

Wells will be clearly marked with the proper well identification number. Access to the wells is possible by an off road vehicle.

## Well Development

After completion of construction of the monitoring wells, every effort is made to (1) restore the natural hydraulic conductivity of the formation, and (2) to remove foreign sediment to ensure turbidity-free groundwater samples. These two items are accomplished by proper well development.

Proper well development requires reversals or surges in flow to avoid bridging, which commonly occurs when flow is continuous in one direction. Wells will be developed using a combination of pumping and surging. The wells will be pumped until the water is clear. The well will then be surged using either a submersible pump or a surge block. This combination of alternating surging and pumping will continue until the water is clear after surging. A field test to measure turbidity will be performed to ensure that the well is fully developed. All equipment will be steam-cleaned prior to each well development.

## Documentation of Well Design and Construction

Information on drilling, design, and construction of the monitoring wells will be compiled under the direction of a geologist or geotechnical engineer registered in Georgia, who is overseeing the operation in the field. Such information typically includes the items shown in Table 1.

Table 1 - Typical Items To Document Well Construction

Name of drillers, identification of drill rig  
Date of construction  
Drilling method  
Well location ( $\pm 0.5$  ft.)  
Borehole diameter and well casing diameter  
Well depth ( $\pm 0.1$  ft.)  
Drilling and lithologic logs  
Casing materials  
Screen materials and design  
Casing and screen joint type  
Screen slot size and length  
Filter pack material and size  
Filter pack volume  
Filter pack placement method  
Sealant materials  
Sealant volume  
Sealant placement methods  
Surface seal design construction  
Type of protective well cap  
Ground surface elevation ( $\pm 0.01$  ft.)  
Top of casing elevation ( $\pm 0.01$  ft.)  
Detailed drawing of well (including dimensions)

## Well Plugging and Abandonment

Monitoring wells and piezometers outside the footprint of the CCB disposal area will be abandoned according to the guidelines set forth in the Georgia Department of Natural Resources "Manual For Groundwater Monitoring", September 1991. Wells located within the footprint of the CCB disposal area shall be abandoned according to the proposed procedure detailed in the June 24, 2005 correspondence from Georgia Power Company to the EPD as stated below. The wells will be abandoned under the direction of a geologist or geotechnical engineer registered in Georgia. The PG/PE will submit a report of the abandonment to the EPD and certify that the wells were abandoned in accordance with the appropriate procedures.

## Rock Wells

- Tremie cement/bentonite grout into the well casing and screen section from the bottom of the casing up to the top of the rock.
- Overdrill the well using either hollow stem augers, rotary bits, or a reaming device, such that the casing, grout, and seal are removed down to the top of rock.
- Tremie cement/bentonite grout into the overdrilled borehole from the bottom of the overdrilled section to 10 feet below the limit of excavation. Grout to the ground surface with bentonite grout.

## Soil Wells

- Overdrill the well using either hollow stem augers, rotary bits, or a reaming device, such that the casing, grout, and seal are removed down to the bottom of the well.
- Tremie cement/bentonite grout into the overdrilled borehole from the bottom of the overdrilled section to 10 feet below the limit of excavation. Grout to the ground surface with bentonite grout.

The sequence for abandonment listed above, in conjunction with the engineering measures for the construction of the Bowen CCB disposal site, will ensure that a minimum of 20 feet of compacted soil overlies the monitoring well location.

## SAMPLING AND ANALYSIS

### Introduction

This sampling and analysis plan defines the parameters for analysis, frequency of collection, procedures and techniques for sample collection, sample preservation and shipment, analytical procedures, chain-of-custody control, and statistical analysis of groundwater quality data. If, during the compliance monitoring phase, it is found that a release from the disposal facility has occurred, the EPD will be notified immediately and a written plan for assessing the potential impacts will be developed in cooperation with the EPD.

### Parameters

The following groundwater parameters will be tested initially for four sampling events (background), and semi-annually after CCB placement:

|  |                        |
|--|------------------------|
| Dissolved Oxygen (in field)              | pH (in field)          |
| Specific Conductance (in field)          | Temperature (in field) |
| Oxidation-Reduction Potential (in field) | Turbidity (in field)   |
| Arsenic                                  | Antimony               |
| Barium                                   | Beryllium              |
| Cadmium                                  | Chromium               |
| Cobalt                                   | Copper                 |
| Lead                                     | Mercury                |
| Selenium                                 | Nickel                 |
| Thallium                                 | Silver                 |
| Zinc                                     | Vanadium               |

Total metals analysis will be performed. Temperature, specific conductance, pH, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity will be measured and recorded in the field during well evacuation procedures.

Chlorides and sulfates were not included in the parameter list because the secondary drinking water standard for them is high and they are two of the most common naturally-occurring anions present in water.

Fly ash does not contain volatile organic chemicals, due to the high temperatures in the boilers from which it was derived (2500° to 3000° F); similarly, fly ash does not generate methane gas. Gypsum does not contain volatile organics or generate methane. Therefore these parameters have been eliminated from the parameter list.

### Frequency and Duration

At least four initial sampling events will be performed at eight-week intervals during the six month period following approval of this plan and installation of the permanent monitoring wells. This data will be used to develop and establish a statistical base. This background data will be determined from the upgradient wells and downgradient wells. Groundwater monitoring of the wells will commence within six (6) months after the first placement of ash and/or gypsum to the facility. Sampling and reporting will continue semiannually for the life of the disposal facility and the post closure period.

### Water Levels

Water level elevations will be measured semiannually on a continuing basis to determine if horizontal and vertical flow gradients have changed since initial site characterization. A change in hydrologic conditions may require modification of the design of the groundwater monitoring system.

Field measurements will include depth to standing water and total depth of the well to the bottom of the intake screen structure. The device used for water level measurements will be an electronic water level reader permanently marked in 1/100ths of a foot. The device will be cleaned between wells. Each well will have a surveyed reference point from which its water level measurement is taken, preferably the top of the casing. The reference point elevation will be established in relation to a permanent bench mark and the survey will also note the well location. Potentiometric surface maps will be constructed for each event. A review of the groundwater flow direction and velocity will be included.

### Monitoring Well Sampling Equipment

In order to minimize the introduction of contamination into the well, positive gas displacement bladder pumps or peristaltic pumps, which will not aerate the samples, will be used for purging wells.

When purging equipment must be reused, it will be decontaminated with a non-phosphate detergent wash and deionized water rinse between wells. Should purging equipment become heavily contaminated, it should be cleaned with a nonphosphate detergent wash followed by rinsing with isopropanol and deionized water.

Clean plastic gloves will be worn by the sampling personnel. A clean pair of new, disposable gloves will be worn each time a different location is sampled and gloves should be donned immediately prior to sampling. Plastic gloves will be discarded after sampling one well and before sampling the next well.

Consistent sampling techniques will be used for all subsequent sampling.

Sampling equipment should be constructed of inert material. Equipment with neoprene fittings, PVC ballers, Tygon tubing, neoprene impellers, and Viton are not acceptable.

### Well Preparation and Purging Procedure

Always start with the least contaminated well, or wells expected to be uncontaminated, such as upgradient wells. Wells will be purged until turbidity, pH, specific conductance, DO, ORP, and temperature stabilize. The values for these field parameters will be recorded during the evacuation procedures.

Water standing in a well may not be a true representation of water quality in the aquifer. Changes in temperature and pressure, contact with air, and prolonged contact with well casing materials can all affect the chemical quality of the water.

Georgia Power will follow this procedure to ensure that a representative sample is collected. The recommended procedure for monitoring well sampling, using low flow sampling techniques, is described below.

### Pre-Sampling Activities:

- Start at the well known or believed to have the least contaminated ground water and proceed systematically to the well with the most contaminated ground water. Check the well, the lock, and the locking cap for damage or evidence of tampering. Record observations.
- Remove well cap.

- If the well casing does not have a reference point (usually a V-cut or indelible mark in the well casing), make one. Note that the reference point should be surveyed for correction of ground water elevations to the mean geoidetic datum (MSL).
- Measure and record the depth to water (to 0.01 ft) in all wells to be sampled prior to purging. Care should be taken to minimize disturbance in the water column and dislodging of any particulate matter attached to the sides or settled at the bottom of the well.

### Sampling Procedures

- Install Pump: Slowly lower the pump into the well to the depth specified for that well in the EPA-approved QAPP or a depth otherwise approved by the hydrogeologist or project scientist. The pump intake must be kept at least two (2) feet above the bottom of the well to prevent disturbance and resuspension of any sediment present in the bottom of the well. Record the depth to which the pump is lowered.
- Measure Water Level: Before starting the pump, measure the water level again with the pump in the well. Leave the water level measuring device in the well.
- Purge Well: Start pumping the well at 100 to 500 milliliters per minute (ml/min). The water level will be monitored approximately every five minutes. Ideally, a steady flow rate should be maintained that results in a stabilized water level (drawdown of 0.3 ft. or less). Pumping rates should, if needed, be reduced to the minimum capabilities of the pump to ensure stabilization of the water level. As noted above, care should be taken to maintain pump suction and to avoid entrainment of air in the tubing. Record each adjustment made to the pumping rate and the water level measured immediately after each adjustment.

8. Monitor Indicator Parameters: During purging of the well, monitor and record the field indicator parameters (turbidity, temperature, specific conductance, pH, Eh, and DO) approximately every five minutes. The well is considered stabilized and ready for sample collection when the indicator parameters have stabilized for three consecutive readings as follows (Puis and Barcelona, 1996):

- $\pm 0.1$  for pH
- $\pm 10\%$  for specific conductance (conductivity)
- $\pm 10$  mv for redox potential, Eh
- $\pm 10\%$  for DO and turbidity

Dissolved oxygen and turbidity usually require the longest time to achieve stabilization. The pump must not be removed from the well between purging and sampling.

- Collect Samples: Collect samples at a flow rate between 100 and 250 ml/min and such that drawdown of the water level within the well does not exceed the maximum allowable drawdown of 0.3 ft. All sample containers should be filled with minimal turbulence by allowing the groundwater to flow from the tubing gently down the inside of the container.

- Remove Pump and Tubing: After collection of the samples, the tubing, unless permanently installed, must be properly discarded or dedicated to the well for resampling by hanging the tubing inside the well.

- Measure and record well depth.

- Close and lock the well.

- All remaining sample bottles should now be carried to the ice chest where they are labeled and ice-down. Background samples will be collected first.

- The labels can be filled out prior to beginning sampling to avoid delay at the site. The label must include: Name of facility, Date and time of sampling, Sample description (well ID number and "up" or "down"), Sampler's name

The sample label should also contain information on: 1) whether or not the sample was filtered; 2) what preservatives were added; and 3) what analyses are to be performed for that particular sample bottle. Each sample bottle should also have a chain-of-custody label for the names of all persons handling the sample.

Additionally, mark each sample bottle with an identification number using a permanent marker. Bottle caps are good places to add identification. This is a precaution in case labels get wet or come off during transport.

- Proceed to the next well. Repeat.

NOTE: It is good practice to take an extra set of sample bottles to the field in case of breakage or accidental contamination.

### Decontamination

Non-disposable sampling equipment, including the pump and support cable and electrical wires which contact the sample, must be decontaminated thoroughly each day before use ("daily decon") and after each well is sampled ("between-well decon"). Dedicated, in-place pumps and tubing must be thoroughly decontaminated using "daily decon" procedures (see #19, below) prior to their initial use. For centrifugal pumps, the non-disposable sampling equipment, including the pump and support cable and electrical wires in contact with the sample, will be decontaminated thoroughly each day before use ("daily decon").

### 19. Daily Decon

- Pre-rinse: Operate pump in a deep basin containing potable water and flush other equipment with potable water.
- Wash: Operate pump in a deep basin containing a non-phosphate detergent solution and flush other equipment with fresh detergent solution. Use the detergent sparingly.
- Rinse: Operate pump in a deep basin of potable water and flush other equipment with potable water.
- Dipso-sterilize pump.
- Wash pump parts: Place the disassembled parts of the pump into a deep basin containing a non-phosphate detergent solution. Scrub all pump parts.
- Rinse pump parts with deionized or distilled water.

### 20. Between-Well Decon

- Pre-rinse: Operate pump in a deep basin containing potable water and flush other equipment with potable water.
- Wash: Operate pump in a deep basin containing a non-phosphate detergent solution and flush other equipment with fresh detergent solution. Use the detergent sparingly.
- Rinse: Operate pump in a deep basin of potable water and flush other equipment with potable water.
- Final Rinse: Operate pump in a deep basin of deionized or distilled water as a final rinse.

### Sample Handling and Preservation

1. Dissolved metals - Compliance samples will be unfiltered. However, to determine if turbidity is producing apparent contamination, duplicate samples may be filtered in the field. The well water must not receive preservative before being filtered to remove the sediment which may have been stirred up during the purging operation. Filtering will be accomplished by either the use of filters on the sampling line or the use of a filter funnel. With this procedure, a 0.45 micron filter disk is used with the filtrate receiving flask containing acid preservative. The filtrate is tested for the drinking water standard metals listed in the Table 5-1.

2. All sample bottles will be filled to the top, capped with a Teflon seal, and be placed on ice immediately after sampling. On arrival at the laboratory, they will be transferred to a refrigerator. Table 5-1 lists preservatives and holding times.

3. Sample delivery to the laboratory will be in the shortest possible time after collection. If delay is incurred, this will be entered in the field log book along with the time increment.

### Chain of Custody

Custody and protection of samples is an important legal consideration. As few people as possible should handle the samples. The sampler is personally responsible for collected samples, and should be able to attest to the integrity of samples until transfer. If the samples are placed in a vehicle, it will be kept locked. Any ice chest will be locked, or located in a place which is locked, and having access only by responsible officials.

A chain-of-custody form will be used to document the handling of samples from the moment of collection until testing. The ID number of each sampling point will be entered in a sampling log book along with a word description of the sample. Note that several bottles collected for different parameters will have the same ID number if they come from one sampling point.

The chain-of-custody form should contain the facility name, date of sampling, and name of the collector. Each transfer of custody is recorded with an appropriate signature, date, and time. Standard EPD form SWM-23 will be used.

If the samples are to be shipped, they must be sealed.

### Field and Laboratory Quality Assurance/Quality Control

Quality control samples must be collected to determine if sample collection and handling procedures have adversely affected the quality of the groundwater samples. The appropriate EPA Program Guidance should be consulted in preparing the field QC sample requirements of the site-specific QAPP.

All field quality control samples must be prepared exactly as regular investigation samples with regard to sample volume, containers, and preservation. The following quality control samples should be collected during the sampling event:

- Field duplicates
- Equipment blank (not necessary if equipment is dedicated to the well)

As noted above, groundwater samples will be collected systematically from wells with the lowest level of contamination through to wells with highest level of contamination.

A field log book must be kept each time groundwater monitoring activities are conducted in the field. The field log book will document the following:

- Well identification number and physical condition
- Well depth
- Static water level depth and date
- Presence and thickness of immiscible liquid layers and detection method
- Collection method for immiscible liquid layers
- Pumping rate, drawdown, indicator parameters values, and clock time, at three to five minute intervals; calculate or measure total volume pumped
- Time of sample collection
- Types of sample bottles used and sample identification numbers
- Preservatives used
- Parameters requested for analysis
- Field observations of sampling event
- Name of sample collector(s)
- Weather conditions
- QA/QC data (i.e. calibration) for field instruments

The laboratory chosen will be NELAP or NELAP certified.

Any field instruments used will be calibrated prior to field use and recalibrated daily. Field logs of the procedures will be maintained and included with the reporting.

### Analytical Procedures

The laboratory chosen to perform the analyses will have a current certification recognized in the State of Georgia. The laboratory will specify a method in EPA Manual SW-846, EPA 800/4-79-020, or an EPA approved method. Records of groundwater analyses will include the methods used (by number), the extraction date, and date of actual analysis. Data from samples that are not analyzed within recommended holding times will be considered suspect. Any deviation from an EPA approved method will be adequately tested to ensure that the quality of the results meets the performance specifications (e.g., detection limit, sensitivity, precision accuracy) of the reference method. A planned deviation will be justified and submitted for approval by the Georgia Environmental Protection Division prior to use. Table 5-1 presents the sample test methods, preservatives, and holding times to be used in the testing and sampling.

### Surface Water Monitoring

As requested by EPD in December 8, 2004 correspondence, Site Suitability for Solid Waste Disposal Operation Known As: Bartow County-Georgia Power Plant Bowen Proposed Private Industrial Solid Waste Landfill, the small spring at the northeastern edge of the northern favorable area (Drawing H-15093) will also be monitored for the same parameters and at the same frequency as groundwater. Note that the spring may not discharge water during the drier parts of the year.

The Etowah River stage elevations and flow will be monitored via the existing USGS gaging stations. The results will be used in the evaluation of the water levels obtained from the groundwater monitoring wells, Allatoona Dam releases, and recorded rainfall events. At a minimum, the reporting frequency will coincide with the groundwater monitoring schedule.

Table 5-1 - Sample Test Methods, Preservation Procedures, and Holding Times

| PARAMETER            | TEST METHOD<br>SW-846<br>"834 Method<br>**EPA | RECOMMENDED CONTAINER | PRESERVATIVE | HOLDING TIME | VOLUME REQUIRED FOR ONE ANALYSIS |
|----------------------|---|-----------------------|--------------|--------------|----------------------------------|
| pH                   | 9040 <sup>a</sup>                             | P.G.                  | None         | On site      | 25 ml                            |
| Specific Conductance | 9007 <sup>a</sup>                             | P.G.                  | None         | On site      | 100 ml                           |
| ORP                  | 2868A <sup>a</sup>                            | P.G.                  | None         | On site      | 100 ml                           |
| Temperature          | 2959A <sup>a</sup>                            | P.G.                  | None         | On site      | 100 ml                           |
| DO                   | 3601 <sup>a</sup>                             | P.G.                  | None         | On site      | 100 ml                           |
| Turbidity            | 1831 <sup>a</sup>                             | P.G.                  | None         | On site      | 100 ml                           |
| Mercury              | 7470, 8010                                    | P.G.                  |              | 28 days      | 1,000 ml                         |
| Arsenic              | 8010, 7080, 7081                              | T.P.G.                |              | 6 months     | 1,000 ml                         |
| Barium               | 8010, 7080, 7081                              |                       |              |              |                                  |
| Beryllium            | 8010, 7080, 7081                              |                       |              |              |                                  |
| Cadmium              | 8010, 7180, 7181                              |                       |              |              |                                  |
| Chromium             | 8010, 7190, 7191                              |                       |              |              |                                  |
| Cobalt               | 8010, 7200, 7201                              |                       |              |              |                                  |
| Copper               | 8010, 7210, 7211                              |                       |              |              |                                  |
| Lead                 | 8010, 7420, 7421                              |                       |              |              |                                  |
| Nickel               | 8010, 7420                                    |                       |              |              |                                  |
| Selenium             | 8010, 7740, 7741                              |                       |              |              |                                  |
| Silver               | 8010, 7780, 7781                              |                       |              |              |                                  |
| Thallium             | 6020  |                       |              |              |                                  |
| Vanadium             | 8010, 7910, 7911                              |                       |              |              |                                  |
| Zinc                 | 8010, 7880                                    |                       |              |              |                                  |

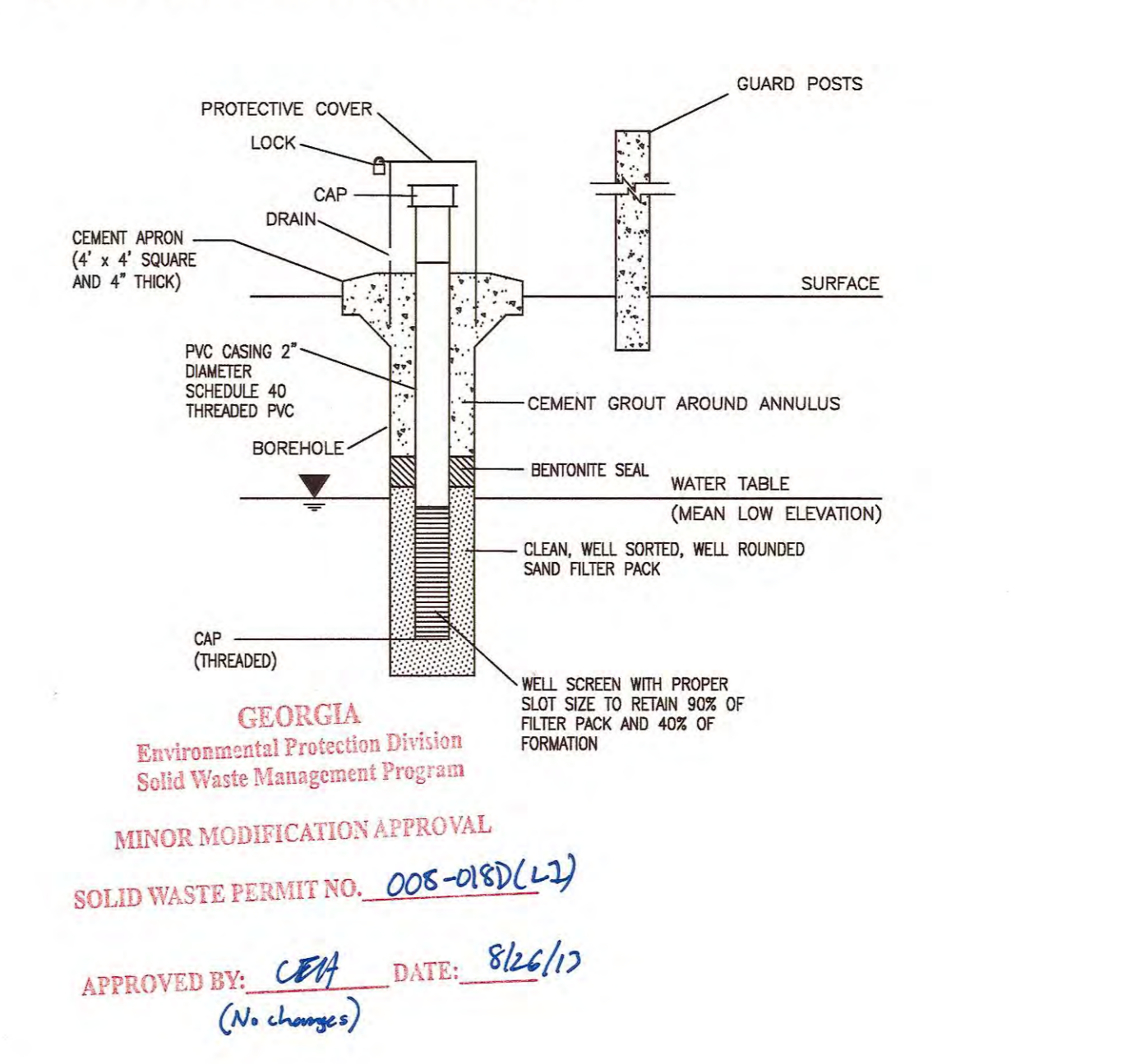
Note: 1 - P= polyethylene  
G= glass  
T= fluorocarbon resins (Teflon, PTFE, PFP, etc.)

### Statistical Analysis of Groundwater Quality Data

The interwell prediction interval method of statistical analysis with a pass 1 of 2 resample plan will be used for this site. This method is allowable under the Rules of the Georgia Department of Natural Resources Environmental Protection Division, Chapter 391-3-4-.14, Solid Waste Management.

If the prediction interval is not appropriate for the data set, then Georgia Power Company will propose an alternate statistical method, consistent with Chapter 391-3-4-.14 Solid Waste Management Regulations, to the EPD.

Figure 4-1 - Basic Monitoring Well Design



GEORGIA Environmental Protection Division Solid Waste Management Program  
MINOR MODIFICATION APPROVAL  
SOLID WASTE PERMIT NO. 005-018D(L-2)  
APPROVED BY: [Signature] DATE: 8/26/13  
(No Changes)

### REFERENCE DRAWINGS:

- FOR A COMPLETE DRAWING LIST SEE SHEET H-15061



**ATTACHMENT B: ENVIRONMENTAL PROTECTION DIVISION RESPONSE LETTER TO GEORGIA POWER DATED JUNE 24, 2005 – SITE LIMITATIONS; SOLID WASTE DISPOSAL OPERATION KNOWN AS BARTOW COUNTY – GEORGIA POWER, PLANT BOWEN PROPOSED PRIVATE INDUSTRIAL LANDFILL, DATED DECEMBER 8, 2004**

Environmental Affairs  
Bin 10221  
241 Ralph McGill Boulevard NE  
Atlanta, Georgia 30308-3374  
Tel 404.506.6526



June 24, 2005

Mr. Tim Earle  
Solid Waste Management Program  
Georgia Department of Natural Resources  
Georgia Environmental Protection Division  
4244 International Parkway, Suite 104  
Atlanta, Georgia 30354

**Re: Georgia Power – Site Limitations; Solid waste Disposal Operation Known  
As Bartow County – Georgia Power, Plant Bowen Proposed Private  
Industrial Landfill, dated December 8, 2004  
APL 0083**

Dear Mr. Earle:

Thank you for meeting with representatives of Georgia Power and Southern Company Generation on March 31, 2005, to discuss the Plant Bowen site limitations that were provided in the EPD correspondence dated December 8, 2004. During the meeting we discussed three items, as described below:

- 1) Please reference EPD's site limitation number 6. The site boundary (as originally shown on Plate 2-1 of our submittal, entitled "*Georgia Power Company, Plant Bowen, Proposed Coal Combustion By-Product Monofill, Addendum 1, Site Acceptability Report, Hydrogeological Assessment and Demonstration of Engineering Measures*, dated July 2004) must be modified to accommodate new rail lines. The new site boundary is entirely within the limits of the previous site boundary, and the 200 foot buffers will be maintained. We have resurveyed the site and have prepared the attached drawing H690-6-10 (revision 1). This addendum shows the new site boundary.
- 2) Please reference EPD's site limitation number 8. The engineering design for this site dictates that the drainage ditch from the sedimentation basins drain to an approximate elevation of 666. This point is not in the buffer zone nor is it in the 100-year floodplain. Please consider modifying site limitation number 3 to include an exception for drainage from the sedimentation basins. A diagram showing these drainage features is attached.
- 3) Please reference EPD's site limitation number 10. Attached is the proposed procedure we discussed for abandoning the borings, piezometers, and monitoring wells located in the waste disposal area. Also, based on our March 31, 2005 meeting and our understanding of the Water Well Standards Act, the intent of the act is that the field



Mr. Tim Earle  
Page 2  
June 24, 2005

employees can be "under the direction of" a PG or PE, rather than under constant supervision. Let us know if you are in agreement with this interpretation and the attached proposed well abandonment procedure. If so, please modify site limitation 10.

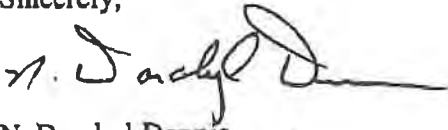
In addition to the above three points, Georgia Power also requests that the site suitability letter provided for this site, dated December 8, 2004, be amended to allow for the disposal of ash and gypsum in the same cell. We have attached TCLP and SPLP data for three mixes:

- 25% ash, 75% gypsum
- 50% ash, 50% gypsum
- 75% ash, 25% gypsum

The data show that no TCLP levels have been exceeded.

If you have any questions or would like to discuss any of the points above, please feel free to call Rochelle Routman at (404) 506-7780.

Sincerely,



N. Darahyl Dennis  
Land and Remediation Program Manager

RJR/ww  
Enclosures



**ATTACHMENT C: WELL CONSTRUCTION AND BORING LOGS**

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 5/5/16 16:54 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\IGA-BOWEN\LANDFILL REPLACEMENT WELLS 2016\BORING LOGS\BOWEN LANDFILL REPLACEMENT



Log updated with revised survey certified 3/23/2021  
Ground Surface Elevation (feet, NAVD88): **705.81**  
Top of PVC Casing Elevation (feet, NAVD188): **708.58**

**BORING GWA-51R Z**  
PAGE 1 OF 2  
GPC633179

**LOG OF TEST BORING**

SOUTHERN COMPANY SERVICES, INC.  
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Landfill Replacement Monitoring Wells  
**LOCATION** Plant Bowen

**DATE STARTED** 2/18/2016    **COMPLETED** 3/1/2016    **SURF. ELEV.** 705.81    **COORDINATES:** N 1505310.36 E 2073781.34

**CONTRACTOR** Cascade    **EQUIPMENT** Tracked    **METHOD** Rotosonic

**DRILLED BY** T. Ardito    **LOGGED BY** W. Shaughnessy    **CHECKED BY** B. Smelser    **ANGLE**    **BEARING**

**BORING DEPTH** 92 ft.    **GROUND WATER DEPTH DURING** 45 ft.    **COMP.** 50.4 ft.    **DELAYED** 41.2 ft. after 72 hrs.

**NOTES**

| DEPTH<br>(ft) | GRAPHIC<br>LOG | MATERIAL DESCRIPTION  | ELEVATION | HCL<br>REACTION<br><small>Weak<br/>Moderate<br/>Strong</small> | GROUNDWATER<br>OBSERVATIONS | WELL DATA   |  |
|---------------|----------------|---|-----------|--|-----------------------------|---|--|
|               |                |   |           |  |                             | Completion:<br>protective aluminum cover with bollards;<br>4-foot square concrete pad |  |
| 5             |                | <b>Silt (ML)</b><br>- mottled red (2.5YR 4/8) and yellow / pale yellowish orange (10YR 8/6) dry, with sand and clay<br>- some gravel seams                      |           |  |                             | ▲ ▲ ▲ ▲   | Surface Seal:<br>Concrete  |
| 10            |                | - mottled red / moderate reddish brown (10R 4/6) and brownish yellow (10YR 6/8) dry, soft, low plasticity<br>- medium stiff<br><br>- brownish yellow (10YR 6/8) |           |  |                             | ▲ ▲ ▲ ▲   | Annular Fill:<br>Portland Cement-Bentonite<br>Grout (4 - 94lbs bags PC, 1 - 50lbs bags Gel, 45 gal. Water)   |
| 15            |                | - mottled yellow (10YR 7/8) and black (10YR 2/1) dry, medium stiff, few seams of fine-gravel and white sand   |           |  |                             | ▲ ▲ ▲ ▲   |  |
| 20            |                | - very damp   |           |  |                             | ▲ ▲ ▲ ▲   |  |
| 25            |                | - mottled yellow (10YR 7/6) and black (10YR 2/1) medium stiff, with white coarse-sand and weathered gravel  |           |  |                             | ▲ ▲ ▲ ▲   |  |
| 30            |                | - with coarse gravel  |           |  |                             | ▲ ▲ ▲ ▲   |  |
| 35            |                | - wet   |           |  |                             | ▲ ▲ ▲ ▲   | Annular Seal:<br>Pel-Plug 3/8 Bentonite Coated<br>Pellets (0.5 - 5gal buckets<br>(78.5'-75.0')) and Baroid Hole<br>Plug 3/8 Chips (15 - 50lbs bags<br>(75.0'-22.0')) |
| 40            |                | <b>Elastic Silt (MH)</b><br>- dark yellowish brown (10YR 4/4), yellow (10YR 7/6) and black (10YR 2/1) wet, medium stiff   |           |  |                             | ▲ ▲ ▲ ▲   |  |
| 45            |                | - saturated, with sand and coarse gravel (non-carbonate)  |           |  |                             | ▲ ▲ ▲ ▲   |  |

(Continued Next Page)



# LOG OF TEST BORING

## BORING GWA-51R Z

PAGE 2 OF 2

GPC633179

SOUTHERN COMPANY SERVICES, INC.  
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Landfill Replacement Monitoring Wells

LOCATION Plant Bowen

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 5/5/16 16:54 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\GA-BOWEN\LANDFILL REPLACEMENT WELLS 2016\BORING LOGS\BOWEN LANDFILL REPLACEMENT

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION  | ELEVATION | HCL REACTION<br><small>Weak<br/>Moderate<br/>Strong</small> | GROUNDWATER OBSERVATIONS | WELL DATA  |
|------------|-------------|---|-----------|---|--------------------------|--|
| 50         |             | <b>Elastic Silt (MH)</b> (Con't)<br><br><b>Clayey Gravel (GC)</b><br>- reddish yellow (7.5YR 6/6) wet<br><br>- some cobbles, pulverized rock  |           |   |                          | Completion:<br>protective aluminum cover with bollards;<br>4-foot square concrete pad  |
| 55         |             | <b>Dolostone</b><br>- grayish brown (2.5Y 5/2) and gray (10YR 5/1) hard<br><br>- medium dark gray (N4) and dark greenish gray (5GY 4/1) fine grain, hard, not to slightly weathered on fractures weathered, slightly fractured, carbonate, thin fractures healed with calcite |           |   |                          | (CONTINUED)  |
| 60         |             |   |           |   |                          |  |
| 65         |             |   |           |   |                          | Annular Seal:<br>Pel-Plug 3/8 Bentonite Coated Pellets (0.5 - 5gal buckets (78.5'-75.0')) and Baroid Hole Plug 3/8 Chips (15 - 50lbs bags (75.0'-22.0')) |
| 70         |             | - dark gray (N3) fine grain, hard, not to slightly weathered, medium to thick bedded, slight to moderately fractured, vertical and cross-cutting thin fractures, calcite healed fractures   |           |   |                          |  |
| 75         |             |   |           |   |                          |  |
| 80         |             | - dark gray (N3) and black (N1) fine grain, hard, not to slightly weathered, medium to thick bedded, slight to moderately fractured, low carbonate reaction, fractures healed with calcite, fractures up to 2 inch, cross-cutting, brown-yellow water staining on fractures   |           |   |                          | Filter:<br>← Filter Media 20/40 Silica Sand (4 - 50 lbs bags)  |
| 85         |             |   |           |   |                          | <b>Standpipe:</b><br>2" OD PVC (SCH 40)<br>Screen:<br>10 ft; 0.010" Slot Prepack   |
| 90         |             | - thick to massive bedded   |           |   |                          | Sump: 0.299999999999997 ft.<br>← Backfill: Filter Media 20/40 Silica Sand (0.25 - 50 lbs bags (92.0'-91.0'))<br>Cave-in to 92 ft.                        |
| 92.0       |             | Bottom of borehole at 92.0 feet.  |           |   |                          |  |
| 95         |             |   |           |   |                          |  |

Log updated with revised survey certified 3/23/2021  
 Ground Surface Elevation (feet, NAVD88): **705.81**  
 Top of PVC Casing Elevation (feet, NAVD188): **708.58**



**LOG OF TEST BORING**

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Landfill Replacement Monitoring Wells  
**LOCATION** Plant Bowen

**DATE STARTED** 2/18/2016    **COMPLETED** 3/1/2016    **SURF. ELEV.** 705.81    **COORDINATES:** N 1505310.36 E 2073781.34

**CONTRACTOR** Cascade    **EQUIPMENT** Tracked    **METHOD** Rotosonic

**DRILLED BY** T. Ardito    **LOGGED BY** W. Shaughnessy    **CHECKED BY** B. Smelser    **ANGLE** \_\_\_\_\_ **BEARING** \_\_\_\_\_

**BORING DEPTH** 92 ft.    **GROUND WATER DEPTH DURING** 45 ft.    **COMP.** 50.4 ft.    **DELAYED** 41.2 ft. after 72 hrs.

**NOTES** \_\_\_\_\_

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION  | ELEVATION | HCL REACTION<br><small>Weak<br/>Moderate<br/>Strong</small> | COMMENTS                             | Natural Gamma |     |     |
|------------|-------------|---|-----------|---|--------------------------------------|---------------|-----|-----|
|            |             |   |           |   |                                      | 55            | 110 | 165 |
| 5          |             | <b>Silt (ML)</b><br>- mottled red (2.5YR 4/8) and yellow / pale yellowish orange (10YR 8/6) dry, with sand and clay<br>- some gravel seams                      |           |   | (Recovery=100% between 0 and 7ft.)   |               |     |     |
| 10         |             | - mottled red / moderate reddish brown (10R 4/6) and brownish yellow (10YR 6/8) dry, soft, low plasticity<br>- medium stiff<br><br>- brownish yellow (10YR 6/8) |           |   | (Recovery=95% between 7 and 17ft.)   |               |     |     |
| 15         |             |   |           |   |                                      |               |     |     |
| 20         |             | - mottled yellow (10YR 7/8) and black (10YR 2/1) dry, medium stiff, few seams of fine-gravel and white sand   |           |   | (Recovery=100% between 17 and 27ft.) |               |     |     |
| 25         |             |   |           |   |                                      |               |     |     |
| 30         |             | - very damp<br><br>- mottled yellow (10YR 7/6) and black (10YR 2/1) medium stiff, with white coarse-sand and weathered gravel<br><br>- with coarse gravel       |           |   | (Recovery=90% between 27 and 37ft.)  |               |     |     |
| 35         |             |   |           |   |                                      |               |     |     |
| 40         |             | <b>Elastic Silt (MH)</b><br>- dark yellowish brown (10YR 4/4), yellow (10YR 7/6) and black (10YR 2/1) wet, medium stiff   |           |   | (Recovery=60% between 37 and 47ft.)  |               |     |     |
| 45         |             | ▽ - saturated, with sand and coarse gravel (non-carbonate)  |           |   |                                      |               |     |     |

(Continued Next Page)



WELL CONSTRUCTION LOG - ESEE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4 WEL

Log updated with revised survey certified 3/23/2021  
 Ground Surface Elevation (feet, NAVD88): **707.61**  
 Top of PVC Casing Elevation (feet, NAVD88): **710.99**

**WELL: GWA-53**  
 PAGE 1 OF 4  
 ECS37738



## LOG OF WELL CONSTRUCTION

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells  
**LOCATION** Cartersville, GA

**DATE STARTED** 3/26/2015 **COMPLETED** 4/10/2015 **SURF. ELEV.** 707.61 **COORDINATES:** N 1505695.52 E 2074038.90

**CONTRACTOR** Cascade Drilling **EQUIPMENT** 7868 **METHOD** Sonic; SPT

**DRILLED BY** J. Sigler **LOGGED BY** B. Smelser **CHECKED BY** L. Millet **ANGLE** \_\_\_\_\_ **BEARING** \_\_\_\_\_

**BORING DEPTH** 117.85 ft. **GROUND WATER DEPTH: DURING** 53.5 ft. **COMP.** 56 ft. **DELAYED** 59.15 ft. after 100 hrs.

**NOTES** TOC Elevation 710.99, Sonic Drilling - 7"OD Casing in Overburden, 6"OD Casing in Rock, 4"OD Core Well installed. Refer to well data sheet.

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | ELEVATION            | WELL DATA<br><br>Completion:<br>Protective aluminum cover with bollards;<br>4-foot square concrete pad  | NOTES |
|------------|--------------------------|----------------------|---|-------|
| 5          |                          | 707.61<br><br>704.61 | <p style="margin-left: 20px;">← Surface Seal: Concrete</p> <p style="margin-left: 20px;">Annular Fill: Portland Cement-Bentonite Grout (39 - 47lbs bags PC, 3 - 50lbs bags Gel, 255 gal. Water)</p> |       |
| 10         |                          |                      |   |       |
| 15         |                          |                      |   |       |
| 20         |                          |                      |   |       |
| 25         |                          |                      |   |       |
| 30         |                          |                      |   |       |

(Continued Next Page)

WELL CONSTRUCTION LOG - ESEE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICGB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4 WEL



# LOG OF WELL CONSTRUCTION

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells  
**LOCATION** Cartersville, GA

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | ELEVATION | WELL DATA   |  | NOTES |
|------------|--------------------------|-----------|---|--|-------|
|            |                          |           | Completion:<br>Protective aluminum cover with bollards;<br>4-foot square concrete pad |  |       |
|            |                          |           | (CONTINUED)   |  |       |
| 35         |                          |           |   |  |       |
| 40         |                          |           |   |  |       |
| 45         |                          |           |   |  |       |
| 50         |                          |           |   |  |       |
| 55         |                          | 652.61    |   |  |       |
| 60         |                          |           |   |  |       |
| 65         |                          |           |   |  |       |

Annular Fill: Portland Cement-Bentonite Grout (39 - 47lbs bags PC, 3 - 50lbs bags Gel, 255 gal. Water)

Annular Seal: Pel-Plug 3/8 Bentonite Coated Pellets (3 - 5gal buckets (105.5'-94.0')) and Baroid Hole Plug 3/8 Chips (13 - 50lbs bags (94.0'-55.0'))

(Continued Next Page)



WELL CONSTRUCTION LOG - ESEE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICGB WELLS 2015\CELLS 3-4 WELLS\SIBORING LOGS\PLANT BOWEN CELLS 3 & 4 WEL



# LOG OF WELL CONSTRUCTION

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells  
**LOCATION** Cartersville, GA

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | ELEVATION | WELL DATA   |   | NOTES |
|------------|--------------------------|-----------|---|---|-------|
|            |                          |           | Completion:<br>Protective aluminum cover with bollards;<br>4-foot square concrete pad |   |       |
| 70         |                          |           | (CONTINUED)   |   |       |
| 75         |                          |           |   |   |       |
| 80         |                          |           |   |   |       |
| 85         |                          |           |   |   |       |
| 90         |                          |           |   |   |       |
| 95         |                          |           |   |   |       |
| 100        |                          |           |   |   |       |
| 105        |                          | 602.61    |   | Filter: Filter Media 1A Silica Sand (4.5 - 50 lbs bags) |       |

Annular Seal: Pel-Plug 3/8 Bentonite Coated Pellets (3 - 5gal buckets (105.5'-94.0')) and Baroid Hole Plug 3/8 Chips (13 - 50lbs bags (94.0'-55.0'))



**LOG OF WELL CONSTRUCTION**

**WELL: GWA-53**  
PAGE 4 OF 4  
ECS37738

SOUTHERN COMPANY SERVICES, INC.  
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells  
**LOCATION** Cartersville, GA

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | ELEVATION        | WELL DATA   | NOTES |
|------------|--------------------------|------------------|---|-------|
|            |                          |                  | (CONTINUED)   |       |
| 110        |                          | 600.11           | ← Filter: Filter Media 1A Silica Sand (4.5 - 50 lbs bags)             |       |
| 115        |                          |                  | ← Standpipe: 2" OD PVC (SCH 40)<br>Screen: 10 ft; 0.010" Slot Prepack |       |
| 120        |                          | 590.06<br>589.76 | ← Sump: 0.30 ft.<br>Cave-in to 117.85 ft.                             |       |
| 125        |                          |                  |   |       |
| 130        |                          |                  |   |       |
| 135        |                          |                  |   |       |
| 140        |                          |                  |   |       |

GEOLOGY LOG COLOR GAMMA - ESEE DATABASE GDT - 5/20/15 13:24 - S:\WORKGROUPO\SAPC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4



Log updated with revised survey certified 3/23/2021  
 Ground Surface Elevation (feet, NAVD88): **707.61**  
 Top of PVC Casing Elevation (feet, NAVD188): **710.99**

**BORING GWA-53**  
 PAGE 1 OF 4  
 ECS37738

**LOG OF TEST BORING**

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Bowen Cells 3 & 4 Wells  
 LOCATION Cartersville, GA

DATE STARTED 3/26/2015 COMPLETED 4/10/2015 SURF. ELEV. 707.61 COORDINATES: N 1505695.52 E 2074038.90

CONTRACTOR Cascade Drilling EQUIPMENT 7868 METHOD Sonic; SPT

DRILLED BY J. Sigler LOGGED BY B. Smelser CHECKED BY L. Millet ANGLE \_\_\_\_\_ BEARING \_\_\_\_\_

BORING DEPTH 117.85 ft. GROUND WATER DEPTH: DURING 53.5 ft. COMP. 56 ft. DELAYED 59.15 ft. after 100 hrs.

NOTES TOC Elevation 710.99, Sonic Drilling - 7"OD Casing in Overburden, 6"OD Casing in Rock, 4"OD Core Well installed. Refer to well data sheet.

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION  | ELEVATION | HCL REACTION<br><small>Weak<br/>Moderate<br/>Strong</small> | COMMENTS                       | Natural Gamma |     |     |
|------------|-------------|---|-----------|---|--------------------------------|---------------|-----|-----|
|            |             |   |           |   |                                | 55            | 110 | 165 |
| 5          |             | <p><b>Silt (ML)</b></p> <p>- mottled red (10R 4/8) and yellowish red (5YR 5/8) fill dry, hard, some light gray to white/angular to subangular dolomite fragments</p>  |           |   | SPT N=42bpf(@3ft.)<br>12/18/24 |               |     |     |
| 10         |             | <p>- mottled red (10R 4/8) and yellowish red (5YR 5/8) fill dry, hard, trace white/medium to coarse/angular dolomite fragments</p>  |           |   | SPT N=32bpf(@8ft.)<br>7/15/17  |               |     |     |
| 15         |             | <p>- mottled yellowish red (5YR 5/8) and red (10R 4/8) residuum dry, very stiff, abundant white with orangish staining/coarse/angular to subangular dolomite fragments</p>  |           |   | SPT N=21bpf(@13ft.)<br>8/9/12  |               |     |     |
| 20         |             | <p><b>Elastic Silt (MH)</b></p> <p>- mottled brownish yellow (10YR 6/8) and red (2.5YR 4/8) residuum dry, very stiff, low plastic, abundant coarse/angular to subangular/very brittle to friable dolomite fragments, trace light gray interbedded clay lenses</p> |           |   | SPT N=19bpf(@18ft.)<br>6/9/10  |               |     |     |
| 25         |             | <p>- mottled brownish yellow (10YR 6/8) and red / moderate reddish brown (10R 4/6) residuum moist, very stiff, low plastic, trace light gray angular dolomite and chert fragments</p>   |           |   | SPT N=20bpf(@23ft.)<br>6/6/14  |               |     |     |
| 30         |             | <p><b>Silt (ML)</b></p> <p>- trace mottling reddish yellow (7.5YR 7/8), reddish yellow (7.5YR 7/8) and brownish yellow (10YR 6/8) residuum moist, stiff, trace clay and rock fragments</p>  |           |   | SPT N=11bpf(@28ft.)<br>3/5/6   |               |     |     |

(Continued Next Page)



# LOG OF TEST BORING

**BORING GWA-53**  
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ECS37738

SOUTHERN COMPANY SERVICES, INC.  
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Bowen Cells 3 & 4 Wells

LOCATION Cartersville, GA

GEOLOGY LOG COLOR GAMMA - ESEE DATABASE GDT - 5/20/15 13:24 - S:\WORKGROUPO\SPAC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\CB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION   | ELEVATION | HCL REACTION<br>Weak<br>Moderate<br>Strong | COMMENTS                       | Natural Gamma |     |     |
|------------|-------------|--|-----------|--|--------------------------------|---------------|-----|-----|
|            |             |  |           |  |                                | 55            | 110 | 165 |
|            |             | <b>Silt (ML) (Con't)</b>   |           |  |                                |               |     |     |
| 35         |             | <b>Elastic Silt (MH)</b><br>- trace mottling strong brown (7.5YR 5/8) and reddish yellow (7.5YR 7/8) residuum moist, very stiff, low plastic, abundant light gray/angular dolomite and dark bluish gray to brown chert fragments |           |  | SPT N=27bpf(@33ft.)<br>20/18/9 |               |     |     |
| 40         |             | - mottled strong brown (7.5YR 5/8) and red / moderate reddish brown (10R 4/6) residuum moist, stiff, low plastic, trace dark gray to light gray/coarse/subangular chert and dolomite fragments                                   |           |  | SPT N=13bpf(@38ft.)<br>10/4/9  |               |     |     |
| 45         |             | <b>Silt (ML)</b><br>- mottled brown (7.5YR 4/4) and reddish yellow (7.5YR 6/6) residuum moist, stiff, abundant medium to coarse/subrounded dolomite fragments, trace dark gray/coarse/subangular to subrounded chert fragments   |           |  | SPT N=14bpf(@43ft.)<br>8/6/8   |               |     |     |
| 50         |             | - reddish yellow (7.5YR 6/8) residuum moist, stiff, dark brown angular chert fragments, trace clay   |           |  | SPT N=13bpf(@48ft.)<br>4/7/6   |               |     |     |
| 55         |             | ▽ <b>Elastic Silt (MH)</b><br>- mottled strong brown (7.5YR 5/8) and reddish yellow (7.5YR 7/8) residuum wet, very stiff, low plastic, subangular to subrounded chert and dolomite fragments                                     |           |  | SPT N=19bpf(@53ft.)<br>7/8/11  |               |     |     |
| 60         |             | ▽ - yellowish red (5YR 5/8) residuum wet, soft, low plastic, cohesive, trace rock fragments  |           |  | SPT N=2bpf(@58ft.)<br>1/1/1    |               |     |     |
| 65         |             | <b>Lean Clay (CL)</b><br>- yellowish red (5YR 5/8) residuum wet, very soft, low to medium plastic, trace rock fragments  |           |  | SPT N=0bpf(@63ft.)<br>WOH      |               |     |     |

(Continued Next Page)



# LOG OF TEST BORING

**BORING GWA-53**  
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SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Bowen Cells 3 & 4 Wells  
 LOCATION Cartersville, GA

GEOLOGY LOG COLOR GAMMA - ESEE DATABASE GDT - 5/20/15 13:24 - S:\WORKGROUP\SPAC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\CB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4

| DEPTH<br>(ft) | GRAPHIC<br>LOG | MATERIAL DESCRIPTION   | ELEVATION | HCL<br>REACTION<br><small>Weak<br/>Moderate<br/>Strong</small> | COMMENTS   | Natural Gamma |     |     |
|---------------|----------------|--|-----------|--|--|---------------|-----|-----|
|               |                |  |           |  |  | 55            | 110 | 165 |
| 70            |                | <b>Lean Clay (CL) (Con't)</b><br>- yellowish red / light brown (5YR 5/6) wet, very soft, low plastic to medium plastic, cohesive, abundant dark brown chert fragments  |           |  | SPT N=0bpf(@68ft.)<br>WOH  |               |     |     |
| 75            |                | <b>Dolostone</b><br>- light gray (N7) and light bluish gray (10B 7/1) very fine to fine grain, medium hard to hard, slightly to moderately weathered, massive, moderate- to high-angle fractures visible, moderate to partial healing, trace total and no healing visible, staining visible within fractures from approx. 71-72', core pieces stained from approx. 72-77.5', trace calcite fracture fill visible, trace dark brown interbedded chert |           |  | Degree of fracturing and fracture orientation unknown due to sonic drilling method |               |     |     |
| 80            |                | <b>VOID - possible solution cavity (77.5-100')</b><br>- approx. 8' of mud and rock fragments recovered, thin chert/dolomite ledge @ approx. 89-90'   |           |  |  |               |     |     |
| 100           |                | <b>Dolostone</b><br>- bluish gray (10B 5/1) very fine to fine grain, hard, not to slightly weathered, massive, moderate- to high-angle fractures visible, trace low-angle fractures, moderate to full healing, no visible staining within healed fractures, trace staining visible from approx. 106-108', no to few open fractures visible, calcite fracture fill visible approx. 1-2mm in thickness   |           |  |  |               |     |     |
| 105           |                |  |           |  |  |               |     |     |

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WELL CONSTRUCTION LOG - ESEE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4 WELL

Log updated with revised survey certified 3/23/2021  
 Ground Surface Elevation (feet, NAVD88): **708.38**  
 Top of PVC Casing Elevation (feet, NAVD88): **711.58**



# LOG OF WELL CONSTRUCTION

**WELL: GWA-53R**  
 PAGE 1 OF 5  
 ECS37738

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells  
**LOCATION** Cartersville, GA

**DATE STARTED** 3/30/2015 **COMPLETED** 4/10/2015 **SURF. ELEV.** 708.38 **COORDINATES:** N 1505689.06 E 2074032.00

**CONTRACTOR** Cascade Drilling **EQUIPMENT** 7868 **METHOD** Sonic

**DRILLED BY** J. Sigler **LOGGED BY** B. Smelser **CHECKED BY** L. Millet **ANGLE** \_\_\_\_\_ **BEARING** \_\_\_\_\_

**BORING DEPTH** 165.44 ft. **GROUND WATER DEPTH: DURING** 55 ft. **COMP.** 63.4 ft. **DELAYED** 59.81 ft. after 100 hrs.

**NOTES** TOC Elevation 711.58, Sonic Drilling - 7"OD Casing in Overburden, 6"OD Casing in Rock, 4"OD Core Well installed. Refer to well data sheet.

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | WELL DATA |   | NOTES |
|------------|--------------------------|-----------|---|-------|
|            |                          | ELEVATION | Completion:<br>Protective aluminum cover with bollards;<br>4-foot square concrete pad |       |
| 0          |                          | 708.38    | ← Surface Seal: Concrete  |       |
| 5          |                          | 705.38    |   |       |
| 10         |                          |           |   |       |
| 15         |                          |           |   |       |
| 20         |                          |           |   |       |
| 25         |                          |           |   |       |
| 30         |                          |           |   |       |

Annular Fill: Portland Cement-Bentonite Grout (28 - 47lbs bags PC, 2 - 50lbs bags Gel, 120 gal. Water)

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WELL CONSTRUCTION LOG - ESEE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICGB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4 WEL



# LOG OF WELL CONSTRUCTION

**WELL: GWA-53R**  
PAGE 2 OF 5  
ECS37738

SOUTHERN COMPANY SERVICES, INC.  
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells

**LOCATION** Cartersville, GA

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | ELEVATION | WELL DATA  | NOTES |
|------------|--------------------------|-----------|--|-------|
|            |                          |           | Completion:<br>Protective aluminum cover with bollards;<br>4-foot square concrete pad  |       |
| 35         |                          |           | (CONTINUED)  |       |
| 40         |                          |           | Annular Fill: Portland Cement-Bentonite Grout (28 - 47lbs bags PC, 2 - 50lbs bags Gel, 120 gal. Water)   |       |
| 45         |                          |           |  |       |
| 50         |                          |           |  |       |
| 55         |                          | 656.38    |  |       |
| 60         |                          |           | Annular Seal: Pel-Plug 3/8 Bentonite Coated Pellets (3 - 5gal buckets (153.0'-140.0')) and Baroid Hole Plug 3/8 Chips (13 - 50lbs bags (140.0'-52.0')) |       |
| 65         |                          |           |  |       |

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WELL CONSTRUCTION LOG - ESEE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICGB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4 WEL



# LOG OF WELL CONSTRUCTION

**WELL: GWA-53R**  
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SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells

**LOCATION** Cartersville, GA

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | ELEVATION | WELL DATA<br><br>Completion:<br>Protective aluminum cover with bollards;<br>4-foot square concrete pad<br><br>(CONTINUED)                              | NOTES |
|------------|--------------------------|-----------|--|-------|
| 70         |                          |           |  |       |
| 75         |                          |           |  |       |
| 80         |                          |           |  |       |
| 85         |                          |           | Annular Seal: Pel-Plug 3/8 Bentonite Coated Pellets (3 - 5gal buckets (153.0'-140.0')) and Baroid Hole Plug 3/8 Chips (13 - 50lbs bags (140.0'-52.0')) |       |
| 90         |                          |           |  |       |
| 95         |                          |           |  |       |
| 100        |                          |           |  |       |

(Continued Next Page)

WELL CONSTRUCTION LOG - ESEE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING PROJECTS\BOWEN\ICGB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4 WEL



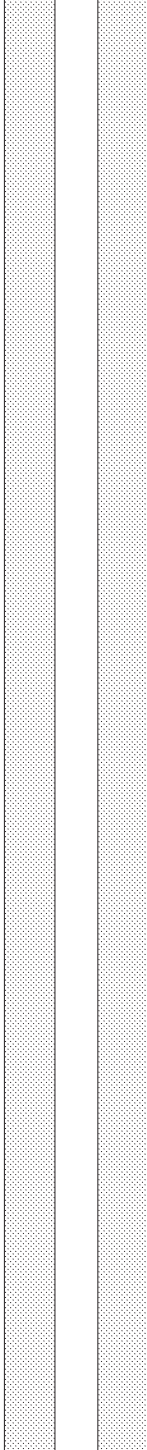
# LOG OF WELL CONSTRUCTION

**WELL: GWA-53R**  
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SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells

**LOCATION** Cartersville, GA

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | ELEVATION | WELL DATA  | NOTES |
|------------|--------------------------|-----------|--|-------|
| 105        |                          |           | Completion:<br>Protective aluminum cover with bollards;<br>4-foot square concrete pad  |       |
| 110        |                          |           | (CONTINUED)  |       |
| 115        |                          |           |    |       |
| 120        |                          |           | Annular Seal: Pel-Plug 3/8 Bentonite Coated Pellets (3 - 5gal buckets (153.0'-140.0')) and Baroid Hole Plug 3/8 Chips (13 - 50lbs bags (140.0'-52.0')) |       |
| 125        |                          |           |  |       |
| 130        |                          |           |  |       |
| 135        |                          |           |  |       |

(Continued Next Page)

WELL CONSTRUCTION LOG - ESEE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICGB WELLS 2015\CELLS 3-4 WELLS\BOWEN LOGS\PLANT BOWEN CELLS 3 & 4 WEL



# LOG OF WELL CONSTRUCTION

**WELL: GWA-53R**  
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SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells

**LOCATION** Cartersville, GA

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | WELL DATA  | NOTES |
|------------|--------------------------|--|-------|
| 140        |                          | (CONTINUED)<br>Completion:<br>Protective aluminum cover with bollards;<br>4-foot square concrete pad   |       |
| 145        |                          | Annular Seal: Pel-Plug 3/8 Bentonite Coated Pellets (3 - 5gal buckets (153.0'-140.0')) and Baroid Hole Plug 3/8 Chips (13 - 50lbs bags (140.0'-52.0')) |       |
| 150        |                          | Filter: Filter Media 1A Silica Sand (5 - 50 lbs bags)  |       |
| 155        |                          | Standpipe: 2" OD PVC (SCH 40)<br>Screen: 11 ft; 0.010" Slot Prepack  |       |
| 160        |                          | Sump: 0.30 ft.<br>Cave-in to 165.44 ft.  |       |
| 165        |                          | Elevation markers: 555.38, 554.38, 543.24, 542.94  |       |
| 170        |                          |  |       |

GEOLOGY LOG COLOR GAMMA - ESEE DATABASE GDT - 5/20/15 13:24 - S:\WORKGROUPO\SP\PC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4

Log updated with revised survey certified 3/23/2021  
 Ground Surface Elevation (feet, NAVD88): **708.38**  
 Top of PVC Casing Elevation (feet, NAVD88): **711.58**



## LOG OF TEST BORING

**BORING GWA-53R**  
 PAGE 1 OF 5  
 ECS37738

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells  
**LOCATION** Cartersville, GA

**DATE STARTED** 3/30/2015 **COMPLETED** 4/10/2015 **SURF. ELEV.** 708.38 **COORDINATES:** N 1505689.06 E 2074032.00

**CONTRACTOR** Cascade Drilling **EQUIPMENT** 7868 **METHOD** Sonic

**DRILLED BY** J. Sigler **LOGGED BY** B. Smelser **CHECKED BY** L. Millet **ANGLE** \_\_\_\_\_ **BEARING** \_\_\_\_\_

**BORING DEPTH** 165.44 ft. **GROUND WATER DEPTH: DURING** 55 ft. **COMP.** 63.4 ft. **DELAYED** 59.81 ft. after 100 hrs.

**NOTES** TOC Elevation 711.58, Sonic Drilling - 7"OD Casing in Overburden, 6"OD Casing in Rock, 4"OD Core Well installed. Refer to well data sheet.

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION   | ELEVATION | HCL REACTION<br><small>Weak<br/>Moderate<br/>Strong</small> | COMMENTS                                 | Natural Gamma<br><br>55    110    165 |
|------------|-------------|--|-----------|---|--|---------------------------------------|
| 5          |             | <b>Elastic Silt (MH)</b><br>- dusky red (10R 3/3) fill dry, very stiff, trace organics and medium to coarse/subangular to subrounded rock fragments<br><br><b>Silt (ML)</b><br>- red / moderate reddish brown (10R 4/6) and red (10R 5/8) residuum dry, very stiff, zone of brittle to friable light gray rock fragments @ approx. 6-7', trace clay<br><br>- mottled yellowish red (5YR 5/8) and brownish yellow / dark yellowish orange (10YR 6/6) residuum dry, very stiff, medium to coarse/angular to subangular dolomite fragments, trace clay    |           |   | Soil density gauged by thumb penetration |                                       |
| 10         |             | <b>Elastic Silt (MH)</b><br>- mottled strong brown (7.5YR 5/8) and red (10R 5/8) residuum dry, very stiff to hard, low plastic, interbedded sandy CL, zone of decreased clay to silt and rock fragments @ approx. 13-14', abundant very coarse/subangular/light gray dolomite fragments<br><br>- mottled reddish yellow (7.5YR 6/6) and red / moderate reddish brown (10R 4/6) residuum dry, very stiff, low plastic, abundant light gray to white/very coarse to cobble/angular to subangular dolomite fragments, light gray to brown chert fragments |           |   |  |                                       |
| 15         |             |  |           |   |  |                                       |
| 20         |             |  |           |   |  |                                       |
| 25         |             |  |           |   |  |                                       |
| 30         |             | <b>Silt (ML)</b><br>- mottled strong brown (7.5YR 5/6), pink (7.5YR 7/4) and red (2.5YR 5/8) residuum moist, stiff, interbedded zones of ML, abundant light gray to white/medium to coarse dolomite and chert fragments, rubble zone of very coarse to cobble size @ approx. 35-36'  |           |   |  |                                       |

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# LOG OF TEST BORING

**BORING GWA-53R**  
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SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells  
**LOCATION** Cartersville, GA

GEOLOGY LOG COLOR GAMMA - ESEE DATABASE GDT - 5/20/15 13:24 - S:\WORKGROUPO\SAPC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICB WELLS 2015\ICB CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4

| DEPTH<br>(ft) | GRAPHIC<br>LOG | MATERIAL DESCRIPTION   | ELEVATION | HCL<br>REACTION<br><small>Weak<br/>Moderate<br/>Strong</small> | COMMENTS | Natural Gamma |     |     |
|---------------|----------------|--|-----------|--|----------|---------------|-----|-----|
|               |                |  |           |  |          | 55            | 110 | 165 |
| 35            |                | <b>Silt (ML) (Con't)</b><br><br>- trace mottling strong brown (7.5YR 5/6) and red (2.5YR 4/8) residuum moist, stiff, decrease in rock fragments from above, light gray/coarse to very coarse/angular to subangular dolomite fragments, trace chert fragments   |           |  |          |               |     |     |
| 40            |                |  |           |  |          |               |     |     |
| 45            |                | - trace mottling strong brown (7.5YR 5/6) and red (10R 5/8) residuum moist to wet, stiff, abundant coarse/angular to subangular dolomite and chert fragments, rock lens/ledge of dolomite with trace chert @ approx. 54-55' with coarse to large cobble size pieces recovered, trace interbedded clay lenses |           |  |          |               |     |     |
| 50            |                |  |           |  |          |               |     |     |
| 55            |                | <b>Lean Clay (CL)</b><br>▽ - reddish brown (2.5YR 4/3) residuum wet, soft, low to medium plastic, cohesive, trace coarse/angular to subangular dolomite and chert fragments, limited recovery  |           |  |          |               |     |     |
| 60            |                | ▽  |           |  |          |               |     |     |
| 65            |                | ▽  |           |  |          |               |     |     |

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# LOG OF TEST BORING

**BORING GWA-53R**  
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SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Bowen Cells 3 & 4 Wells  
 LOCATION Cartersville, GA

GEOLOGY LOG COLOR GAMMA - ESEE DATABASE GDT - 5/20/15 13:24 - S:\WORKGROU\SPAC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICB WELLS 2015\ICB CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION  | ELEVATION | HCL REACTION<br>Weak<br>Moderate<br>Strong | COMMENTS  | Natural Gamma |     |     |
|------------|-------------|---|-----------|--|---|---------------|-----|-----|
|            |             |   |           |  |   | 55            | 110 | 165 |
| 70         |             | <b>Lean Clay (CL) (Con't)</b><br>- No Recovery (67-77')   |           |  |   |               |     |     |
| 75         |             |   |           |  |   |               |     |     |
| 80         |             | <b>Silt (ML)</b><br>- reddish yellow (5YR 6/8) residuum wet, soft, mud-filled void, limited recovery, abundant coarse to very coarse dolomite and chert fragments, cohesive   |           |  |   |               |     |     |
| 85         |             |   |           |  |   |               |     |     |
| 90         |             | <b>Dolostone</b>  |           |  | Limited Recovery  |               |     |     |
|            |             | <b>VOID - possible solution cavity (91-95')</b>   |           |  |   |               |     |     |
| 95         |             | <b>Dolostone with interbedded Chert</b><br>- light gray (N7) and bluish gray (10B 5/1) very fine to fine grain, medium hard, moderately weathered, massive, trace apparent high-angle fractures, partial healing, some calcite fracture fill visible, some light brown to orangish-brown mud staining, dark gray to dark brown chert, chert decreasing with depth |           |  | Degree of fracturing and fracture orientation unknown due to sonic drilling method, no intact core pieces recovered |               |     |     |
| 100        |             | <b>VOID - possible solution cavity (100-104')</b>   |           |  |   |               |     |     |

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# LOG OF TEST BORING

**BORING GWA-53R**  
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SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells  
**LOCATION** Cartersville, GA

GEOLOGY LOG COLOR GAMMA - ESEE DATABASE GDT - 5/20/15 13:24 - S:\WORKGROUPO\SPAPC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\CB WELLS 2015\BORING LOGS\PLANT BOWEN CELLS 3 & 4

| DEPTH<br>(ft) | GRAPHIC<br>LOG | MATERIAL DESCRIPTION   | ELEVATION | HCL<br>REACTION<br><br>Weak<br>Moderate<br>Strong | COMMENTS                         | Natural Gamma |     |     |
|---------------|----------------|--|-----------|---|----------------------------------|---------------|-----|-----|
|               |                |  |           |   |                                  | 55            | 110 | 165 |
|               |                | <b>VOID - possible solution cavity (100-104') (Con't)</b>  |           |   |                                  |               |     |     |
| 105           |                | <b>Dolostone</b><br>- light gray (N7) and bluish gray (10B 5/1) very fine to fine grain, medium hard, moderately weathered, massive, trace moderate- to high-angle fractures from core pieces recovered, no visible evidence of healing (no visible fracture fill), zone of moderately healed fractures and pitting @ approx. 106', heavily stained mud @ approx. 108-110'   |           |   | Few intact core pieces recovered |               |     |     |
| 110           |                | <b>VOID - possible solution cavity (110-117')</b><br>- mud and rock fragment-filled void, rock fragments range from cobble to coarse to very coarse with depth   |           |   |                                  |               |     |     |
| 115           |                |  |           |   |                                  |               |     |     |
| 120           |                | <b>Dolostone</b><br>- light gray (N7) and bluish gray (10B 5/1) very fine to fine grain, medium hard, moderately weathered, trace fragments show low- to high-angle fractures, moderately to not healed fractures, calcite fracture fill visible, trace fully healed fractures visible, where sonic broke up the rock trace calcite crystallization is visible, visible light brown to orangish brown mud staining on some fragments |           |   | Limited Recovery                 |               |     |     |
| 125           |                | <b>VOID - possible solution cavity (122-125')</b><br>- no recovery   |           |   |                                  |               |     |     |
| 130           |                | <b>Dolostone</b><br>- light bluish gray (10B 7/1) and bluish gray (10B 5/1) very fine to fine grain, medium hard, moderately weathered, mud coating rock fragments from approx. 129-130'   |           |   | Limited Recovery                 |               |     |     |
| 135           |                | <b>VOID - possible solution cavity (130-143')</b><br>- mud and rock fragment filled void   |           |   |                                  |               |     |     |

(Continued Next Page)





WELL CONSTRUCTION LOG - ESSEE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4 WEI

Log updated with revised survey certified 3/23/2021  
 Ground Surface Elevation (feet, NAVD88): **701.23**  
 Top of PVC Casing Elevation (feet, NAVD188): **704.23**

**WELL: GWA-54**  
 PAGE 1 OF 2  
 ECS37738



# LOG OF WELL CONSTRUCTION

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells  
**LOCATION** Cartersville, GA

**DATE STARTED** 3/25/2015 **COMPLETED** 4/14/2015 **SURF. ELEV.** 701.7 **COORDINATES:** N:34.137385 E:84.901333  
**CONTRACTOR** Cascade Drilling **EQUIPMENT** 7868 **METHOD** Sonic  
**DRILLED BY** J. Sigler **LOGGED BY** B. Smelser **CHECKED BY** L. Millet **ANGLE** \_\_\_\_\_ **BEARING** \_\_\_\_\_  
**BORING DEPTH** 73.17 ft. **GROUND WATER DEPTH: DURING** 58 ft. **COMP.** 55 ft. **DELAYED** 51.05 ft. after 100 hrs.  
**NOTES** TOC Elevation 704.63, Sonic Drilling - 7"OD Casing in Overburden, 6"OD Casing in Rock, 4"OD Core Well installed. Refer to well data sheet.

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | WELL DATA |  | NOTES |
|------------|--------------------------|-----------|--|-------|
|            |                          | ELEVATION | Completion:<br>Protective aluminum cover with bollards;<br>4-foot square concrete pad  |       |
|            |                          | 701.7     | <p>← Surface Seal: Concrete</p> <p>Annular Fill: Portland Cement-Bentonite Grout (20 - 47lbs bags PC, 2.25 - 50lbs bags Gel, 120 gal. Water)</p> |       |
|            |                          | 698.7     |  |       |
| 5          |                          |           |  |       |
| 10         |                          |           |  |       |
| 15         |                          |           |  |       |
| 20         |                          |           |  |       |
| 25         |                          |           |  |       |
| 30         |                          |           |  |       |
| 35         |                          |           |  |       |

(Continued Next Page)



# LOG OF WELL CONSTRUCTION

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells

**LOCATION** Cartersville, GA

WELL CONSTRUCTION LOG - ESSE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICGB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4 WEL

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | ELEVATION      | WELL DATA   | NOTES |
|------------|--------------------------|----------------|---|-------|
|            |                          |                | Completion:<br>Protective aluminum cover with bollards;<br>4-foot square concrete pad |       |
|            |                          |                | (CONTINUED)   |       |
| 40         |                          |                |   |       |
| 45         |                          |                |   |       |
| 50         |                          |                |   |       |
| 55         |                          | 647.7          |   |       |
| 60         |                          | 640.8          | Annular Seal: Pel-Plug 3/8 Bentonite Coated Pellets (2 - 5gal buckets (60.9'-54.0'))  |       |
|            |                          | 638.8          | Filter: Filter Media 1A Silica Sand (8 - 50 lbs bags)                                 |       |
| 65         |                          |                |   |       |
| 70         |                          |                | Standpipe: 2" OD PVC (SCH 40)<br>Screen: 10 ft; 0.010" Slot Prepack                   |       |
|            |                          | 628.8<br>628.5 | Sump: 0.30 ft.<br>Cave-in to 73.17 ft.  |       |
| 75         |                          |                |   |       |
| 80         |                          |                |   |       |

Log updated with revised survey certified 3/23/2021  
 Ground Surface Elevation (feet, NAVD88): **701.23**  
 Top of PVC Casing Elevation (feet, NAVD188): **704.23**



# LOG OF TEST BORING

**BORING GWA-54**  
 PAGE 1 OF 2  
 ECS37738

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Bowen Cells 3 & 4 Wells  
 LOCATION Cartersville, GA

DATE STARTED 3/25/2015 COMPLETED 4/14/2015 SURF. ELEV. 701.7 COORDINATES: N:34.137385 E:84.901333  
 CONTRACTOR Cascade Drilling EQUIPMENT 7868 METHOD Sonic  
 DRILLED BY J. Sigler LOGGED BY B. Smelser CHECKED BY L. Millet ANGLE \_\_\_\_\_ BEARING \_\_\_\_\_  
 BORING DEPTH 73.17 ft. GROUND WATER DEPTH: DURING 58 ft. COMP. 55 ft. DELAYED 51.05 ft. after 100 hrs.  
 NOTES TOC Elevation 704.63, Sonic Drilling - 7"OD Casing in Overburden, 6"OD Casing in Rock, 4"OD Core Well installed. Refer to well data sheet.

GEOLOGY LOG COLOR GAMMA - ESEE DATABASE GDT - 5/20/15 13:24 - S:\WORK\GROU\SP\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4

| DEPTH<br>(ft) | GRAPHIC<br>LOG | MATERIAL DESCRIPTION  | ELEVATION | HCL<br>REACTION<br><small>Weak<br/>Moderate<br/>Strong</small> | COMMENTS                                 | Natural Gamma |     |     |
|---------------|----------------|---|-----------|--|--|---------------|-----|-----|
|               |                |   |           |  |  | 55            | 110 | 165 |
| 5             |                | <p><b>Silt (ML)</b><br/>           - red / moderate reddish brown (10R 4/6) fill moist, hard, trace organics and interbedded clay lenses</p> <p>- dark red (10R 3/6) and dusky red / dark reddish brown (10R 3/4) residuum moist, very stiff, white to light gray/medium to coarse/angular rock fragments, trace clay</p> |           |  | Soil density gauged by thumb penetration |               |     |     |
| 10            |                | <p>- mottled red (10R 5/8) and reddish yellow (5YR 7/8) residuum moist, very stiff, white to light gray/coarse to cobble/angular to subangular dolomite fragments, amount and size of rock fragments increases with depth, trace interbedded clay lenses</p>  |           |  |  |               |     |     |
| 15            |                |   |           |  |  |               |     |     |
| 20            |                | <p><b>Elastic Silt (MH)</b><br/>           - mottled reddish yellow (5YR 6/8) and red (10R 4/8) residuum dry, very stiff, low plastic, abundant light gray to white/angular to subrounded rock fragments, clay content increasing with depth</p>  |           |  |  |               |     |     |
| 25            |                |   |           |  |  |               |     |     |
| 30            |                | <p>- trace mottling strong brown (7.5YR 5/6) and red (10R 5/8) residuum moist, stiff to very stiff, low plastic, interbedded CL, decrease in amount of dolomite fragments, increase in size of dolomite fragments, trace dark gray angular chert fragments</p>  |           |  |  |               |     |     |
| 35            |                |   |           |  |  |               |     |     |

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WELL CONSTRUCTION LOG - ESEE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4 WEL

Log updated with revised survey certified 3/23/2021  
 Ground Surface Elevation (feet, NAVD88): **693.43**  
 Top of PVC Casing Elevation (feet, NAVD188): **696.72**

**WELL: GWA-55**  
 PAGE 1 OF 3  
 ECS37738



## LOG OF WELL CONSTRUCTION

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells  
**LOCATION** Cartersville, GA

**DATE STARTED** 3/18/2015 **COMPLETED** 4/15/2015 **SURF. ELEV.** 693.43 **COORDINATES:** N 1506034.69 E 2074507.04

**CONTRACTOR** Cascade Drilling **EQUIPMENT** 7868 **METHOD** Sonic

**DRILLED BY** J. Sigler **LOGGED BY** B. Smelser **CHECKED BY** L. Millet **ANGLE** \_\_\_\_\_ **BEARING** \_\_\_\_\_

**BORING DEPTH** 62.42 ft. **GROUND WATER DEPTH: DURING** 40.5 ft. **COMP.** 42.8 ft. **DELAYED** 43.59 ft. after 100 hrs.

**NOTES** TOC Elevation 696.72, Sonic Drilling - 6"OD Casing, 4"OD Core Well installed. Refer to well data sheet.

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | ELEVATION | WELL DATA  | NOTES |
|------------|--------------------------|-----------|--|-------|
|            |                          | 693.43    | <p>Completion:<br/>                     Protective aluminum cover with bollards;<br/>                     4-foot square concrete pad</p> <p>← Surface Seal: Concrete</p> <p>Annular Fill: Portland Cement-Bentonite Grout (26 - 47lbs bags PC, 2.5 - 50lbs bags Gel, 150 gal. Water)</p> |       |
|            |                          | 691.43    |  |       |
| 5          |                          |           |  |       |
| 10         |                          |           |  |       |
| 15         |                          |           |  |       |
| 20         |                          |           |  |       |
| 25         |                          |           |  |       |

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WELL CONSTRUCTION LOG - ESEE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICGB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4 WEL



# LOG OF WELL CONSTRUCTION

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells  
**LOCATION** Cartersville, GA

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | ELEVATION   | WELL DATA  | NOTES |
|------------|--------------------------|-------------|--|-------|
|            |                          |             | Completion:<br>Protective aluminum cover with bollards;<br>4-foot square concrete pad                    |       |
|            |                          | (CONTINUED) |  |       |
| 30         |                          |             |  |       |
| 35         |                          |             | Annular Fill: Portland Cement-Bentonite Grout (26 - 47lbs bags PC, 2.5 - 50lbs bags Gel, 150 gal. Water) |       |
| 40         |                          |             |  |       |
| 45         |                          | 650.43      |  |       |
|            |                          |             | Annular Seal: Pel-Plug 3/8 Bentonite Coated Pellets (4 - 5gal buckets (50.4'-43.0'))                     |       |
| 50         |                          | 642.93      |  |       |
|            |                          |             | Filter: Filter Media 1A Silica Sand (5 - 50 lbs bags)  |       |
|            |                          | 641.43      |  |       |
| 55         |                          |             | Standpipe: 2" OD PVC (SCH 40)<br>Screen: 10 ft; 0.010" Slot Prepack                                      |       |

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WELL CONSTRUCTION LOG - ESEE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4 WEL



# LOG OF WELL CONSTRUCTION

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells  
**LOCATION** Cartersville, GA

| DEPTH<br>(ft) | GROUNDWATER<br>OBSERVATIONS | WELL DATA  | NOTES |
|---------------|-----------------------------|--|-------|
| 60            |                             | <p>(CONTINUED)</p> <p>Completion:<br/>                     Protective aluminum cover with bollards;<br/>                     4-foot square concrete pad</p> <p>Standpipe: 2" OD PVC (SCH 40)<br/>                     Screen: 10 ft; 0.010" Slot Prepack</p> <p>Sump: 0.30 ft.<br/>                     Cave-in to 62.42 ft.</p> |       |
| 65            |                             |  |       |
| 70            |                             |  |       |
| 75            |                             |  |       |
| 80            |                             |  |       |
| 85            |                             |  |       |

Log updated with revised survey certified 3/23/2021  
 Ground Surface Elevation (feet, NAVD88): **693.43**  
 Top of PVC Casing Elevation (feet, NAVD188): **696.72**



**LOG OF TEST BORING**

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells  
**LOCATION** Cartersville, GA

**DATE STARTED** 3/18/2015 **COMPLETED** 4/15/2015 **SURF. ELEV.** 693.43 **COORDINATES:** N 1506034.69 E 2074507.04

**CONTRACTOR** Cascade Drilling **EQUIPMENT** 7868 **METHOD** Sonic

**DRILLED BY** J. Sigler **LOGGED BY** B. Smelser **CHECKED BY** L. Millet **ANGLE** **BEARING**

**BORING DEPTH** 62.42 ft. **GROUND WATER DEPTH: DURING** 40.5 ft. **COMP.** 42.8 ft. **DELAYED** 43.59 ft. after 100 hrs.

**NOTES** TOC Elevation 696.72, Sonic Drilling - 6"OD Casing, 4"OD Core Well installed. Refer to well data sheet.

GEOLOGY LOG COLOR GAMMA - ESEE DATABASE GDT - 5/20/15 13:24 - S:\WORK\GROU\SP\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\CB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION  | ELEVATION | HCL REACTION<br>Weak<br>Moderate<br>Strong | COMMENTS | Natural Gamma |     |     |
|------------|-------------|---|-----------|--|----------|---------------|-----|-----|
|            |             |   |           |  |          | 55            | 110 | 165 |
| 5          |             | <p><b>Silt (ML)</b><br/>           - mottled red / moderate reddish brown (10R 4/6) and dark reddish gray (10R 3/1) fill dry, hard, trace organics, clay, and medium to coarse/angular to subangular rock fragments</p> <p>- dusky red / dark reddish brown (10R 3/4) and weak red (10R 4/4) residuum dry, very stiff, increase in rock fragments with depth, white to light gray with brown staining/angular to subangular dolomite fragments, trace interbedded CL</p> <p>- increase in size of rock fragments, very coarse to cobble size</p> <p>- mottled red (10R 4/8) and reddish yellow (5YR 6/8) residuum dry, very stiff, abundant white to pinkish white/coarse to very coarse/angular to subangular dolomite fragments</p> |           |  |          |               |     |     |
| 20         |             | <p><b>Elastic Silt (MH)</b><br/>           - trace mottling strong brown (7.5YR 5/8) and red (2.5YR 4/8) residuum dry, very stiff, low plastic, red mottling decreasing with depth, zones of mostly weathered rock fragments @ approx. 21' and 23.5', abundant white to light gray/angular to subangular dolomite fragments</p>   |           |  |          |               |     |     |
| 25         |             |   |           |  |          |               |     |     |

(Continued Next Page)





# LOG OF TEST BORING

**BORING GWA-55**  
PAGE 2 OF 3  
ECS37738

SOUTHERN COMPANY SERVICES, INC.  
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Bowen Cells 3 & 4 Wells

LOCATION Cartersville, GA

GEOLOGY LOG COLOR GAMMA - ESEE DATABASE GDT - 5/20/15 13:24 - S:\WORKGROUP\SPAPC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\CB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION   | ELEVATION | HCL REACTION<br>Weak<br>Moderate<br>Strong | COMMENTS  | Natural Gamma    |
|------------|-------------|--|-----------|--|---|------------------|
|            |             |  |           |  |   | 55<br>110<br>165 |
| 30         |             | <b>Elastic Silt (MH) (Con't)</b><br>- mottled dark reddish brown (2.5YR 3/4) and yellowish red (5YR 5/8) residuum moist, very stiff, low plastic, interbedded CL lenses, decrease in dolomite fragments, increase in light to dark brown/angular chert fragments   |           |  |   |                  |
| 35         |             | <b>Lean Clay (CL)</b><br>- yellowish red (5YR 4/6) residuum moist, very stiff, low to medium plastic, interbedded silt lenses, dark to light brown/angular chert fragments, trace dolomite fragments, zone of interbedded 10YR 8/8 yellow silt @ approx. 36-36.5'  |           |  |   |                  |
| 40         |             | ▽<br>- mottled reddish brown / moderate brown (5YR 4/4) and dark reddish brown (2.5YR 3/4) residuum wet, stiff, medium plastic, dark brown angular chert fragments, trace interbedded CH and coarse subangular dolomite fragments  |           |  |   |                  |
| 45         |             | <b>Dolostone with trace chert</b><br>- light bluish gray (10B 7/1) and bluish gray (10B 5/1) very fine to medium grain, medium hard, moderately weathered, massive, visible fully healed fractures with calcite fracture fill, high-angle (vertical) fractures with trace low-angle fractures, some samples show bisecting healed fractures, fractures range from 1-2mm to few 4-6mm, some partially healed fractures observed<br><b>VOID - possible solution cavity (48'-52')</b> |           |  | Degree of fracturing and fracture orientation unknown due to sonic drilling method, no intact core pieces recovered |                  |
| 50         |             | <b>Dolostone</b><br>- light gray (N7) and light bluish gray (10B 7/1) very fine to fine grain, medium hard, moderately to highly weathered, moderate- to high-angle fractures, partial to full healing visible, calcite fracture fill visible, healed fractures range from 1-2mm to 3-4mm thick, trace very coarse calcite crystals visible @ 53' within heavily fractured zone, driller   |           |  |   |                  |
| 55         |             |  |           |  |   |                  |

(Continued Next Page)



WELL CONSTRUCTION LOG - ESEE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4 WEL

Log updated with revised survey certified 3/23/2021  
 Ground Surface Elevation (feet, NAVD88): **693.28**  
 Top of PVC Casing Elevation (feet, NAVD188): **696.53**



# LOG OF WELL CONSTRUCTION

**WELL: GWA-55R**  
 PAGE 1 OF 3  
 ECS37738

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells  
**LOCATION** Cartersville, GA

**DATE STARTED** 3/11/2015 **COMPLETED** 4/15/2015 **SURF. ELEV.** 693.28 **COORDINATES:** N 1506034.69 E 2074507.04

**CONTRACTOR** Cascade Drilling **EQUIPMENT** 7868 **METHOD** Sonic; SPT

**DRILLED BY** J. Sigler **LOGGED BY** B. Smelser **CHECKED BY** L. Millet **ANGLE** \_\_\_\_\_ **BEARING** \_\_\_\_\_

**BORING DEPTH** 102.83 ft. **GROUND WATER DEPTH: DURING** 38.5 ft. **COMP.** 41.55 ft. **DELAYED** 43.47 ft. after 100 hrs.

**NOTES** TOC Elevation 696.53, Sonic Drilling - 6"OD Casing, 4"OD Core Well installed. Refer to well data sheet.

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | WELL DATA |   | NOTES |
|------------|--------------------------|-----------|---|-------|
|            |                          | ELEVATION | Completion:<br>Protective aluminum cover with bollards;<br>4-foot square concrete pad |       |
|            |                          | 693.28    |   |       |
|            |                          | 691.28    |   |       |
| 5          |                          |           |   |       |
| 10         |                          |           |   |       |
| 15         |                          |           |   |       |
| 20         |                          |           |   |       |
| 25         |                          |           |   |       |
| 30         |                          |           |   |       |
| 35         |                          |           |   |       |

← Surface Seal: Concrete

Annular Fill: Portland Cement-Bentonite Grout (40 - 47lbs bags PC, 4.5 - 50lbs bags Gel, 205 gal. Water)

(Continued Next Page)

WELL CONSTRUCTION LOG - ESEE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICGB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4 WEL



# LOG OF WELL CONSTRUCTION

**WELL: GWA-55R**  
 PAGE 2 OF 3  
 ECS37738

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells

**LOCATION** Cartersville, GA

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | ELEVATION | WELL DATA   | NOTES   |
|------------|--------------------------|-----------|---|---|
| 40         |                          |           | Completion:<br>Protective aluminum cover with bollards;<br>4-foot square concrete pad |   |
| 45         |                          | 646.78    | (CONTINUED)<br>   | Annular Fill: Portland Cement-Bentonite Grout (40 - 47lbs bags PC, 4.5 - 50lbs bags Gel, 205 gal. Water)  |
| 50         |                          |           |   |   |
| 55         |                          |           |   |   |
| 60         |                          |           |   |   |
| 65         |                          |           |   | Annular Seal: Pel-Plug 3/8 Bentonite Coated Pellets (7 - 5gal buckets (91.0'-78.0')) and Baroid Hole Plug 3/8 Chips (14 - 50lbs bags (78.0'-46.5')) |
| 70         |                          |           |   |   |
| 75         |                          |           |   |   |
| 80         |                          |           |   |   |

(Continued Next Page)

WELL CONSTRUCTION LOG - ESEE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4 WEL



# LOG OF WELL CONSTRUCTION

**WELL: GWA-55R**  
 PAGE 3 OF 3  
 ECS37738

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells

**LOCATION** Cartersville, GA

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | WELL DATA   | NOTES |
|------------|--------------------------|---|-------|
|            |                          | Completion:<br>Protective aluminum cover with bollards;<br>4-foot square concrete pad   |       |
| 85         |                          | (CONTINUED)   |       |
| 90         |                          | Annular Seal: Pel-Plug 3/8 Bentonite Coated Pellets (7 - 5gal buckets (91.0'-78.0')) and Baroid Hole Plug 3/8 Chips (14 - 50lbs bags (78.0'-46.5')) |       |
| 95         |                          | 601.78<br>600.78 ← Filter: Filter Media 1A Silica Sand (8.75 - 50 lbs bags)   |       |
| 100        |                          | ← Standpipe: 2" OD PVC (SCH 40)<br>Screen: 10 ft; 0.010" Slot Prepack   |       |
| 105        |                          | 590.85<br>590.45 ← Sump: 0.30 ft.<br>Cave-in to 102.83 ft.  |       |
| 110        |                          |   |       |
| 115        |                          |   |       |
| 120        |                          |   |       |
| 125        |                          |   |       |

Log updated with revised survey certified 3/23/2021  
 Ground Surface Elevation (feet, NAVD88): **693.28**  
 Top of PVC Casing Elevation (feet, NAVD188): **696.53**



**LOG OF TEST BORING**

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells  
**LOCATION** Cartersville, GA

**DATE STARTED** 3/11/2015 **COMPLETED** 4/15/2015 **SURF. ELEV.** 693.28 **COORDINATES:** N 1506034.69 E 2074507.04

**CONTRACTOR** Cascade Drilling **EQUIPMENT** 7868 **METHOD** Sonic; SPT

**DRILLED BY** J. Sigler **LOGGED BY** B. Smelser **CHECKED BY** L. Millet **ANGLE** **BEARING**

**BORING DEPTH** 102.83 ft. **GROUND WATER DEPTH: DURING** 38.5 ft. **COMP.** 41.55 ft. **DELAYED** 43.47 ft. after 100 hrs.

**NOTES** TOC Elevation 696.53, Sonic Drilling - 6"OD Casing, 4"OD Core Well installed. Refer to well data sheet.

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION  | ELEVATION | HCL REACTION<br>Weak<br>Moderate<br>Strong | COMMENTS                        | Natural Gamma |     |     |
|------------|-------------|---|-----------|--|---------------------------------|---------------|-----|-----|
|            |             |   |           |  |                                 | 55            | 110 | 165 |
| 5          |             | <b>Silt (ML)</b><br><br>- red / moderate reddish brown (10R 4/6) residuum moist, very stiff, trace clay and subrounded coarse sand  |           |  | SPT N=26bpf(@3ft.)<br>6/10/16   |               |     |     |
| 10         |             | - mottled red (10R 5/8) and reddish yellow (5YR 6/8) residuum dry, hard, trace clay and subrounded coarse sand  |           |  | SPT N=34bpf(@8ft.)<br>8/14/20   |               |     |     |
| 15         |             | - mottled strong brown (7.5YR 5/8), light gray (10YR 7/1) and red (10R 5/6) residuum dry, hard, increase in clay content within mottled zones, trace white to light gray/angular rock fragments |           |  | SPT N=33bpf(@13ft.)<br>10/14/19 |               |     |     |
| 20         |             | - mottled red (2.5YR 4/6) and reddish yellow (7.5YR 6/8) residuum dry, hard, light gray angular chert fragments   |           |  | SPT N=41bpf(@18ft.)<br>12/24/17 |               |     |     |
| 25         |             | <b>Elastic Silt (MH)</b><br>- mottled red (2.5YR 4/6) and reddish yellow (7.5YR 6/8) residuum moist, very stiff, low plastic, light gray with yellowish staining/angular rock fragments         |           |  | SPT N=24bpf(@23ft.)<br>7/10/14  |               |     |     |
| 30         |             | - mottled red (2.5YR 4/6) and reddish yellow (7.5YR 6/8) residuum moist, very stiff, low plastic, light gray/coarse/angular to subangular chert and dolomite fragments                          |           |  | SPT N=24bpf(@28ft.)<br>7/9/15   |               |     |     |
| 35         |             | <b>Lean Clay (CL)</b><br>- mottled reddish yellow (5YR 6/8) and red (10R 5/8) residuum moist, very stiff, low to medium plastic, gray angular to subrounded chert fragments                     |           |  | SPT N=22bpf(@33ft.)<br>4/13/9   |               |     |     |

(Continued Next Page)

GEOLOGY LOG COLOR GAMMA - ESEE DATABASE GDT - 5/20/15 13:24 - S:\WORKGROUPO\SPAPC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4



# LOG OF TEST BORING

**BORING GWA-55R**  
PAGE 2 OF 3  
ECS37738

SOUTHERN COMPANY SERVICES, INC.  
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Bowen Cells 3 & 4 Wells  
LOCATION Cartersville, GA

GEOLOGY LOG COLOR GAMMA - ESEE DATABASE GDT - 5/20/15 13:24 - S:\WORK\GROU\SP\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\CB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION  | ELEVATION | HCL REACTION<br>Weak<br>Moderate<br>Strong | COMMENTS  | Natural Gamma |
|------------|-------------|---|-----------|--|---|---------------|
|            |             |   |           |  |   |               |
| 40         |             | <b>Lean Clay (CL) (Con't)</b><br>▽<br>- yellowish red (5YR 5/8) residuum wet, very stiff, low to medium plastic, trace chert fragments  |           |  | SPT N=16bpf(@38ft.)<br>5/7/9  |               |
| 45         |             | <b>Fat Clay (CH)</b><br>▽<br>- yellowish red (5YR 5/8) residuum wet, very stiff, medium to high plastic, trace light gray rock fragments  |           |  | SPT N=17bpf(@43ft.)<br>7/9/8  |               |
| 50         |             | <b>Dolostone</b><br>- light bluish gray (10B 7/1) and bluish gray (10B 5/1) very fine to fine grain, medium hard, slightly to moderately weathered, some visible high-angle fractures with calcite fracture fill, full healing, trace chert |           |  | Degree of fracturing and fracture orientation unknown due to sonic drilling method, no intact core pieces recovered |               |
| 55         |             | <b>VOID - possible solution cavity (53'-58')</b><br>- some orangish mud with rock fragments recovered from void   |           |  |   |               |
| 60         |             | <b>Chert with Dolostone</b><br>- bluish black (10B 2.5/1), dark brown (10YR 3/3) and light bluish gray (10B 7/1) very fine to fine grain, medium hard, moderately to highly weathered   |           |  |   |               |
| 65         |             | <b>Chert with Dolostone</b><br>- trace fully healed fractures, calcite fracture fill, very limited recovery, some orangish mud staining visible   |           |  |   |               |
| 70         |             | <b>VOID - possible solution cavity (66'-78')</b>  |           |  |   |               |
| 75         |             |   |           |  |   |               |
| 80         |             | <b>Dolostone with Chert</b><br>- light bluish gray (10B 7/1) and bluish gray (10B 5/1) very fine to fine grain, medium hard, not to moderately weathered, visible fully healed fractures, calcite fracture fill, moderate- to high- angle   |           |  |   |               |

(Continued Next Page)





WELL CONSTRUCTION LOG - ESEE DATABASE.GDT - 5/20/15 13:17 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4 WEL

Log updated with revised survey certified 3/23/2021  
 Ground Surface Elevation (feet, NAVD88): **689.14**  
 Top of PVC Casing Elevation (feet, NAVD188): **692.17**

**WELL: GWA-56**  
 PAGE 1 OF 3  
 ECS37738



# LOG OF WELL CONSTRUCTION

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

**PROJECT** Plant Bowen Cells 3 & 4 Wells  
**LOCATION** Cartersville, GA

**DATE STARTED** 4/14/2015 **COMPLETED** 4/16/2015 **SURF. ELEV.** 689.14 **COORDINATES:** N 1506128.38 E 2074633.08  
**CONTRACTOR** Cascade Drilling **EQUIPMENT** 7868 **METHOD** Sonic  
**DRILLED BY** J. Sigler **LOGGED BY** B. Smelser **CHECKED BY** L. Millet **ANGLE** **BEARING**  
**BORING DEPTH** 82.96 ft. **GROUND WATER DEPTH: DURING** 43 ft. **COMP.** 38.8 ft. **DELAYED** 39.02 ft. after 100 hrs.  
**NOTES** TOC Elevation 692.17, Sonic Drilling - 7"OD Casing in Overburden, 6"OD Casing in Rock, 4"OD Core Well installed. Refer to well data sheet.

| DEPTH (ft) | GROUNDWATER OBSERVATIONS | WELL DATA |   | NOTES |
|------------|--------------------------|-----------|---|-------|
|            |                          | ELEVATION | Completion:<br>Protective aluminum cover with bollards;<br>4-foot square concrete pad                 |       |
| 0          |                          | 689.14    | Surface Seal: Concrete  |       |
| 5          |                          | 685.14    |   |       |
| 10         |                          |           |   |       |
| 15         |                          |           |   |       |
| 20         |                          |           | Annular Fill: Portland Cement-Bentonite Grout (12 - 47lbs bags PC, 1 - 50lbs bags Gel, 65 gal. Water) |       |
| 25         |                          |           |   |       |
| 30         |                          |           |   |       |

(Continued Next Page)





Log updated with revised survey certified 3/23/2021  
 Ground Surface Elevation (feet, NAVD88): **689.14**  
 Top of PVC Casing Elevation (feet, NAVD188): **692.17**

**BORING GWA-56**  
 PAGE 1 OF 3  
 ECS37738



# LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Bowen Cells 3 & 4 Wells

LOCATION Cartersville, GA

DATE STARTED 4/14/2015 COMPLETED 4/16/2015 SURF. ELEV. 689.14 COORDINATES: N 1506128.38 E 2074633.08

CONTRACTOR Cascade Drilling EQUIPMENT 7868 METHOD Sonic

DRILLED BY J. Sigler LOGGED BY B. Smelser CHECKED BY L. Millet ANGLE BEARING

BORING DEPTH 82.96 ft. GROUND WATER DEPTH: DURING 43 ft. COMP. 38.8 ft. DELAYED 39.02 ft. after 100 hrs.

NOTES TOC Elevation 692.17, Sonic Drilling - 7"OD Casing in Overburden, 6"OD Casing in Rock, 4"OD Core Well installed. Refer to well data sheet.

GEOLOGY LOG COLOR GAMMA - ESEE DATABASE GDT - 5/20/15 13:24 - S:\WORKGROUPO\SPAC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION   | ELEVATION | HCL REACTION<br>Weak<br>Moderate<br>Strong | COMMENTS                                 | Natural Gamma |     |     |
|------------|-------------|--|-----------|--|--|---------------|-----|-----|
|            |             |  |           |  |  | 55            | 110 | 165 |
| 0 - 5      |             | <b>Silty Clay (CL-ML)</b><br>- dusky red / dark reddish brown (10R 3/4) fill dry, very stiff to hard, low plastic  |           |  | Soil density gauged by thumb penetration |               |     |     |
| 5 - 10     |             | <b>Silt (ML)</b><br>- dusky red / dark reddish brown (10R 3/4) fill dry, very stiff, trace interbedded clay lenses and medium to coarse/subangular to subrounded/brittle to friable dolomite fragments<br><br>- trace mottling red (10R 5/6) and light brown (7.5YR 6/4) residuum dry, very stiff, white with reddish staining/medium to very coarse/angular to subangular dolomite fragments, trace chert fragments |           |  |  |               |     |     |
| 10 - 20    |             | <b>Elastic Silt (MH)</b><br>- mottled red (10R 4/8), yellowish red (5YR 5/8) and light gray (10YR 7/1) residuum moist, very stiff to stiff, low plastic, white to light gray interbedded ML, light gray clayey zones have increased plasticity, trace light gray to white angular dolomite and chert fragments   |           |  |  |               |     |     |
| 20 - 30    |             | <b>Gravelly Lean Clay (CL)</b><br>- trace mottling yellowish red (5YR 5/8) and red (2.5YR 4/8) residuum moist, very stiff to stiff, low to medium plastic, abundant gray to dark brown/medium cobble/angular to subangular chert fragments, trace dolomite fragments   |           |  |  |               |     |     |

(Continued Next Page)



# LOG OF TEST BORING

**BORING GWA-56**  
PAGE 2 OF 3  
ECS37738

SOUTHERN COMPANY SERVICES, INC.  
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Bowen Cells 3 & 4 Wells  
LOCATION Cartersville, GA

GEOLOGY LOG COLOR GAMMA - ESEE DATABASE GDT - 5/20/15 13:25 - S:\WORKGROUPO\SPAC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\BOWEN\ICB WELLS 2015\CELLS 3-4 WELLS\BORING LOGS\PLANT BOWEN CELLS 3 & 4

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION   | ELEVATION | HCL REACTION<br>Weak<br>Moderate<br>Strong | COMMENTS         | Natural Gamma    |
|------------|-------------|--|-----------|--|------------------|------------------|
|            |             |  |           |  |                  | 55<br>110<br>165 |
| 35         |             | Gravelly Lean Clay (CL) (Cont')  |           |  |                  |                  |
| 40         |             |  |           |  |                  |                  |
| 45         |             | Sandy Lean Clay (CL)<br>- red (2.5YR 5/8) and reddish yellow (7.5YR 6/6) residuum wet, medium stiff to soft, low to medium plastic, trace very coarse to cobble size angular chert fragments |           |  |                  |                  |
|            |             | Chert (ledge)  |           |  | Limited Recovery |                  |
| 50         |             | VOID - possible solution cavity (48'-68')<br>- mud filled void, no recovery  |           |  |                  |                  |
| 55         |             |  |           |  |                  |                  |
| 60         |             |  |           |  |                  |                  |
| 65         |             |  |           |  |                  |                  |

(Continued Next Page)



# **APPENDIX B WELL ABANDONMENT DOCUMENTS**

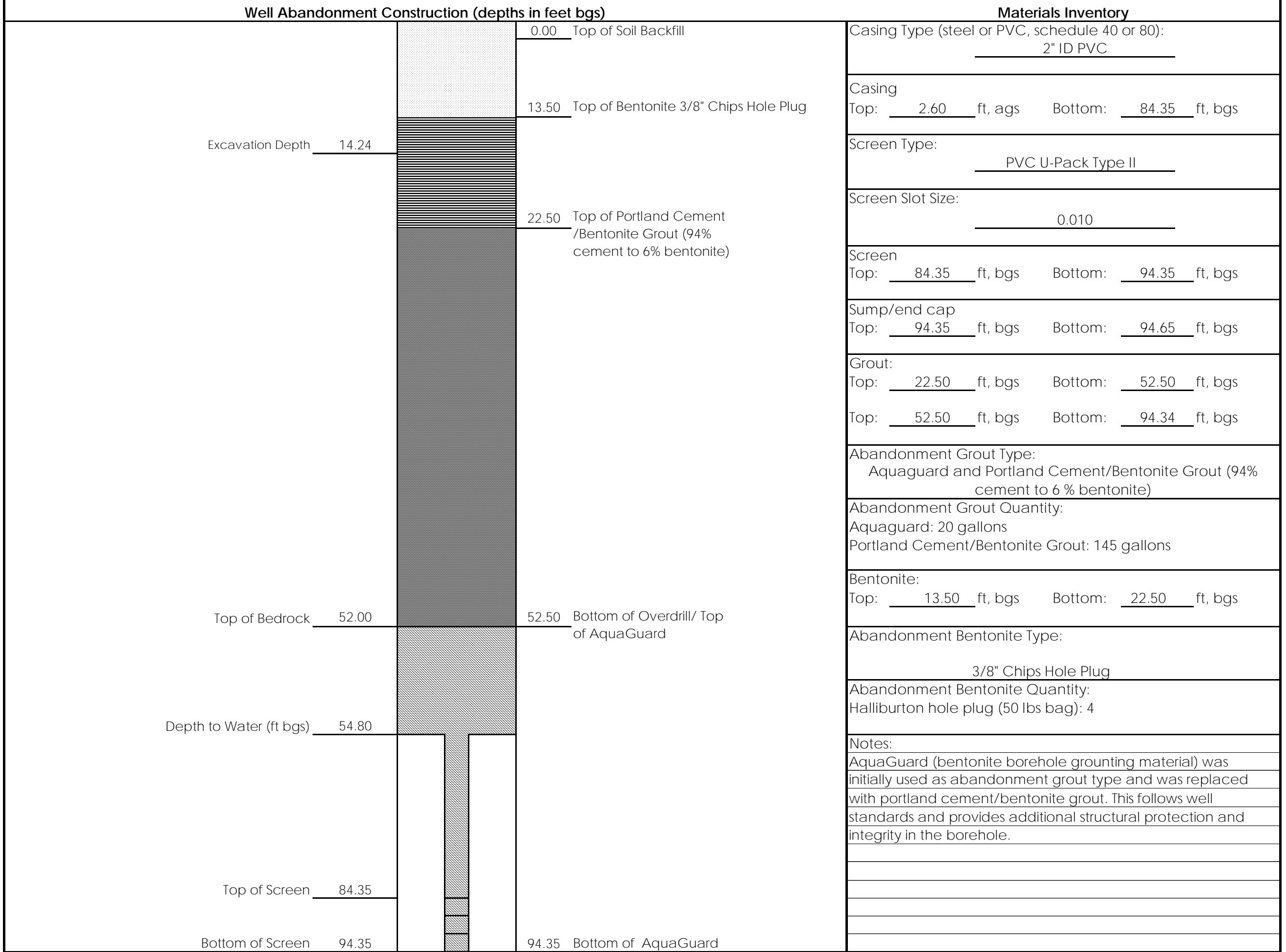




# Well Abandonment Log

|  |   |                                       |
|--|---|---------------------------------------|
| Project Name: <u>Plant Bowen Cells 5, 6, 7, &amp; 8 Landfill Expansion</u> | Date Started: <u>11/30/2022</u>               | Date Completed: <u>12/13/2022</u>     |
| Borehole/Well No: <u>GWA-51RZ</u>  | Northing (ft): <u>1505310.36</u>              | Easting (ft): <u>2073781.34</u>       |
| Plant Name: <u>Bowen</u>   | Location Datum: <u>NAD83</u>                  | Elevation Datum: <u>NAVD88</u>        |
| Plant Address: <u>317 Covered Bridge Rd SW Euharlee GA 30120</u>           | Surface/ Ground Elevation (ft): <u>705.81</u> | Stickup (ft, ags): <u>2.6</u>         |
| Project Number: <u>175569450</u>   | Borehole Diameter (in): <u>8.0</u>            | Borehole Depth (ft, bgs): <u>52.5</u> |
| Goals/Task: <u>Cells 3 &amp; 4 Abandonment</u>                             | Well Casing Diameter (in): <u>2.0</u>         | Well Depth (ft, bgs): <u>91.0</u>     |
| Drilling Company: <u>Cascade Drilling</u>                                  | Top of Casing elev (ft): <u>708.58</u>        | Screen length (ft): <u>10</u>         |
| Drilling Equipment/Rig Type: <u>TSI-150CC</u>                              |   |                                       |
| Abandonment Drilling Method: <u>7" x 8" Rotasonic</u>                      |   |                                       |
| Recovery Sampling Method: <u>Sonic 7" core barrel</u>                      |   |                                       |
| Prepared By: <u>Jackson Bankston</u>                                       |   |                                       |
| Review By: <u>Brian Steele, PG</u>   |   |                                       |

\*Not to Scale







# Well Abandonment Log

|  |   |                                       |
|--|---|---------------------------------------|
| Project Name: <u>Plant Bowen Cells 5, 6, 7, &amp; 8 Landfill Expansion</u> | Date Started: <u>11/30/2022</u>               | Date Completed: <u>12/2/2022</u>      |
| Borehole/Well No: <u>GWA-52</u>  | Northing (ft): <u>1505459.85</u>              | Easting (ft): <u>2073876.00</u>       |
| Plant Name: <u>Bowen</u>   |   |                                       |
| Plant Address: <u>317 Covered Bridge Rd SW Euharlee GA 30120</u>           | Location Datum: <u>NAD83</u>                  | Elevation Datum: <u>NAVD88</u>        |
| Project & Task Number: <u>175569450</u>                                    | Surface/ Ground Elevation (ft): <u>706.56</u> | Stickup (ft, ags): <u>3.2</u>         |
| Goals/Task: <u>Cells 3 &amp; 4 Abandonment</u>                             | Borehole Diameter (in): <u>8.0</u>            | Borehole Depth (ft, bgs): <u>80.0</u> |
| Drilling Company: <u>Cascade Drilling</u>                                  | Well Casing Diameter (in): <u>2.0</u>         | Well Depth (ft, bgs): <u>80.96</u>    |
| Drilling Equipment/Rig Type: <u>TSI-150CC</u>                              | Top of Casing elev (ft): <u>709.77</u>        | Screen length (ft): <u>10</u>         |
| Abandonment Drilling Method: <u>7" x 8" Rotosonic</u>                      |   |                                       |
| Recovery Sampling Method: <u>Sonic 7" core barrel</u>                      |   |                                       |
| Prepared By: <u>Jackson Bankston</u>                                       |   |                                       |
| Review By: <u>Brian Steele, PG</u>   |   |                                       |

**\*Not to Scale**

| Well Abandonment Construction   | Materials Inventory   |
|---|---|
| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Excavation Depth (ft bgs) <u>11.72</u></p> <p>Depth to Water (ft bgs) <u>52.30</u></p> <p>Top of Bedrock <u>79.50</u></p> <p>Bottom of Overdrill <u>80.00</u></p> </div> <div style="width: 50%; border-left: 1px solid black; padding-left: 5px;"> <p>0.00 Top of soil Backfill</p> <p>10.20 Top of Bentonite 3/8" Chips Hole Plug</p> <p>20.00 Top of Portland Cement /Bentonite Grout (94% cement to 6% bentonite)</p> <p>Bottom of Portland Cement/Bentonite Grout 80.00 (94% cement to 6% bentonite)</p> </div> </div> | <p>Casing Type (steel or PVC, schedule 40 or 80):<br/><u>2" ID PVC</u></p> <p>Casing<br/>Top: <u>3.20</u> ft, ags Bottom: <u>70.90</u> ft, bgs</p> <p>Screen Type:<br/><u>PVC U-Pack Type II</u></p> <p>Screen Slot Size:<br/><u>0.010</u></p> <p>Screen<br/>Top: <u>70.90</u> ft, bgs Bottom: <u>80.90</u> ft, bgs</p> <p>Sump/end cap<br/>Top: <u>80.90</u> ft, bgs Bottom: <u>81.20</u> ft, bgs</p> <p>Grout:<br/>Top: <u>20.00</u> ft, bgs Bottom: <u>80.00</u> ft, bgs</p> <p>Abandonment Grout Type:<br/>Portland Cement/Bentonite Grout (94% cement to 6 % bentonite)</p> <p>Abandonment Grout Quantity:<br/>Portland Cement/Bentonite Grout: 200 gallons</p> <p>Bentonite:<br/>Top: <u>10.20</u> ft, bgs Bottom: <u>20.00</u> ft, bgs</p> <p>Abandonment Bentonite Type:<br/><u>3/8" Chips Hole Plug</u></p> <p>Abandonment Bentonite Quantity:<br/>Halliburton hole plug (50 lbs bag): 4</p> <p>Notes:</p> |



# Well Abandonment Log

|  |   |                                       |
|--|---|---------------------------------------|
| Project Name: <u>Plant Bowen Cells 5, 6, 7, &amp; 8 Landfill Expansion</u> | Date Started: <u>12/12/2022</u>               | Date Completed: <u>12/14/2022</u>     |
| Borehole/Well No: <u>GWA-53</u>  | Northing (ft): <u>1505695.52</u>              | Easting (ft): <u>2074038.90</u>       |
| Plant Name: <u>Bowen</u>   |   |                                       |
| Plant Address: <u>317 Covered Bridge Rd SW Euharlee GA 30120</u>           | Location Datum: <u>NAD83</u>                  | Elevation Datum: <u>NAVD88</u>        |
| Project & Task Number: <u>175569450</u>                                    | Surface/ Ground Elevation (ft): <u>707.61</u> | Stickup (ft, ags): <u>3.4</u>         |
| Goals/Task: <u>Cells 3 &amp; 4 Abandonment</u>                             | Borehole Diameter (in): <u>8.0</u>            | Borehole Depth (ft, bgs): <u>70.0</u> |
| Drilling Company: <u>Cascade Drilling</u>                                  | Well Casing Diameter (in): <u>2.0</u>         | Well Depth (ft, bgs): <u>117.9</u>    |
| Drilling Equipment/Rig Type: <u>TSI-150CC</u>                              | Top of Casing elev (ft): <u>710.99</u>        | Screen length (ft): <u>10</u>         |
| Abandonment Drilling Method: <u>7" x 8" Rotosonic</u>                      |   |                                       |
| Recovery Sampling Method: <u>Sonic 7" core barrel</u>                      |   |                                       |
| Prepared By: <u>Jackson Bankston</u>                                       |   |                                       |
| Review By: <u>Brian Steele, PG</u>   |   |                                       |

**\*Not to Scale**

### Well Abandonment Construction (depths in feet bgs)

### Materials Inventory

|                                       |       |  |  |
|---------------------------------------|-------|--|--|
|                                       | 0.00  | Top of soil Backfill   | Casing Type (steel or PVC, schedule 40 or 80):<br><u>2" ID PVC</u>   |
|                                       | 8.70  | Top of Bentonite 3/8" Chips Hole Plug  | Casing<br>Top: <u>3.40</u> ft, ags    Bottom: <u>107.50</u> ft, bgs  |
| Excavation Depth (ft bgs) <u>9.03</u> |       |  | Screen Type:<br><u>PVC U-Pack Type II</u>  |
|                                       |       |  | Screen Slot Size:<br><u>0.010</u>  |
|                                       |       |  | Screen<br>Top: <u>107.50</u> ft, bgs    Bottom: <u>117.50</u> ft, bgs  |
|                                       |       |  | Sump/end cap<br>Top: <u>117.50</u> ft, bgs    Bottom: <u>117.80</u> ft, bgs  |
|                                       |       |  | Grout:<br>Top: <u>70.00</u> ft, bgs    Bottom: <u>117.50</u> ft, bgs   |
|                                       |       |  | Abandonment Grout Type:<br>Portland Cement/Bentonite Grout (94% cement to 6% bentonite)  |
|                                       |       |  | Abandonment Grout Quantity:<br>Portland Cement/Bentonite Grout: 240 gallons  |
|                                       |       |  | Bentonite:<br>Top: <u>8.70</u> ft, bgs    Bottom: <u>70.00</u> ft, bgs   |
| Depth to Water (ft bgs) <u>54.50</u>  |       |  | Abandonment Bentonite Type:<br><u>3/8" Chips Hole Plug</u>   |
|                                       |       |  | Abandonment Bentonite Quantity:<br>Halliburton hole plug (50 lbs bag): 17  |
| Top of Bedrock <u>71.00</u>           | 70.00 | Top of Portland Cement /Bentonite Grout (94% cement to 6% bentonite / Bottom of Bentonite 3/8" Chips Hole Plug | Notes:<br>Due to grout loss noted during abandonment (240 gallons) from solution features, bentonite chips were used to seal voids from 70.0' to 8.7'. |
| Top of Screen <u>107.50</u>           |       |  |  |
| Bottom of Screen <u>117.50</u>        |       | Bottom of Portland Cement/Bentonite Grout 117.50 (94% cement to 6% bentonite)                                  |  |



# Well Abandonment Log

|  |   |                                       |
|--|---|---------------------------------------|
| Project Name: <u>Plant Bowen Cells 5, 6, 7, &amp; 8 Landfill Expansion</u> | Date Started: <u>12/7/2022</u>                | Date Completed: <u>12/14/2022</u>     |
| Borehole/Well No: <u>GWA-53R</u>   | Northing (ft): <u>1505689.06</u>              | Easting (ft): <u>2074032.00</u>       |
| Plant Name: <u>Bowen</u>   |   |                                       |
| Plant Address: <u>317 Covered Bridge Rd SW Euharlee GA 30120</u>           | Location Datum: <u>NAD83</u>                  | Elevation Datum: <u>NAVD88</u>        |
| Project & Task Number: <u>175569450</u>                                    | Surface/ Ground Elevation (ft): <u>708.38</u> | Stickup (ft, ags): <u>4.1</u>         |
| Goals/Task: <u>Cells 3 &amp; 4 Abandonment</u>                             | Borehole Diameter (in): <u>8.0</u>            | Borehole Depth (ft, bgs): <u>77.0</u> |
| Drilling Company: <u>Cascade Drilling</u>                                  | Well Casing Diameter (in): <u>2.0</u>         | Well Depth (ft, bgs): <u>165.4</u>    |
| Drilling Equipment/Rig Type: <u>TSI-150CC</u>                              | Top of Casing elev (ft): <u>704.23</u>        | Screen length (ft): <u>11</u>         |
| Abandonment Drilling Method: <u>7" x 8" Rotosonic</u>                      |   |                                       |
| Recovery Sampling Method: <u>Sonic 7" core barrel</u>                      |   |                                       |
| Prepared By: <u>Jackson Bankston</u>                                       |   |                                       |
| Review By: <u>Brian Steele, PG</u>   |   |                                       |

**\*Not to Scale**

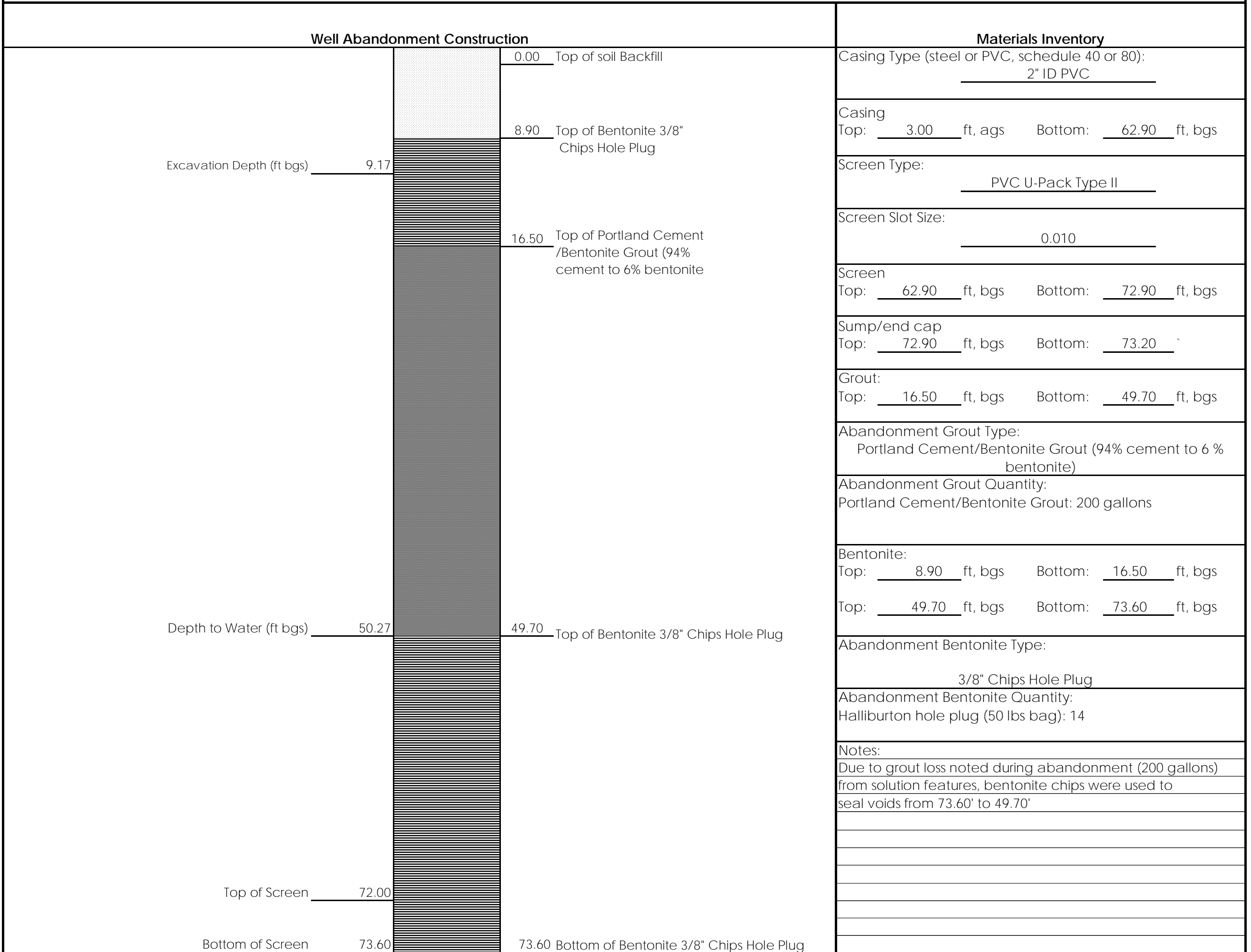
| Well Abandonment Construction (depths in feet bgs)   | Materials Inventory   |
|--|---|
| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Excavation Depth (ft bgs) <u>10.03</u></p> <p>Depth to Water (ft bgs) <u>63.00</u></p> <p>Top of Bedrock <u>76.00</u></p> <p>Top of Screen <u>155.50</u></p> <p>Bottom of Screen <u>165.50</u></p> </div> <div style="width: 5%; text-align: center;"> </div> <div style="width: 50%;"> <p>0.00 Top of soil Backfill</p> <p>10.00 Top of Bentonite 3/8" Chips Hole Plug</p> <p>20.00 Top of Portland Cement /Bentonite Grout (94% cement to 6% bentonite)</p> <p>50.00 Top of Bentonite 3/8" Chips Hole Plug</p> <p>77.00 Top of Portland Cement /Bentonite Grout (94% cement to 6% bentonite / Bottom of Bentonite 3/8" Chips Hole Plug</p> <p>Bottom of Portland Cement/Bentonite Grout (94% cement to 6% bentonite)</p> <p>165.50</p> </div> </div> | <p>Casing Type (steel or PVC, schedule 40 or 80):<br/><u>2" ID PVC</u></p> <p>Casing<br/>Top: <u>3.20</u> ft, ags Bottom: <u>155.50</u> ft, bgs</p> <p>Screen Type:<br/><u>PVC U-Pack Type II</u></p> <p>Screen Slot Size:<br/><u>0.010</u></p> <p>Screen<br/>Top: <u>155.50</u> ft, bgs Bottom: <u>165.50</u> ft, bgs</p> <p>Sump/end cap<br/>Top: <u>165.50</u> ft, bgs Bottom: <u>165.80</u> ft, bgs</p> <p>Grout:<br/>Top: <u>20.00</u> ft, bgs Bottom: <u>50.00</u> ft, bgs</p> <p>Abandonment Grout Type:<br/><u>Portland Cement/Bentonite Grout (94% cement to 6% bentonite)</u></p> <p>Abandonment Grout Quantity:<br/><u>Portland Cement/Bentonite Grout: 320 gallons</u></p> <p>Bentonite:<br/>Top: <u>10.00</u> ft, bgs Bottom: <u>20.00</u> ft, bgs<br/>Top: <u>50.00</u> ft, bgs Bottom: <u>77.00</u> ft, bgs</p> <p>Abandonment Bentonite Type:<br/><u>3/8" Chips Hole Plug</u></p> <p>Abandonment Bentonite Quantity:<br/><u>Halliburton hole plug (50 lbs bag): 9</u></p> <p>Notes:<br/><u>Due to grout loss noted during abandonment (200 gallons) from solution features, bentonite chips were used to seal voids from 77.00' to 50.00'</u></p> |



# Well Abandonment Log

|  |   |                                       |
|--|---|---------------------------------------|
| Project Name: <u>Plant Bowen Cells 5, 6, 7, &amp; 8 Landfill Expansion</u> | Date Started: <u>11/28/2022</u>               | Date Completed: <u>12/2/2022</u>      |
| Borehole/Well No: <u>GWA-54</u>  | Northing (ft): <u>1505853.39</u>              | Easting (ft): <u>2074286.28</u>       |
| Plant Name: <u>Bowen</u>   |   |                                       |
| Plant Address: <u>317 Covered Bridge Rd SW Euharlee GA 30120</u>           | Location Datum: <u>NAD83</u>                  | Elevation Datum: <u>NAVD88</u>        |
| Project & Task Number: <u>175569450</u>                                    | Surface/ Ground Elevation (ft): <u>701.23</u> | Stickup (ft, ags): <u>3.0</u>         |
| Goals/Task: <u>Cells 3 &amp; 4 Abandonment</u>                             | Borehole Diameter (in): <u>8.0</u>            | Borehole Depth (ft, bgs): <u>73.6</u> |
| Drilling Company: <u>Cascade Drilling</u>                                  | Well Casing Diameter (in): <u>2.0</u>         | Well Depth (ft, bgs): <u>73.2</u>     |
| Drilling Equipment/Rig Type: <u>TSI-150CC</u>                              | Top of Casing elev (ft): <u>704.23</u>        | Screen length (ft): <u>10</u>         |
| Abandonment Drilling Method: <u>7" x 8" Rotosonic</u>                      |   |                                       |
| Recovery Sampling Method: <u>Sonic 7" core barrel</u>                      |   |                                       |
| Prepared By: <u>Jackson Bankston</u>                                       |   |                                       |
| Review By: <u>Brian Steele, PG</u>   |   |                                       |

\*Not to Scale





# Well Abandonment Log

|  |   |                                       |
|--|---|---------------------------------------|
| Project Name: <u>Plant Bowen Cells 5, 6, 7, &amp; 8 Landfill Expansion</u> | Date Started: <u>12/2/2022</u>                | Date Completed: <u>12/6/2022</u>      |
| Borehole/Well No: <u>GWA-55</u>  | Northing (ft): <u>1506034.69</u>              | Easting (ft): <u>2074507.04</u>       |
| Plant Name: <u>Bowen</u>   |   |                                       |
| Plant Address: <u>317 Covered Bridge Rd SW Euharlee GA 30120</u>           | Location Datum: <u>NAD83</u>                  | Elevation Datum: <u>NAVD88</u>        |
| Project & Task Number: <u>175569450</u>                                    | Surface/ Ground Elevation (ft): <u>693.43</u> | Stickup (ft, ags): <u>3.3</u>         |
| Goals/Task: <u>Cells 3 &amp; 4 Abandonment</u>                             | Borehole Diameter (in): <u>8.0</u>            | Borehole Depth (ft, bgs): <u>45.3</u> |
| Drilling Company: <u>Cascade Drilling</u>                                  | Well Casing Diameter (in): <u>2.0</u>         | Well Depth (ft, bgs): <u>62.4</u>     |
| Drilling Equipment/Rig Type: <u>TSI-150CC</u>                              | Top of Casing elev (ft): <u>696.72</u>        | Screen length (ft): <u>10</u>         |
| Abandonment Drilling Method: <u>7" x 8" Rotasonic</u>                      |   |                                       |
| Recovery Sampling Method: <u>Sonic 7" core barrel</u>                      |   |                                       |
| Prepared By: <u>Jackson Bankston</u>                                       |   |                                       |
| Review By: <u>Brian Steele, PG</u>   |   |                                       |

**\*Not to Scale**

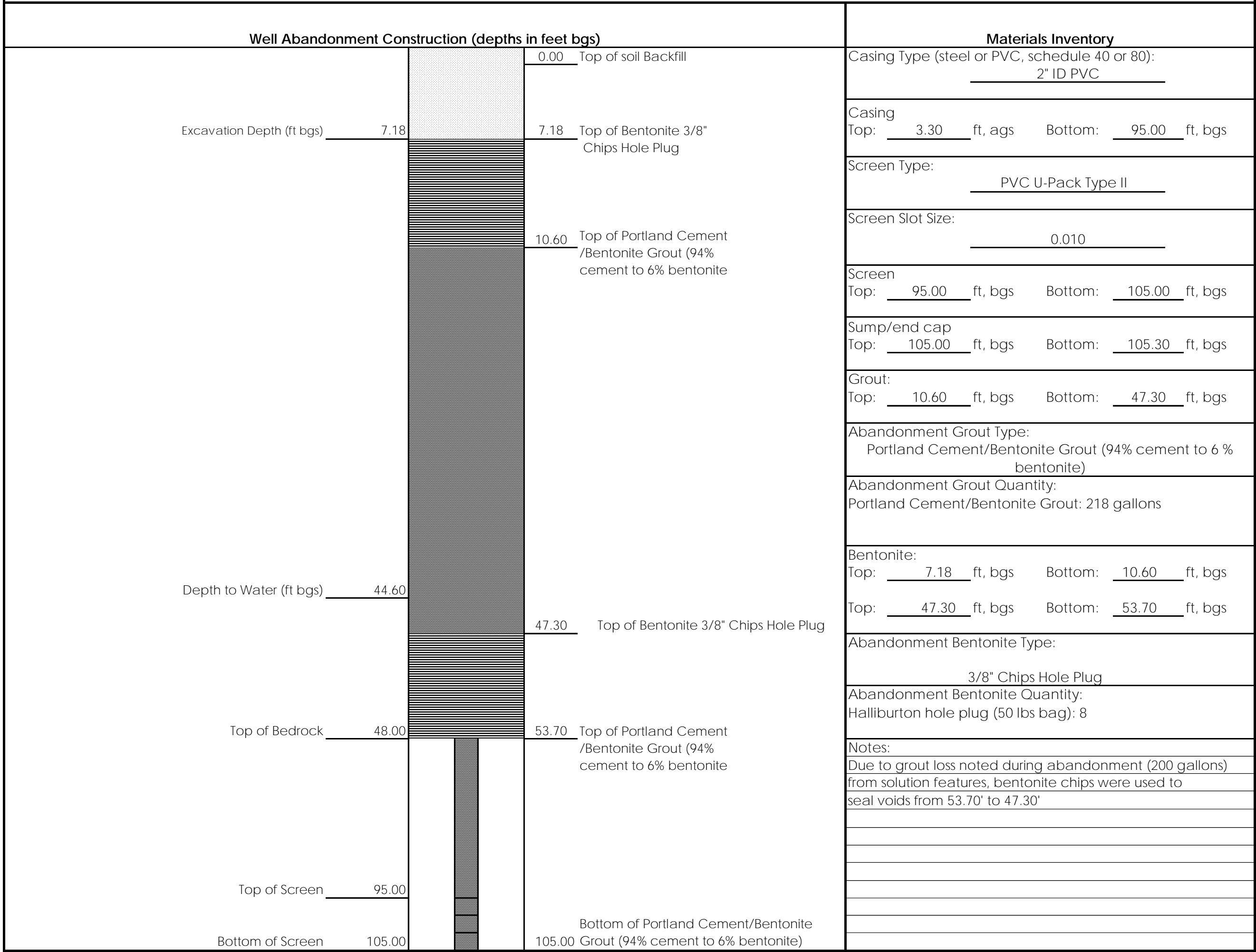
| Well Abandonment Construction (depths in feet bgs) |   | Materials Inventory  |
|--|---|--|
| Excavation Depth (ft bgs) <u>7.10</u>              | 0.00 Top of soil Backfill   | Casing Type (steel or PVC, schedule 40 or 80):<br><u>2" ID PVC</u>   |
|  | 7.30 Top of Bentonite 3/8" Chips Hole Plug  | Casing<br>Top: <u>3.30</u> ft, ags Bottom: <u>55.00</u> ft, bgs  |
|  | 10.20 Top of Portland Cement /Bentonite Grout (94% cement to 6% bentonite)                      | Screen Type:<br><u>PVC U-Pack Type II</u>  |
|  |   | Screen Slot Size:<br><u>0.010</u>  |
|  |   | Screen<br>Top: <u>55.00</u> ft, bgs Bottom: <u>65.00</u> ft, bgs   |
|  |   | Sump/end cap<br>Top: <u>65.00</u> ft, bgs Bottom: <u>65.30</u> ft, bgs   |
|  |   | Grout:<br>Top: <u>10.20</u> ft, bgs Bottom: <u>29.10</u> ft, bgs   |
|  |   | Abandonment Grout Type:<br>Portland Cement/Bentonite Grout (94% cement to 6% bentonite)  |
|  |   | Abandonment Grout Quantity:<br>Portland Cement/Bentonite Grout: 262 gallons  |
|  |   | Bentonite:<br>Top: <u>7.30</u> ft, bgs Bottom: <u>10.20</u> ft, bgs  |
|  |   | Top: <u>29.10</u> ft, bgs Bottom: <u>45.30</u> ft, bgs   |
|  | 29.10 Top of Bentonite 3/8" Chips Hole Plug   | Abandonment Bentonite Type:<br><u>3/8" Chips Hole Plug</u>   |
| Depth to Water (ft bgs) <u>41.70</u>               |   | Abandonment Bentonite Quantity:<br>Halliburton hole plug (50 lbs bag): 7   |
| Top of Bedrock <u>45.00</u>                        | 45.30 Top of Portland Cement /Bentonite Grout (94% cement to 6% bentonite /Bottom of overdrill) | Notes:<br>Due to grout loss noted during abandonment (135 gallons) from solution features, bentonite chips were used to seal voids from 45.30' to 29.10' |
| Top of Screen <u>55.00</u>                         |   |  |
| Bottom of Screen <u>65.00</u>                      | Bottom of Portland Cement/Bentonite Grout (94% cement to 6% bentonite) <u>65.00</u>             |  |



# Well Abandonment Log

|  |   |                                       |
|--|---|---------------------------------------|
| Project Name: <u>Plant Bowen Cells 5, 6, 7, &amp; 8 Landfill Expansion</u> | Date Started: <u>12/2/2022</u>                | Date Completed: <u>12/6/2022</u>      |
| Borehole/Well No: <u>GWA-55R</u>   | Northing (ft): <u>1506041.22</u>              | Easting (ft): <u>2074517.62</u>       |
| Plant Name: <u>Bowen</u>   |   |                                       |
| Plant Address: <u>317 Covered Bridge Rd SW Euharlee GA 30120</u>           | Location Datum: <u>NAD83</u>                  | Elevation Datum: <u>NAVD88</u>        |
| Project & Task Number: <u>175569450</u>                                    | Surface/ Ground Elevation (ft): <u>693.28</u> | Stickup (ft, ags): <u>3.3</u>         |
| Goals/Task: <u>Cells 3 &amp; 4 Abandonment</u>                             | Borehole Diameter (in): <u>8.0</u>            | Borehole Depth (ft, bgs): <u>53.7</u> |
| Drilling Company: <u>Cascade Drilling</u>                                  | Well Casing Diameter (in): <u>2.0</u>         | Well Depth (ft, bgs): <u>102.8</u>    |
| Drilling Equipment/Rig Type: <u>TSI-150CC</u>                              | Top of Casing elev (ft): <u>696.53</u>        | Screen length (ft): <u>10</u>         |
| Abandonment Drilling Method: <u>7" x 8" Rotosonic</u>                      |   |                                       |
| Recovery Sampling Method: <u>Sonic 7" core barrel</u>                      |   |                                       |
| Prepared By: <u>Jackson Bankston</u>                                       |   |                                       |
| Review By: <u>Brian Steele, PG</u>   |   |                                       |

**\*Not to Scale**





# Well Abandonment Log

|  |   |                                       |
|--|---|---------------------------------------|
| Project Name: <u>Plant Bowen Cells 5, 6, 7, &amp; 8 Landfill Expansion</u> | Date Started: <u>12/2/2022</u>                | Date Completed: <u>12/4/2022</u>      |
| Borehole/Well No: <u>GWA-56</u>  | Northing (ft): <u>1506128.38</u>              | Easting (ft): <u>2074633.08</u>       |
| Plant Name: <u>Bowen</u>   |   |                                       |
| Plant Address: <u>317 Covered Bridge Rd SW Euharlee GA 30120</u>           | Location Datum: <u>NAD83</u>                  | Elevation Datum: <u>NAVD88</u>        |
| Project & Task Number: <u>175569450</u>                                    | Surface/ Ground Elevation (ft): <u>689.14</u> | Stickup (ft, ags): <u>3.0</u>         |
| Goals/Task: <u>Cells 3 &amp; 4 Abandonment</u>                             | Borehole Diameter (in): <u>8.0</u>            | Borehole Depth (ft, bgs): <u>45.0</u> |
| Drilling Company: <u>Cascade Drilling</u>                                  | Well Casing Diameter (in): <u>2.0</u>         | Well Depth (ft, bgs): <u>83.0</u>     |
| Drilling Equipment/Rig Type: <u>TSI-150CC</u>                              | Top of Casing elev (ft): <u>692.17</u>        | Screen length (ft): <u>10</u>         |
| Abandonment Drilling Method: <u>7" x 8" Rotasonic</u>                      |   |                                       |
| Recovery Sampling Method: <u>Sonic 7" core barrel</u>                      |   |                                       |
| Prepared By: <u>Jackson Bankston</u>                                       |   |                                       |
| Review By: <u>Brian Steele, PG</u>   |   |                                       |

**\*Not to Scale**

| Well Abandonment Construction (depths in feet bgs) |       | Materials Inventory  |  |
|--|-------|--|--|
|  | 0.00  | Top of soil Backfill   | Casing Type (steel or PVC, schedule 40 or 80):<br><u>2" ID PVC</u>   |
| Excavation Depth (ft bgs) <u>6.31</u>              | 6.70  | Top of Bentonite 3/8" Chips Hole Plug                                  | Casing<br>Top: <u>3.00</u> ft, ags    Bottom: <u>75.87</u> ft, bgs   |
|  | 20.00 | Top of Portland Cement /Bentonite Grout (94% cement to 6% bentonite)   | Screen Type:<br><u>PVC U-Pack Type II</u>  |
|  | 39.80 | Top of Bentonite 3/8" Chips Hole Plug                                  | Screen Slot Size:<br><u>0.01</u>   |
| Depth to Water (ft bgs) <u>37.30</u>               | 45.00 | Top of Portland Cement /Bentonite Grout (94% cement to 6% bentonite)   | Screen<br>Top: <u>75.87</u> ft, bgs    Bottom: <u>85.87</u> ft, bgs  |
|  | 47.00 | Top of Bedrock   | Sump/end cap<br>Top: <u>85.87</u> ft, bgs    Bottom: <u>86.17</u> ft, bgs  |
|  | 75.87 | Top of Screen  | Grout:<br>Top: <u>20.00</u> ft, bgs    Bottom: <u>39.80</u> ft, bgs  |
| Bottom of Screen <u>85.87</u>                      | 85.87 | Bottom of Portland Cement/Bentonite Grout (94% cement to 6% bentonite) | Abandonment Grout Type:<br>Portland Cement/Bentonite Grout (94% cement to 6 % bentonite)   |
|  |       |  | Abandonment Grout Quantity:<br>Portland Cement/Bentonite Grout: 132 gallons  |
|  |       |  | Bentonite:<br>Top: <u>6.70</u> ft, bgs    Bottom: <u>20.00</u> ft, bgs<br>Top: <u>39.80</u> ft, bgs    Bottom: <u>45.00</u> ft, bgs                      |
|  |       |  | Abandonment Bentonite Type:<br><u>3/8" Chips Hole Plug</u>   |
|  |       |  | Abandonment Bentonite Quantity:<br>Halliburton hole plug (50 lbs bag): 8   |
|  |       |  | Notes:<br>Due to grout loss noted during abandonment (200 gallons) from solution features, bentonite chips were used to seal voids from 45.00' to 39.80' |

# **APPENDIX C CASCADE DRILLING BOND**







# Power of Attorney

KNOW ALL MEN BY THESE PRESENTS, that ATLANTIC SPECIALTY INSURANCE COMPANY, a New York corporation with its principal office in Plymouth, Minnesota, does hereby constitute and appoint: **Deanna M. French, Susan B. Larson, Elizabeth R. Hahn, Jana M. Roy, Scott McGilvray, Mindee L. Rankin, Ronald J. Lange, John R. Claeys, Roger Kaltenbach, Guy Armfield, Scott Fisher, Andrew P. Larsen, Nicholas Fredrickson, William M. Smith, Derek Sabo, Charla M. Boadle**, each individually if there be more than one named, its true and lawful Attorney-in-Fact, to make, execute, seal and deliver, for and on its behalf as surety, any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof; provided that no bond or undertaking executed under this authority shall exceed in amount the sum of: **unlimited** and the execution of such bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof in pursuance of these presents, shall be as binding upon said Company as if they had been fully signed by an authorized officer of the Company and sealed with the Company seal. This Power of Attorney is made and executed by authority of the following resolutions adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the President, any Senior Vice President or Vice-President (each an "Authorized Officer") may execute for and in behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and affix the seal of the Company thereto; and that the Authorized Officer may appoint and authorize an Attorney-in-Fact to execute on behalf of the Company any and all such instruments and to affix the Company seal thereto; and that the Authorized Officer may at any time remove any such Attorney-in-Fact and revoke all power and authority given to any such Attorney-in-Fact.

Resolved: That the Attorney-in-Fact may be given full power and authority to execute for and in the name and on behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed and sealed by an Authorized Officer and, further, the Attorney-in-Fact is hereby authorized to verify any affidavit required to be attached to bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof.

This power of attorney is signed and sealed by facsimile under the authority of the following Resolution adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the signature of an Authorized Officer, the signature of the Secretary or the Assistant Secretary, and the Company seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing an Attorney-in-Fact for purposes only of executing and sealing any bond, undertaking, recognizance or other written obligation in the nature thereof, and any such signature and seal where so used, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

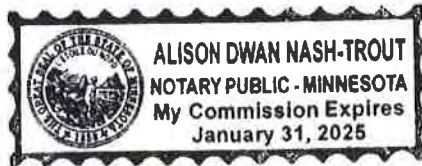
IN WITNESS WHEREOF, ATLANTIC SPECIALTY INSURANCE COMPANY has caused these presents to be signed by an Authorized Officer and the seal of the Company to be affixed this twenty-seventh day of April, 2020.



By *Paul J. Brehm*  
Paul J. Brehm, Senior Vice President

STATE OF MINNESOTA  
HENNEPIN COUNTY

On this twenty-seventh day of April, 2020, before me personally came Paul J. Brehm, Senior Vice President of ATLANTIC SPECIALTY INSURANCE COMPANY, to me personally known to be the individual and officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, that he is the said officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the seal of said Company and that the said seal and the signature as such officer was duly affixed and subscribed to the said instrument by the authority and at the direction of the Company.



*Alison Nash-Trout*  
Notary Public

I, the undersigned, Secretary of ATLANTIC SPECIALTY INSURANCE COMPANY, a New York Corporation, do hereby certify that the foregoing power of attorney is in full force and has not been revoked, and the resolutions set forth above are now in force.

Signed and sealed. Dated 12 day of April, 2021.

This Power of Attorney expires  
January 31, 2025



*Kara Barrow*  
Kara Barrow, Secretary

CONTINUATION  
CERTIFICATE

Atlantic Specialty Insurance Company

, Surety upon

a certain Bond No. 800033976

dated effective 09/27/2017  
(MONTH-DAY-YEAR)

on behalf of Ricky Davis / Cascade Drilling, L.P.  
(PRINCIPAL)

and in favor of Department of Natural Resources, State of Georgia  
(OBLIGEE)

does hereby continue said bond in force for the further period

beginning on 06/30/2021  
(MONTH-DAY-YEAR)

and ending on 06/30/2023  
(MONTH-DAY-YEAR)

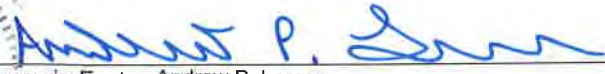
Amount of bond Thirty Thousand and 00/100 Dollars (\$30,000.00)

Description of bond Performance Bond for Water Well Contractors

**PROVIDED: That this continuation certificate does not create a new obligation and is executed upon the express condition and provision that the Surety's liability under said bond and this and all Continuation Certificates issued in connection therewith shall not be cumulative and that the said Surety's aggregate liability under said bond and this and all such Continuation Certificates on account of all defaults committed during the period (regardless of the number of years) said bond had been and shall be in force, shall not in any event exceed the amount of said bond as hereinbefore set forth.**

Signed and dated on April 12th, 2021  
(MONTH-DAY-YEAR)

Atlantic Specialty Insurance Company

By   
Attorney-in-Fact Andrew P. Larsen

Parker, Smith & Feek, Inc.

Agent  
2233 112th Ave NE Bellevue, WA 98004

Address of Agent

425-709-3600

Telephone Number of Agent

**APPENDIX C  
MEMORANDA ON HYDROGEOLOGIC  
MONITORING PROGRAM**



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|       |  |       |  |
|-------|--|-------|--|
| To:   | Kristen Jurinko, P.G.<br>Southern Company Services, Inc. | From: | Andreas Shoreddits, P.G.<br>Stantec Consulting Services Inc. |
| File: | Hydrogeological Monitoring Memo                          | Date: | August 31, 2022  |

---

**Reference: Solid Waste Disposal Facility Permit No. 008-018D (LI) - Hydrogeological Monitoring Program December 16, 2021, through June 3, 2022**

### Background

Stantec Consulting Services Inc. (Stantec) was retained by Southern Company Services, Inc. (SCS), to assist with the hydrogeological (water level) monitoring program at Georgia Power Company's Plant Bowen (Site) Landfill Cells 1 & 2, 3 & 4, 9 & 10. The work is being conducted to comply with Georgia Department of Natural Resources Environmental Protection Division (EPD) Solid Waste Permit No. 008-018D (LI) to assist with early detection of subsurface changes that might indicate land subsidence or sinkhole formation. Groundwater level fluctuations are monitored in accordance with Section 3.6.5 of the *Plant Bowen Proposed Coal Combustion By-Product Monofill Addendum I Site Acceptability Report – Hydrogeological Assessment and Demonstration of Engineering Measures* (SCS 2004)<sup>(1)</sup>.

The Site utilizes In-Situ<sup>®</sup> Instruments, Inc. Win-Situ<sup>®</sup> telemetry and reporting software and pressure transducers to collect and record groundwater elevations from monitoring wells located around the perimeter of the landfill cells. The program was initiated in 2014 at Cells 1 & 2, expanded in 2015 and 2016 to Cells 3 & 4 and Cells 9 & 10, respectively. During this reporting period transducers were deployed in overburden and bedrock wells as follows:

- Cells 1 & 2: six overburden wells (GWA-1 (overburden/bedrock), GWA-3A, GWC-7Z, GWC-11, GWC-13, and GWC-15) and six bedrock wells (GWA-2R, GWC-6RZ, GWC-8RR, GWC-11R, GWC-13R, and GWC-15R).
- Cells 3 & 4: five overburden wells (GWC-18, GWA-36A, GWA-37, GWA-53, and GWA-55) and eight bedrock wells (GWC-16R, GWC-18R, GWC-21R, GWC-24R, GWC-25R, GWA-36RA, GWA-53R, and GWA-55R).
- Cells 9 & 10: six overburden wells (GWA-39Z, GWA-41, GWA-43, GWC-45, GWC-47, and GWC-49Z) and six bedrock wells (GWA-39RZ, GWA-41R, GWA-43R, GWC-45R, GWC-47R, and GWC-49R).
- Etowah River levels and rainfall data for the reporting period were obtained from a U.S. Geological Survey gauge (02394670) near Cartersville, Georgia.

Water level data are electronically logged multiple times daily by each transducer. Most logged data are uploaded after each reading via satellite telemetry to a central In-Situ Inc.® database. Automated reports are accessible via the In-Situ ® database website (ISI Data Center) where the telemetry data are stored and compiled. Data from wells not connected to the site telemetry system are manually downloaded directly from

**Reference:** Solid Waste Disposal Facility Permit No. 008-018D (LI) - Hydrogeological Monitoring Program December 16, 2021, through June 3, 2022

these transducers, because the transducers are set to log and store data internally multiple times throughout each day.

### **Maintenance Observations**

During the reporting period, the following well locations were noted by Southern Company Civil Field Services (SCS-CFS) staff as having issues: GWA-3A, GWA-36A, GWC-25R, and GWC-49R. The wells were visited on one or more occasions for maintenance, manual data downloads, battery change outs, transducer replacement, desiccant replacement, solar panel adjustment, or reconnection of modem or transducer cables. Monitoring well GWA-36 was abandoned on March 16, 2022 and replaced with new monitoring well GWA-36A on March 18, 2022. A new transducer has not been installed in new well GWA-36A. The data, during this reporting period, for the transducer location at GWA-36 are not continuous due to this transducer being offline due to drilling activities. During the past six-month period, transducers from wells GWA-3A, GWC-25R, and GWC-49R were visited to troubleshoot telemetry system. SCS-CFS staff have identified the potential issues associated with GWC-25R, and GWC-49R are working on correcting these in time for the upcoming hydrogeological monitoring period. After early February 2022, the data upload issues continued at GWA-3A. Historically, the groundwater elevations in GWA-3A have been consistent with GWA-2R, which did not show water level fluctuations attributed to subsurface changes that might be indicative of land subsidence or sinkhole formation. The ongoing data upload issues associated with GWA-3A have yet to be resolved and are being worked on.

### **Water Level Fluctuations**

Continuous groundwater level data and river stage elevations were recorded between December 16, 2021, and June 3, 2022. Reporting period hydrographs for Cells 1 & 2, 3 & 4, and 9 & 10 are shown in Figures 1A through 3B.

Table 1 lists the groundwater sampling, water level gauging and transducer maintenance activities during the reporting period and are considered known disruptions to water table. Table 2 summarizes the data gaps or maintenance issues for the reporting period and recommendations for repairs and includes the most recent repairs completed up to May 10, 2022. Repairs consisted of resetting reference water elevation depth, resealing boxes, ant infestation control, replacing desiccants and replacing power controller units and batteries. Periodic sampling and maintenance may induce drifts in pressure readings. When significant drifts are noted, the reference depth to water is re-set and the logging cycle is re-started. Table 2 is a record of the maintenance completed during the reporting period.

The water levels in monitoring wells equipped with transducers exhibited similar overall trends during the reporting period. Groundwater elevations show an overall stable trend during this six-month period with lower elevations through December followed by elevated water levels and monthly peaks in January, February, and March. There is a steady decrease in groundwater elevations from April through May. The fluctuations of groundwater elevations mimic the Etowah River levels in response to rain events and wet conditions. Some of this hydrograph response may be attributable to the fluctuations in water levels in the nearby General Service Water Pond. Wells GWA-41 and GWA-41R showed rapid hydrograph responses to rainfall during the monitoring period as groundwater in both the overburden and bedrock aquifers at this location responded equally to rainfall events. During this monitoring period, the potentiometric surface of the bedrock aquifer remained above the top of competent bedrock in the instrumented monitoring wells. This higher hydrostatic

**Reference:** Solid Waste Disposal Facility Permit No. 008-018D (LI) - Hydrogeological Monitoring Program December 16, 2021, through June 3, 2022

pressure of the bedrock aquifer limits removal of material from the overburden that could result in subsidence issues. The observed variations in groundwater elevations are attributed to rainfall variations, or due to sampling or maintenance activities at the monitoring points. A comparison of river stage and precipitation data with recorded groundwater elevations (Figures 1A through 3B) shows that both sets of data follow similar overall patterns.

### Conclusions and Recommendations

Observed disruptions in the transducer water levels were found to be directly attributed to (a) drawdown during sampling events, water level gauging, well development, and (b) to maintenance of wells, transducers, or telemetry units, or (c) significant rainfall events. The December 16, 2021, through June 3, 2022, hydrologic monitoring data did not show water level fluctuations attributed to subsurface changes that might be indicative of land subsidence or sinkhole formation. Based on our interpretation of data for the current reporting period (December 16, 2021, through June 3, 2022), Stantec can recommend the following measures towards improving the program:

- Quarterly comprehensive field calibration of transducer groundwater elevations to correct for pressure data drifts and identify faulty sensors.
- Continue to perform periodic maintenance of the system and provide record of maintenance documentation digitally.
- Manually download data, monthly, when a telemetry unit is offline (i.e., not transmitting data to the ISI Data Center). This will ensure that data are being reviewed on a consistent and timely basis.
- Field check equipment to make certain insect infestation is not damaging equipment and verify battery level status of transducers periodically as those with low levels will need to be replaced.
- Replace desiccants in stations on a scheduled manner.
- Maintain vegetation clearance around telemetry stations to continue to allow sunlight reaching the solar panels to charge station batteries.

### Stantec Consulting Services Inc.



**Andreas Shoredits** P.G.  
Geologist

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Fax:

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## **TABLES**

**Table 1**  
**Known Sampling and Gauging Events Relative to Water Level Fluctuations**  
**December 16, 2021 to June 3, 2022**  
**Georgia Power - Plant Bowen**  
**Stantec Project No. 172678190**

| Solid Waste Disposal Cells | Well ID   | Date Well Gauged | Date Well Sampled | Most Recent Transducer Network Maintenance Per Well | Comments  |
|----------------------------|-----------|------------------|-------------------|---|---|
| 1 & 2                      | GWA-1     | 1/24/2022        | 2/1/2022          | 5/10/2022   | No issues   |
|                            | GWA-2     | 1/24/2022        | 2/1/2022          | --  | --  |
|                            | GWA-2R    | 1/24/2022        | 2/1/2022          | 4/29/2022   | Measured water level against transducer reading: Off by 0.87ft; Recalibration of water level  |
|                            | GWA-3A    | 1/24/2022        | 2/2/2022          | 5/10/2022   | Not transmitting data currently; Missing data from 2/25 to 6/3; SCS is currently troubleshooting issue  |
|                            | GWA-4RZ   | 1/24/2022        | 2/2/2022          | --  | Complete Evac. Performed on 2/2/22  |
|                            | GWC-5     | 1/24/2022        | 2/2/2022          | --  | --  |
|                            | GWC-5     | --               | 4/28/2022         | --  | Resampled on 4/28/22  |
|                            | GWC-6     | 1/24/2022        | 2/2/2022          | --  | --  |
|                            | GWC-6RZ   | 1/24/2022        | 2/2/2022          | 5/10/2022   | No issues   |
|                            | GWC-7Z    | 1/24/2022        | 2/2/2022          | 4/29/2022   | Measured water level against transducer reading: Off by 1.96ft; Recalibration of water level  |
|                            | GWC-8RR   | 1/24/2022        | 2/2/2022          | 4/29/2022   | Measured water level against transducer reading: Off by 1.14ft; Recalibration of water level  |
|                            | GWC-8Z    | 1/24/2022        | 2/2/2022          | --  | --  |
|                            | GWC-8Z    | --               | 4/28/2022         | --  | Resample on 4/28/22; Sample not submitted for analysis  |
|                            | GWC-9     | 1/24/2022        | 2/2/2022          | --  | --  |
|                            | GWC-10    | 1/24/2022        | 2/4/2022          | --  | --  |
|                            | GWC-10R   | 1/24/2022        | 2/4/2022          | --  | --  |
|                            | GWC-11    | 1/24/2022        | 2/4/2022          | 4/29/2022   | Measured water level against transducer reading: Off by 0.71ft; Recalibration of water level  |
|                            | GWC-11R   | 1/24/2022        | 2/4/2022          | 4/29/2022   | Measured water level against transducer reading: Off by 0.86ft; Recalibration of water level  |
|                            | GWC-12    | 1/24/2022        | 2/2/2022          | --  | --  |
|                            | GWC-12    | --               | 4/28/2022         | --  | Resample on 4/28/22   |
|                            | GWC-13    | 1/24/2022        | 2/17/2022         | 4/29/2022   | Redevelopment on 2/9/22; Measured water level against transducer reading: Off by 0.71ft; Recalibration of water level   |
|                            | GWC-13R   | 1/24/2022        | --                | 5/10/2022   | No issues   |
|                            | GWC-13RZ  | 1/24/2022        | 2/4/2022          | --  | Complete Evac. Performed on 2/3/22.   |
|                            | GWC-14Z   | 1/24/2022        | 2/4/2022          | --  | --  |
|                            | GWC-15    | 1/24/2022        | --                | 4/29/2022   | Measured water level against transducer reading: Off by 1.39ft; Recalibration of water level  |
|                            | GWC-15R   | 1/24/2022        | 2/4/2022          | 4/29/2022   | Measured water level against transducer reading: Off by 0.56ft; Recalibration of water level  |
|                            | GWC-15Z   | 1/24/2022        | 2/7/2022          | --  | --  |
|                            | GWA-50    | 1/24/2022        | 2/1/2022          | --  | --  |
| GWA-50R                    | 1/24/2022 | 2/2/2022         | --                | --  |   |
| 3 & 4                      | GWA-36    | 1/24/2022        | --                | N/A   | Well was abandoned on 3/16/22   |
|                            | GWA-36A   | --               | 4/6/2022          | 5/10/2022   | New well installed on 3/18/22; Well developed on 3/23/22; Missing data 4/28-5/2; GWA-36 transducer (S/N 420330) relocated to here and start logging on 5/2                |
|                            | GWA-36RA  | 1/24/2022        | 1/26/2022         | 5/10/2022   | No issues; Low point readout on 5/2   |
|                            | GWA-37    | 1/24/2022        | 1/26/2022         | 5/10/2022   | No issues   |
|                            | GWA-38    | 1/24/2022        | 1/25/2022         | --  | --  |
|                            | GWC-16R   | 1/24/2022        | 1/28/2022         | 5/10/2022   | No issues   |
|                            | GWC-17R   | 1/24/2022        | 1/28/2022         | --  | Complete Evac. Performed on 1/27/22   |
|                            | GWC-18    | 1/24/2022        | 1/28/2022         | 5/3/2022  | Measured water level against transducer reading: Off by 1.20ft; Recalibration of water level  |
|                            | GWC-18R   | 1/24/2022        | 1/27/2022         | 4/20/2022   | Measured water level against transducer reading: Off by 8.29ft  |
|                            | GWC-19R   | 1/24/2022        | 1/27/2022         | --  | --  |
|                            | GWC-20R   | 1/24/2022        | 1/27/2022         | --  | --  |
|                            | GWC-21R   | 1/24/2022        | 1/28/2022         | 5/10/2022   | No issues   |
|                            | GWC-22R   | 1/24/2022        | 1/27/2022         | --  | --  |
|                            | GWC-23R   | 1/24/2022        | 1/28/2022         | --  | Complete Evac. Performed on 1/27/22   |
|                            | GWC-24R   | 1/24/2022        | 1/28/2022         | 5/10/2022   | No issues   |
|                            | GWC-25R   | 1/24/2022        | 1/27/2022         | 5/10/2022   | Suspected fault with modem; Very little data available for reporting period: Missing 12/18-3/21, 3/26-3/30 and 3/5-6/3 SCS will be submitting modem to vendor for repairs |
|                            | GWA-51RZ  | 1/24/2022        | 1/26/2022         | --  | Complete Evac. Performed on 1/25/22   |
|                            | GWA-52    | 1/24/2022        | 1/25/2022         | --  | --  |
|                            | GWA-53    | 1/24/2022        | 1/26/2022         | 5/10/2022   | No issues   |
|                            | GWA-53R   | 1/24/2022        | 1/26/2022         | 5/10/2022   | No issues   |
| GWA-54                     | 1/24/2022 | 1/25/2022        | --                | --  |   |
| GWA-55                     | 1/24/2022 | 1/26/2022        | 5/10/2022         | No issues   |   |
| GWA-55R                    | 1/24/2022 | 1/27/2022        | 5/10/2022         | No issues   |   |
| GWA-56                     | 1/24/2022 | 1/26/2022        | --                | --  |   |



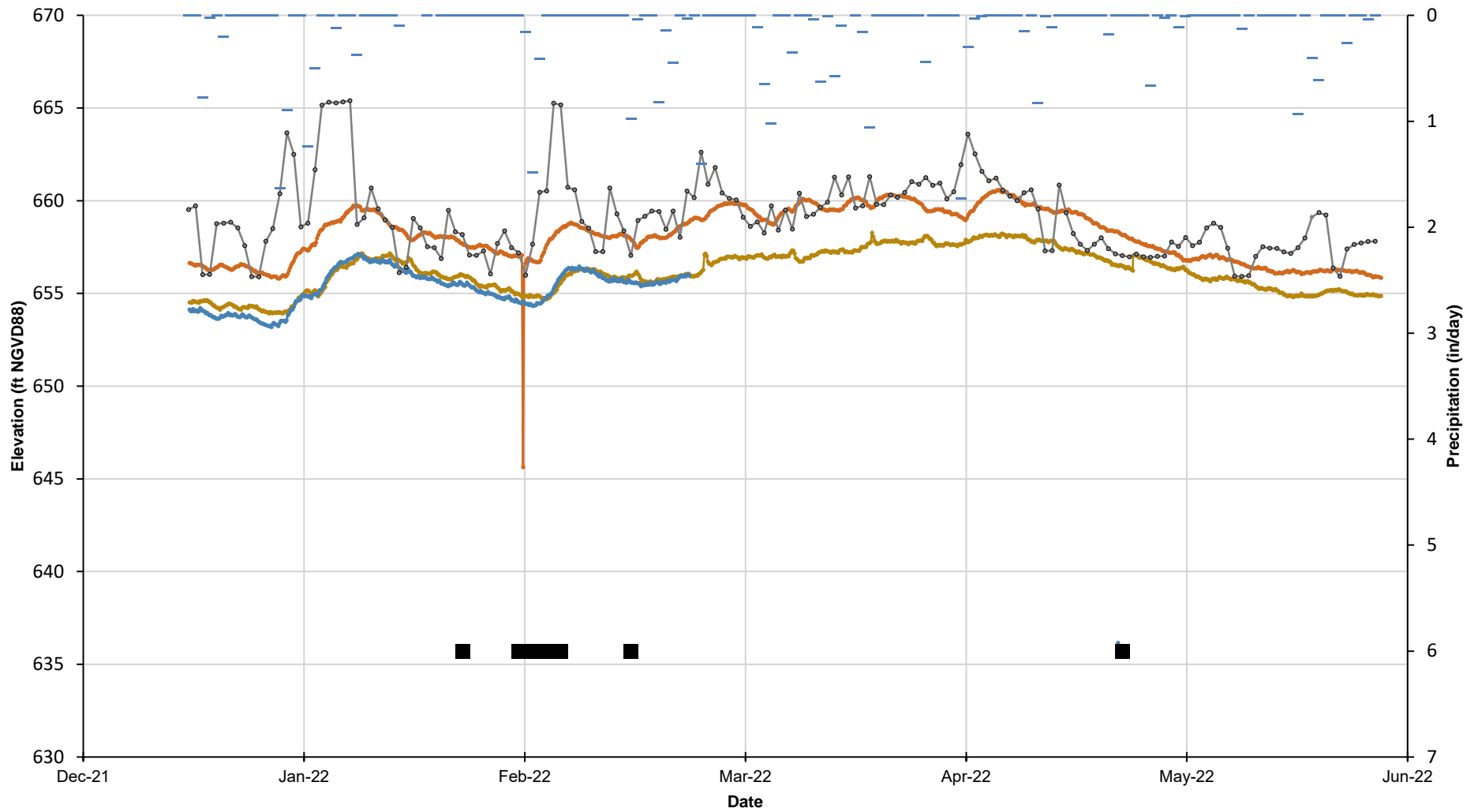
**Table 1**  
**Known Sampling and Gauging Events Relative to Water Level Fluctuations**  
**December 16, 2021 to June 3, 2022**  
**Georgia Power - Plant Bowen**  
**Stantec Project No. 172678190**

| Solid Waste Disposal Cells | Well ID   | Date Well Gauged | Date Well Sampled | Most Recent Transducer Network Maintenance Per Well  | Comments   |
|----------------------------|-----------|------------------|-------------------|--|--|
| 9 & 10                     | GWA-39RZ  | 1/24/2022        | 2/2/2022          | 5/3/2022   | Complete Evac. on 2/1/2022; Measured water level against transducer reading: Off by 0.61ft; Recalibration of water level                     |
|                            | GWA-39Z   | 1/24/2022        | 1/31/2022         | 5/10/2022  | No issues  |
|                            | GWA-40    | 1/24/2022        | 1/31/2022         | --   | --   |
|                            | GWA-41    | 1/24/2022        | 1/31/2022         | 5/10/2022  | No issues  |
|                            | GWA-41R   | 1/24/2022        | 1/31/2022         | 5/10/2022  | No issues  |
|                            | GWA-42    | 1/24/2022        | 1/31/2022         | --   | --   |
|                            | GWA-43    | 1/24/2022        | 1/31/2022         | 4/29/2022  | Measured water level against transducer reading: Off by 38.91ft; Recalibration of water level  |
|                            | GWA-43R   | 1/24/2022        | 1/31/2022         | 5/10/2022  | No issues  |
|                            | GWC-44    | 1/24/2022        | 1/31/2022         | --   | --   |
|                            | GWC-45    | 1/24/2022        | 2/1/2022          | 4/20/2022  | Measured water level against transducer reading: Off by 9.79ft   |
|                            | GWC-45R   | 1/24/2022        | 2/1/2022          | 4/20/2022  | Measured water level against transducer reading: Off by 9.99ft   |
|                            | GWC-46R   | 1/24/2022        | 1/31/2022         | --   | --   |
|                            | GWC-47    | 1/24/2022        | 2/1/2022          | 4/29/2022  | Missing Data from 4/21, 4/23 and from 5/7-5/10; Measured water level against transducer reading: Off by 2.43ft; Recalibration of water level |
|                            | GWC-47R   | 1/24/2022        | 2/1/2022          | 5/10/2022  | Missing Data from 4/21, 4/23 and 5/7-5/10  |
|                            | GWC-48    | 1/24/2022        | 1/31/2022         | --   | --   |
|                            | GWC-48    | --               | 4/28/2022         | --   | Resample on 4/28/22  |
| GWC-49R                    | 1/24/2022 | 2/1/2022         | 5/10/2022         | Faulty cable; SCS waiting to receive replacement cable for installation; Missing data from 12/23-2/3, 2/5-2/8 and 2/19-6/3 |  |
| GWC-49Z                    | 1/24/2022 | 2/1/2022         | 5/10/2022         | Missing data on 2/2 and 2/5-2/8  |  |

**Table 2**  
**Maintenance Information and Recommendations**  
December 16, 2021 to June 3, 2022  
Georgia Power - Plant Bowen  
Project Number: 172678190

| Cell       | Monitoring Well | Date       | Maintenance Information                                       | Recommendations   |
|------------|-----------------|------------|---|---|
| Cells 1&2  | GWA-1           | 5/10/2022  | --  | --  |
| Cells 1&2  | GWA-2R          | 4/29/2022  | Recalibrate reference water level                             | --  |
| Cells 1&3  | GWA-3A          | 5/10/2022  | Not transmitting data, SCS is looking into this               | --  |
| Cells 1&2  | GWC-6RZ         | 5/10/2022  | --  | --  |
| Cells 1&2  | GWC-7Z          | 4/29/2022  | Recalibrate reference water level                             | --  |
| Cells 1&2  | GWC-8RR         | 4/29/2022  | Recalibrate reference water level                             | --  |
| Cells 1&2  | GWC-11          | 4/29/2022  | Recalibrate reference water level                             | --  |
| Cells 1&2  | GWC-11R         | 4/29/2022  | Recalibrate reference water level                             | --  |
| Cells 1&2  | GWC-13          | 4/29/2022  | Recalibrate reference water level                             | --  |
| Cells 1&2  | GWC-13R         | 5/10/2022  | --  | --  |
| Cells 1&2  | GWC-15          | 4/29/2022  | Recalibrate reference water level                             | --  |
| Cells 1&2  | GWC-15R         | 4/29/2022  | Recalibrate reference water level                             | --  |
| Cells 3&4  | GWC-16R         | 5/10/2022  | --  | --  |
| Cells 3&4  | GWC-18          | 5/3/2022   | Recalibrate reference water level                             | --  |
| Cells 3&4  | GWC-18R         | 4/20/2022  | Water elevation readings are off                              | Recalibrate reference water level                       |
| Cells 3&4  | GWC-21R         | 5/10/2022  | --  | --  |
| Cells 3&4  | GWC-24R         | 5/10/2022  | --  | --  |
| Cells 3&4  | GWC-25R         | 12/14/2021 | Possible fault with modem, SCS sending unit off for repairs   | Reinstall upon return receipt and confirm functionality |
| Cells 3&4  | GWA-36A         | 5/10/2022  | --  | Rename well on ISI Data Center                          |
| Cells 3&4  | GWA-36RA        | 5/10/2022  | --  | Rename well on ISI Data Center                          |
| Cells 3&4  | GWA-37          | 5/10/2022  | --  | --  |
| Cells 3&4  | GWA-53          | 5/10/2022  | --  | --  |
| Cells 3&4  | GWA-53R         | 5/10/2022  | --  | --  |
| Cells 3&4  | GWA-55          | 5/10/2022  | --  | --  |
| Cells 3&4  | GWA-55R         | 5/10/2022  | --  | --  |
| Cells 9&10 | GWA-39RZ        | 5/3/2022   | Recalibrate reference water level                             | --  |
| Cells 9&10 | GWA-39Z         | 5/10/2022  | --  | --  |
| Cells 9&10 | GWA-41          | 5/10/2022  | --  | --  |
| Cells 9&10 | GWA-41R         | 5/10/2022  | --  | --  |
| Cells 9&10 | GWA-43          | 4/29/2022  | Recalibrate reference water level                             | --  |
| Cells 9&10 | GWA-43R         | 5/10/2022  | --  | --  |
| Cells 9&10 | GWC-45          | 4/20/2022  | Water elevation readings are off                              | Recalibrate reference water level                       |
| Cells 9&10 | GWC-45R         | 4/20/2022  | Water elevation readings are off                              | Recalibrate reference water level                       |
| Cells 9&10 | GWC-47          | 4/29/2022  | Recalibrate reference water level                             | --  |
| Cells 9&10 | GWC-47R         | 4/20/2022  | Minor missing data  | Monitor general telemetry closely                       |
| Cells 9&10 | GWC-49Z         | 5/10/2022  | --  | --  |
| Cells 9&10 | GWC-49R         | 4/20/2022  | Faulty direct-read cable, SCS is awaiting a replacement cable | Replace cable and verify readings                       |
| --         | USGS 02394670   | --         | No functional issues during this reporting period             | No action needed.                                       |

## **FIGURES**



Legend

- GWA-1
- GWA-3A
- Etowah River Gage
- USGS Precipitation
- GWA-2R
- Monitoring Events

Client/Project

Southern Company Services, Inc.  
Solid Waste Disposal Facility  
Hydrogeological Monitoring Program

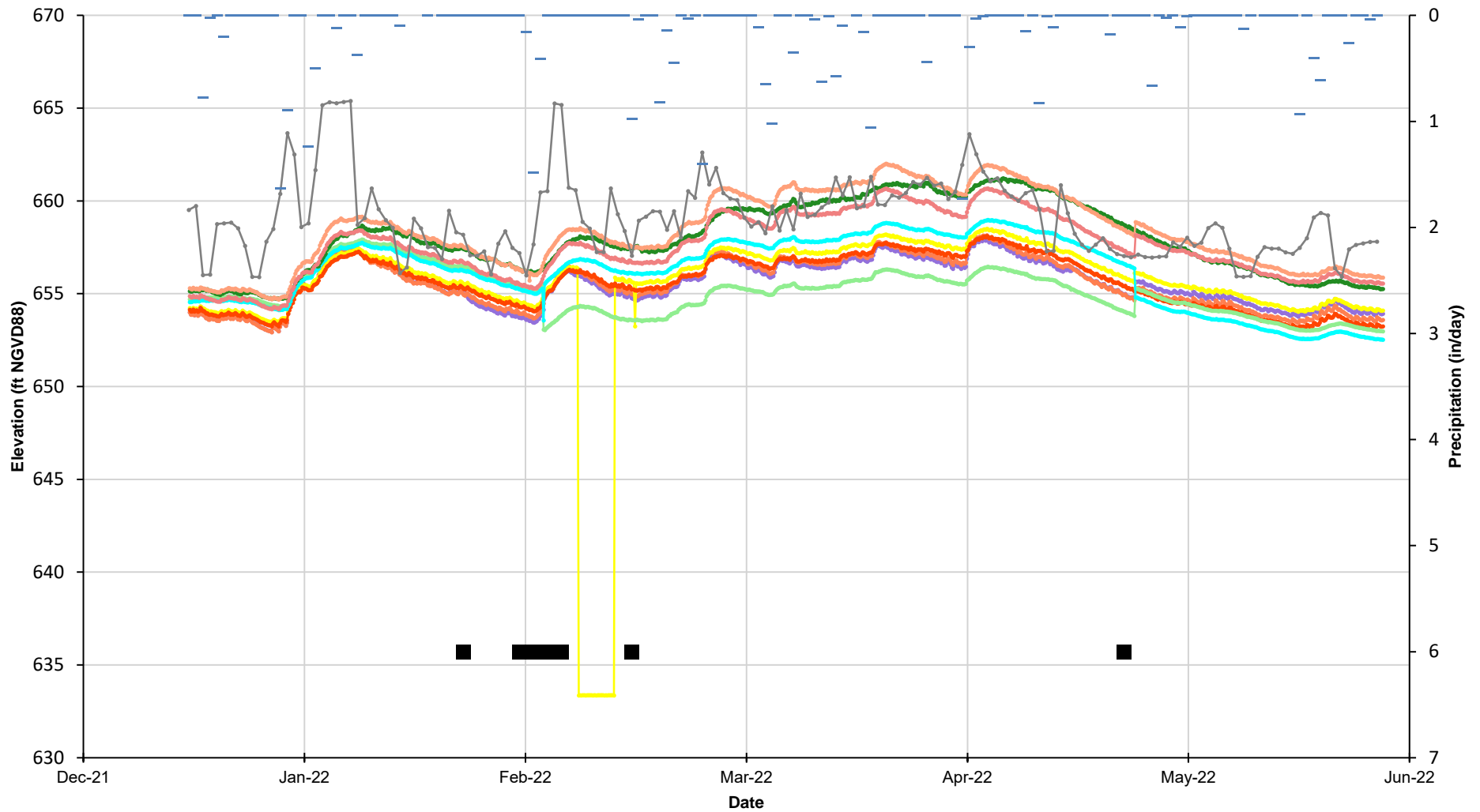
Figure/Well No.

1A

Title

Cell 1&2 Transducer Level Monitoring





Legend

- GWC-11
- GWC-13
- GWC-15
- GWC-6RZ
- GWC-8RR
- USGS Precipitation
- GWC-11R
- GWC-13R
- GWC-15R
- GWC-7Z
- Etowah River Gage
- Monitoring Events

Client/Project

Southern Company Services, Inc.  
Solid Waste Disposal Facility  
Hydrogeological Monitoring Program

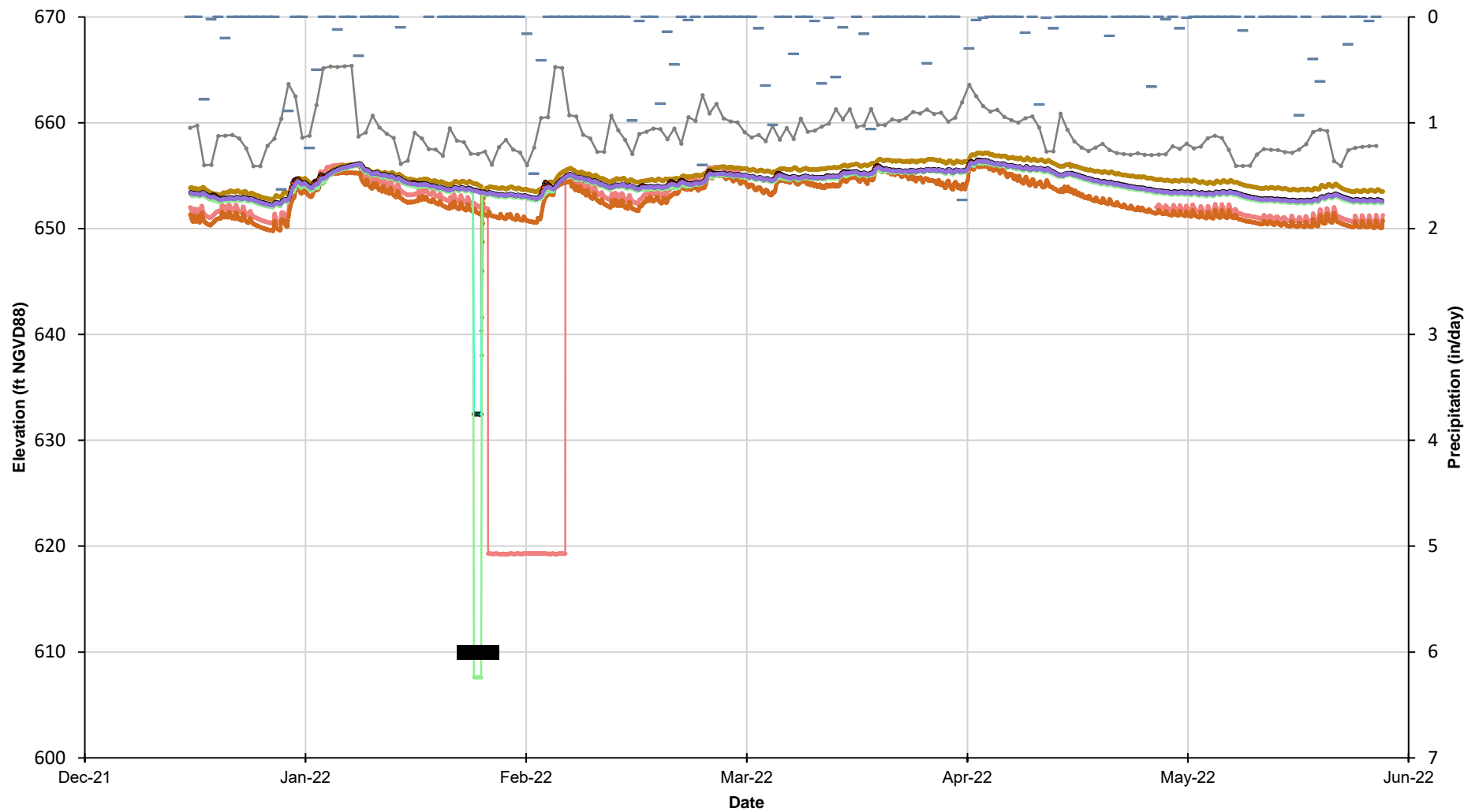
Figure/Well No.

1B

Title

Cell 1&2 Transducer Level Monitoring





Legend

- GWA-36
- GWA-37
- GWA-53R
- GWA-55R
- USGS Precipitation
- GWA-36R
- GWA-53
- GWA-55
- Etowah River Gage
- Monitoring Events

Client/Project

Southern Company Services, Inc.  
 Solid Waste Disposal Facility  
 Hydrogeological Monitoring Program

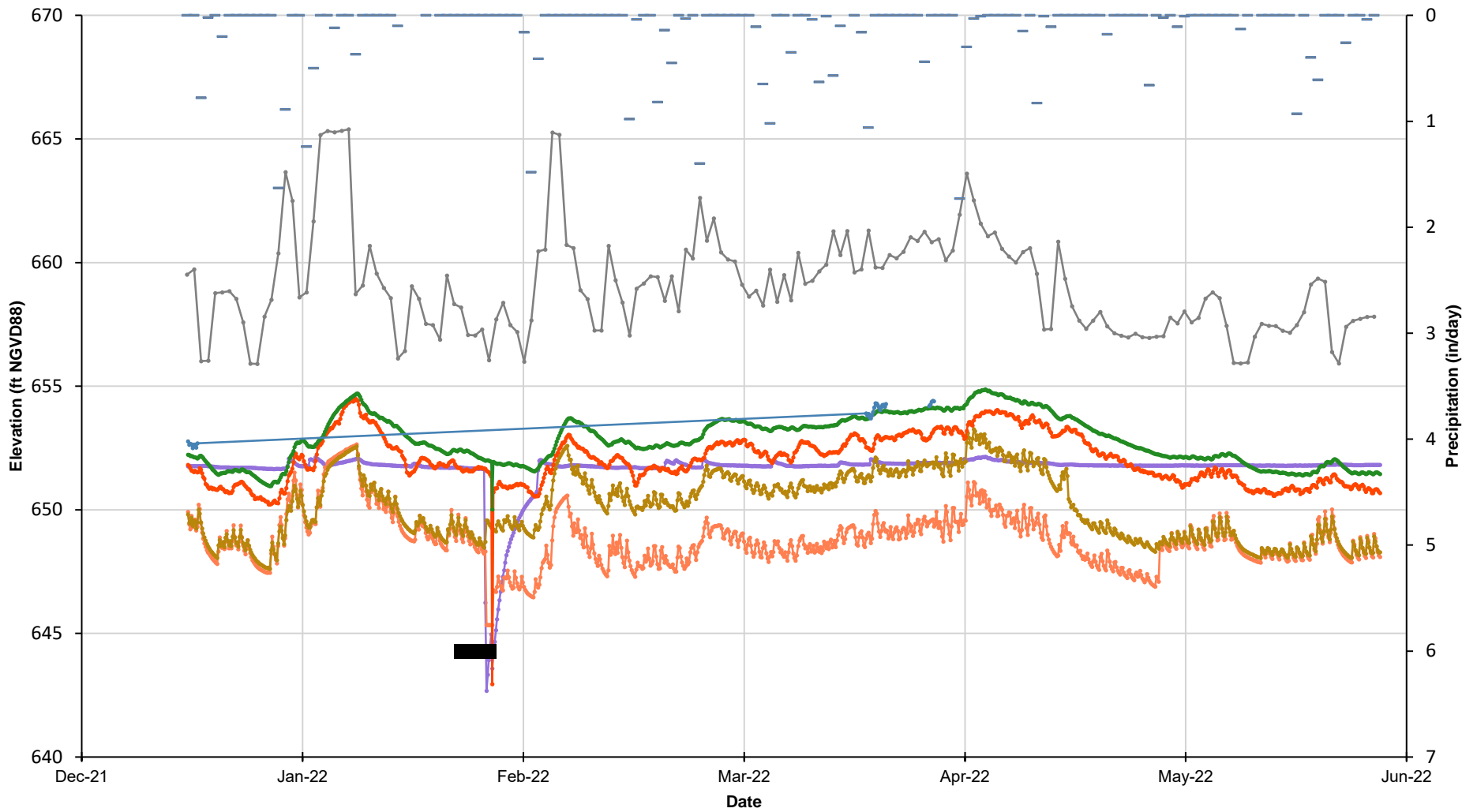
Figure/Well No.

2A

Title

Cell 3 & 4 Transducer Level Monitoring





Legend

- GWC-16R
- GWC-18R
- GWC-24R
- Etowah River Gage
- Monitoring Events
- GWC-18
- GWC-21R
- GWC-25R
- USGS Precipitation

Client/Project

Southern Company Services, Inc.  
Solid Waste Disposal Facility  
Hydrogeological Monitoring Program

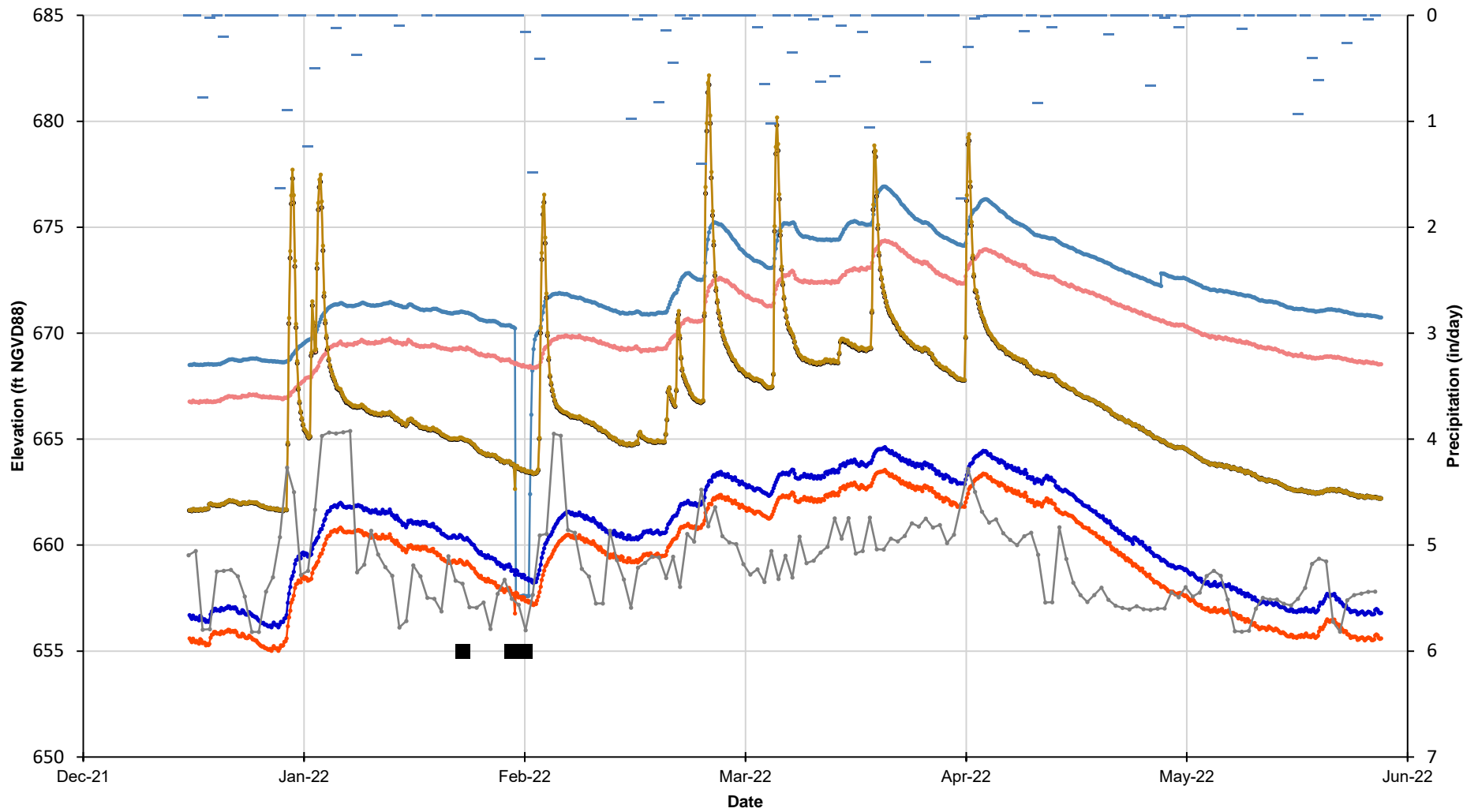
Figure/Well No.

**2B**

Title

**Cell 3 & 4 Transducer Level Monitoring**





Legend

- GWA-39RZ
- GWA-41
- GWA-43
- Etowah River Gage
- Monitoring Events
- GWA-39Z
- GWA-41R
- GWA-43R
- USGS Precipitation

Client/Project

Southern Company Services, Inc.  
Solid Waste Disposal Facility  
Hydrogeological Monitoring Program

Figure/Well No.

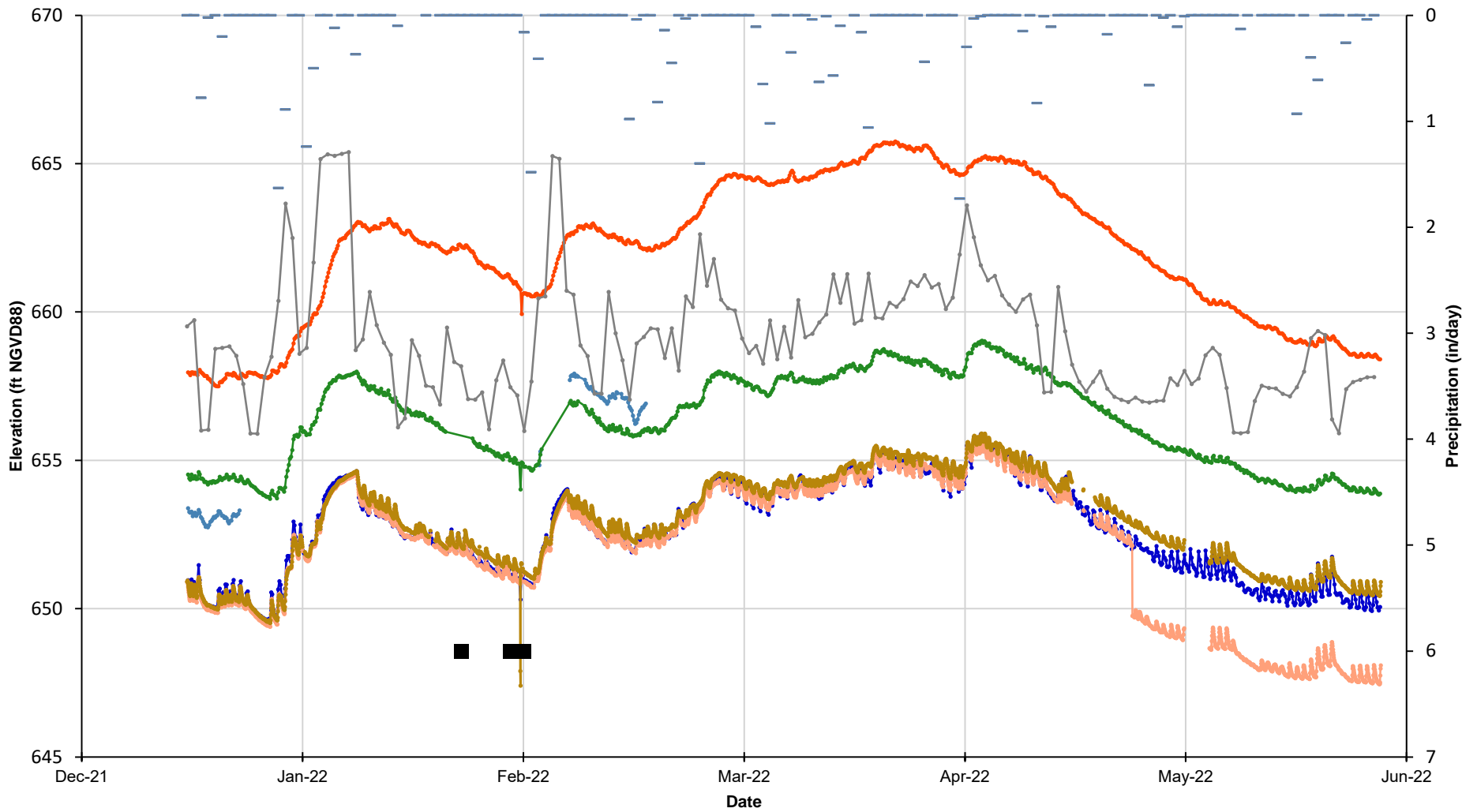
**3A**

Title

**Cell 9 & 10 Transducer Level Monitoring**







Legend

- GWC-45
- GWC-47
- GWC-49R
- Etowah River Gage
- Monitoring Events
- GWC-45R
- GWC-47R
- GWC-49Z
- USGS Precipitation

Client/Project

Southern Company Services, Inc.  
Solid Waste Disposal Facility  
Hydrogeological Monitoring Program

Figure/Well No.

**3B**

Title

**Cell 9 & 10 Transducer Level Monitoring**



---

|       |  |       |   |
|-------|--|-------|---|
| To:   | Kristen Jurinko, P.G.<br>Southern Company Services, Inc. | From: | Andreas Shoredits, P.G.<br>Stantec Consulting Services Inc. |
| File: | Hydrogeological Monitoring Memo                          | Date: | January 31, 2022  |

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**Reference: Solid Waste Disposal Facility Permit No. 008-018D (LI) - Hydrogeological Monitoring Program June 3, 2022 through December 11, 2022**

### Background

Stantec Consulting Services Inc. (Stantec) was retained by Southern Company Services, Inc. (SCS), to assist with the hydrogeological (water level) monitoring program at Georgia Power Company's Plant Bowen (Site) Landfill Cells 1 & 2, 3 & 4, 9 & 10. The work is being conducted to comply with Georgia Department of Natural Resources Environmental Protection Division (EPD) Solid Waste Permit No. 008-018D (LI) to assist with early detection of subsurface changes that might indicate land subsidence or sinkhole formation. Groundwater level fluctuations are monitored in accordance with Section 3.6.5 of the *Plant Bowen Proposed Coal Combustion By-Product Monofill Addendum I Site Acceptability Report – Hydrogeological Assessment and Demonstration of Engineering Measures* (SCS 2004)<sup>(1)</sup>.

The Site utilizes In-Situ<sup>®</sup> Inc telemetry and reporting software and pressure transducers to collect and record groundwater elevations from monitoring wells located around the perimeter of the landfill cells. The program was initiated in 2014 at Cells 1 & 2, expanded in 2015 and 2016 to Cells 3 & 4 and Cells 9 & 10, respectively. During this reporting period transducers were deployed in overburden and bedrock wells as follows:

#### Cells 1 & 2:

Six overburden wells (GWA-1 (overburden/bedrock), GWA-3A, GWC-7Z, GWC-11, GWC-13, and GWC-15) and

Six bedrock wells (GWA-2R, GWC-6RZ, GWC-8RR, GWC-11R, GWC-13R, and GWC-15R)

#### Cells 3 & 4:

Five overburden wells (GWC-18, GWA-36A, GWA-37, GWA-53, and GWA-55) and

Eight bedrock wells (GWC-16R, GWC-18R, GWC-21R, GWC-24R, GWC-25R, GWA-36RA, GWA-53R, and GWA-55R)

#### Cells 9 & 10:

Six overburden wells (GWA-39Z, GWA-41, GWA-43, GWC-45, GWC-47, and GWC-49Z) and

Six bedrock wells (GWA-39RZ, GWA-41R, GWA-43R, GWC-45R, GWC-47R, and GWC-49R)

Water level data are electronically logged multiple times daily by each transducer. Most logged data are uploaded after each reading via satellite telemetry to a central In-Situ Inc.<sup>®</sup> database. Automated reports are accessible via the In-Situ<sup>®</sup> database website (ISI Data Center) where the telemetry data are stored and compiled. Data from wells not connected to the site telemetry system are manually downloaded directly from these transducers, because the transducers are set to log and store data internally multiple times throughout

Reference: Solid Waste Disposal Facility Permit No. 008-018D (LI) - Hydrogeological Monitoring Program June 3, 2022 through December 11, 2022

each day. In addition to collecting transducer data, Etowah River levels and rainfall data for the reporting period were obtained from a U.S. Geological Survey gauge (02394670) near Cartersville, Georgia.

This reporting period saw a new style of In-Situ telemetry device called VuLink® being installed into well GWC-25R at the Site (Table 1). This device communicates data through the global cellular network versus the existing satellite data transmission telemetry devices currently installed at the Site. Data transmitted via VuLink® technology are accessed through HydroVu® online dashboard.

### **Maintenance Observations**

During the reporting period, the well location GWC-25R was noted by Southern Company Civil Field Services (SC-CFS) staff as having issues. Data transmission at GWC-25R resumed on November 3, 2022, with the utilization of VuLink® technology, and after some initial configuration data has started being transmitted uninterrupted since November 14, 2022.

On October 12, 2022 four transducers along the eastern perimeter of Cells 3 & 4 were removed from wells that were abandoned in November to December 2022 in preparation of the landfill expansion of Cells 5 through 8 in this area. Data logging in wells GWA-53, GWA-53R, GWA-55 and GWA-55R was terminated on October 11, 2022 and is reflected on the hydrograph plots for these wells.

### **Water Level Fluctuations**

Continuous groundwater level data and river stage elevations for the Etowah River were recorded between June 3, 2022 and December 11, 2022. Reporting period hydrographs for Cells 1 & 2, 3 & 4, and 9 & 10 are shown in Figures 1A through 3B.

Table 1 lists the transducer maintenance activities along with any water level anomaly observations. During the reporting period, manual groundwater elevation gauging and groundwater sample collection took place over the period of August 3, 2022, through August 19, 2022. These field efforts are considered known disruptions to water table and are marked on the hydrograph plots (Figures 1A through 3B). Transducer maintenance activities and repairs occur throughout the monitoring period and consist of resetting reference water elevation depths, resealing boxes, ant infestation control, replacing desiccants and replacing power controller units and batteries. Periodic sampling and maintenance may induce drifts in pressure readings. When significant drifts are noted, the reference depth to water is re-set and the logging cycle is re-started. Table 1 records maintenance completed during the reporting period that resulted in water level trend anomalies.

The water levels in monitoring wells equipped with transducers exhibited similar overall trends during the reporting period. Groundwater elevations show an overall stable trend during this six-month period with steadily decreasing water levels from June to July, then increasing from July through late August. A gradual drop in

Reference: Solid Waste Disposal Facility Permit No. 008-018D (LI) - Hydrogeological Monitoring Program June 3, 2022 through December 11, 2022

groundwater elevations is observed from September through mid-October followed by a generally level elevation trend to early November. Elevated water levels are evident starting in November and there is an increasing groundwater elevation trend into December. The fluctuations of groundwater elevations generally mimic the Etowah River levels in response to rain events and wet conditions. Some of the hydrograph responses may be attributable to the fluctuations in water levels in the nearby General Service Water Pond. Similar to previous events, wells GWA-41 and GWA-41R showed rapid hydrograph responses to rainfall during the monitoring period as groundwater in both the overburden and bedrock aquifers at this location responded equally to rainfall events. During this monitoring period, the potentiometric surface of the bedrock aquifer remained above the top of competent bedrock in the instrumented monitoring wells. This higher hydrostatic pressure of the bedrock aquifer limits removal of material from the overburden that could result in subsidence issues. The observed variations in groundwater elevations are attributed to rainfall variations, or due to sampling or maintenance activities at the monitoring points. A comparison of river stage and precipitation data with recorded groundwater elevations (Figures 1A through 3B) shows that both sets of data follow similar overall patterns. Two daily significant rainfall events occurred during the monitoring period. First significant rainfall event was on July 1<sup>st</sup> (1.76 inches) and the second event was July 17<sup>th</sup> (1.55 inches) according to the U.S. Geological Survey gauge (02394670) near Cartersville, Georgia.

### Conclusions and Recommendations

Observed disruptions in the transducer water levels were found to be directly attributed to (a) drawdown during sampling events, water level gauging, well development, and (b) to maintenance of wells, transducers, or telemetry units, or (c) significant rainfall events. June 3, 2022 through December 11, 2022, hydrologic monitoring data did not show water level fluctuations attributed to subsurface changes that might be indicative of land subsidence or sinkhole formation. Based on our interpretation of data for the current reporting period (June 3, 2022 through December 11, 2022), Stantec can recommend the following measures towards improving the program:

- Quarterly comprehensive field calibration of transducer groundwater elevations to correct for pressure data drifts and identify faulty sensors.
- Continue to perform periodic maintenance of the system and provide record of maintenance documentation digitally.
- Field check equipment to make certain insect infestation is not damaging equipment and verify battery level status of transducers periodically as those with low levels will need to be replaced.
- Replace desiccants in stations on a scheduled manner.
- Maintain vegetation clearance around telemetry stations to continue to allow sunlight reaching the solar panels to charge station batteries.

#### Memo Attachments:

*Table 1 - Plant Bowen Maintenance and Water Level Observation*

*Figure 1A, 1B, 2A, 2B, 3A, and 3B - Hydrographs*

<sup>(1)</sup> SCS (Southern Company Services, Inc.), 2004. Plant Bowen Proposed Coal Combustion By-Product Monofill Addendum I Site Acceptability Report – Hydrogeological Assessment and Demonstration of Engineering Measures.

January 31, 2022

Page 4 of 4

**Reference:** Solid Waste Disposal Facility Permit No. 008-018D (LI) - Hydrogeological Monitoring Program June 3, 2022 through December 11, 2022

**Stantec Consulting Services Inc.**



**Andreas Shoredits** P.G.  
Geologist

Phone: 678 327 2932

Fax:

[Andreas.Shoredits@stantec.com](mailto:Andreas.Shoredits@stantec.com)

Table 1

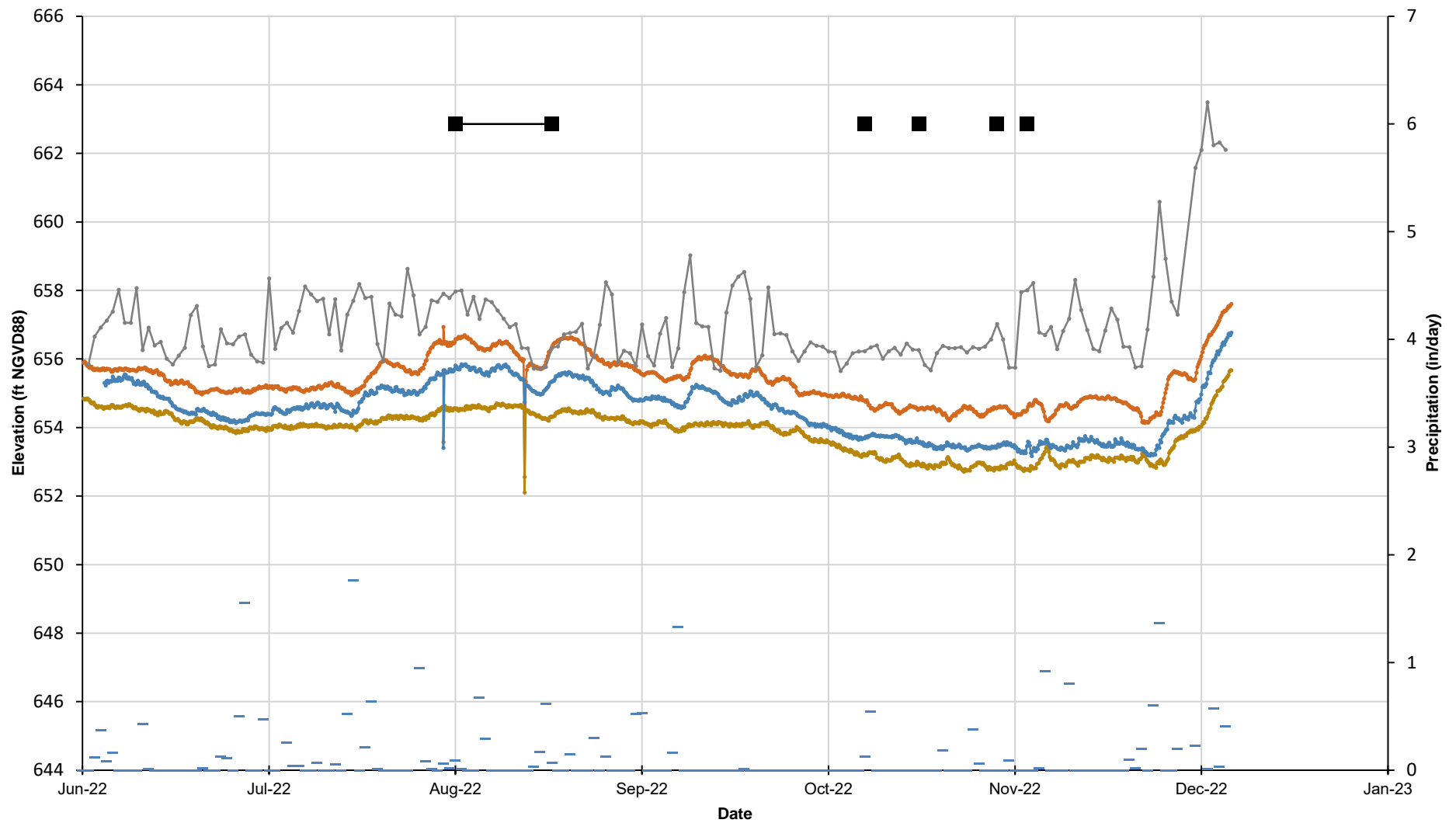
| Plant Bowen Maintenance and Water Level Observation |            |  |   |   |
|---|------------|--|---|---|
| June 3, 2022 through December 11, 2022              |            |  |   |   |
| Solid Waste Disposal Cells                          | Well ID    | Most Recent Transducer Network Maintenance           | Maintenance Information   | Comments/ Recommendations   |
| 1 & 2   | GWA-1      | --   | --  | --  |
|   | GWA-2R     | --   | --  | --  |
|   | GWA-3A     | --   | --  | Start recording data again on 6/7/2022  |
|   | GWC-6RZ    | 8/17/2022  | Water level adjustment  | Jump in water level data trend as a result of sampling  |
|   | GWC-7Z     | 10/31/2022   | Spent battery replaced  | Missing data 10/13-31/2022  |
|   | GWC-8RR    | --   | --  | --  |
|   | GWC-11     | --   | --  | --  |
|   | GWC-11R    | --   | --  | --  |
|   | GWC-13     | --   | --  | --  |
|   | GWC-13R    | --   | --  | --  |
|   | GWC-15     | --   | --  | --  |
|   | GWC-15R    | --   | --  | --  |
| 3 & 4   | GWC-16R    | --   | --  | Well evacuation during August sampling  |
|   | GWC-18     | --   | --  | --  |
|   | GWC-18R    | --   | --  | --  |
|   | GWC-21R    | --   | Sampling event related  | Missing data 8/11-15/2022   |
|   | GWC-24R    | --   | Sampling event related  | Missing data 8/13-15/2022   |
|   | GWC-25R    | 11/3/2022  | Satellite telemetry equipment replacement with VuLink cellular based system | Data logging is back online on 11/14/2022; Missing data 11/5-14/2022; Missing data from 11/18-30/2022 |
|   | GWA-36A    | --   | Spent battery replaced  | Missing data 11/6-11/2022   |
|   | GWA-36RA   | --   | Spent battery replaced  | Missing data 11/6-11/2022   |
|   | GWA-37     | --   | --  | --  |
|   | GWA-53     | 10/11/2022   | Staff stopped transducer data logging                                       | Transducer permanently removed from well on 10/12/2022  |
|   | GWA-53R    | 10/11/2022   | Staff stopped transducer data logging                                       | Transducer permanently removed from well on 10/12/2022  |
|   | GWA-55     | 10/11/2022   | Staff stopped transducer data logging                                       | Transducer permanently removed from well on 10/12/2022  |
| GWA-55R   | 10/11/2022 | Staff stopped transducer data logging                | Transducer permanently removed from well on 10/12/2022                      |   |
| 9 & 10  | GWA-39RZ   | --   | --  | Well evacuation during August sampling  |
|   | GWA-39Z    | 8/10/2022  | Water level adjustment  | Jump in water level data trend  |
|   | GWA-41     | --   | --  | --  |
|   | GWA-41R    | --   | --  | --  |
|   | GWA-43     | --   | Spent battery replaced  | Missing data 8/10-15/2022   |
|   | GWA-43R    | --   | Spent battery replaced  | Missing data 8/10-15/2022   |
|   | GWC-45     | --   | --  | --  |
|   | GWC-45R    | --   | --  | --  |
|   | GWC-47     | --   | Telemetry miscommunication  | Missing data 12/1-3/2022  |
|   | GWC-47R    | --   | --  | --  |
|   | GWC-49R    | --   | --  | Start recording data again on 6/4/2022  |
| GWC-49Z   | 11/8/2023  | Transducer extraction for serial number confirmation | Jump in water level data trend on 11/8/2022 due to maintenance              |   |

Note: Occasionally missing data resulted from infrequent telemetry miscommunications

where field maintenance would be impractical.

Prepared by/Date: A.Shoredits 12/11/2022

Checked by/Date: A.Stevens 1/4/2023



Legend

- GWA-1
- GWA-3A
- Etowah River Gage
- USGS Precipitation
- GWA-2R
- Monitoring & Maintenance

Client/Project

Southern Company Services, Inc.  
Solid Waste Disposal Facility  
Hydrogeological Monitoring Program

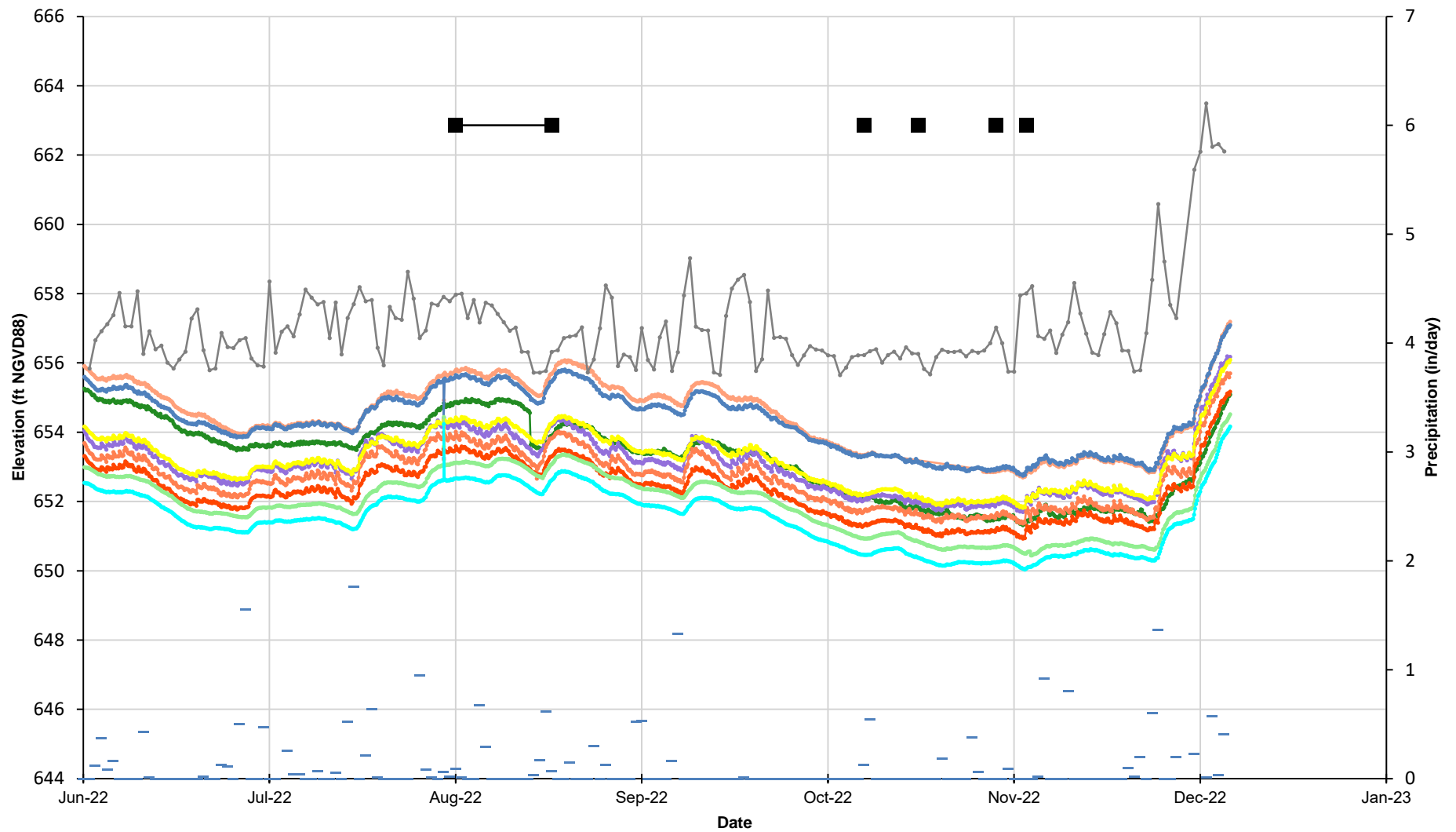
Figure/Well No.

1A

Title

Cell 1&2 Transducer Level Monitoring





Legend

- GWC-6RZ
- GWC-8RR
- GWC-11R
- GWC-13R
- GWC-15R
- USGS Precipitation
- GWC-7Z
- GWC-11
- GWC-13
- GWC-15
- Etoawah River Gage
- Monitoring & Maintenance

Client/Project

Southern Company Services, Inc.  
Solid Waste Disposal Facility  
Hydrogeological Monitoring Program

Figure/Well No.

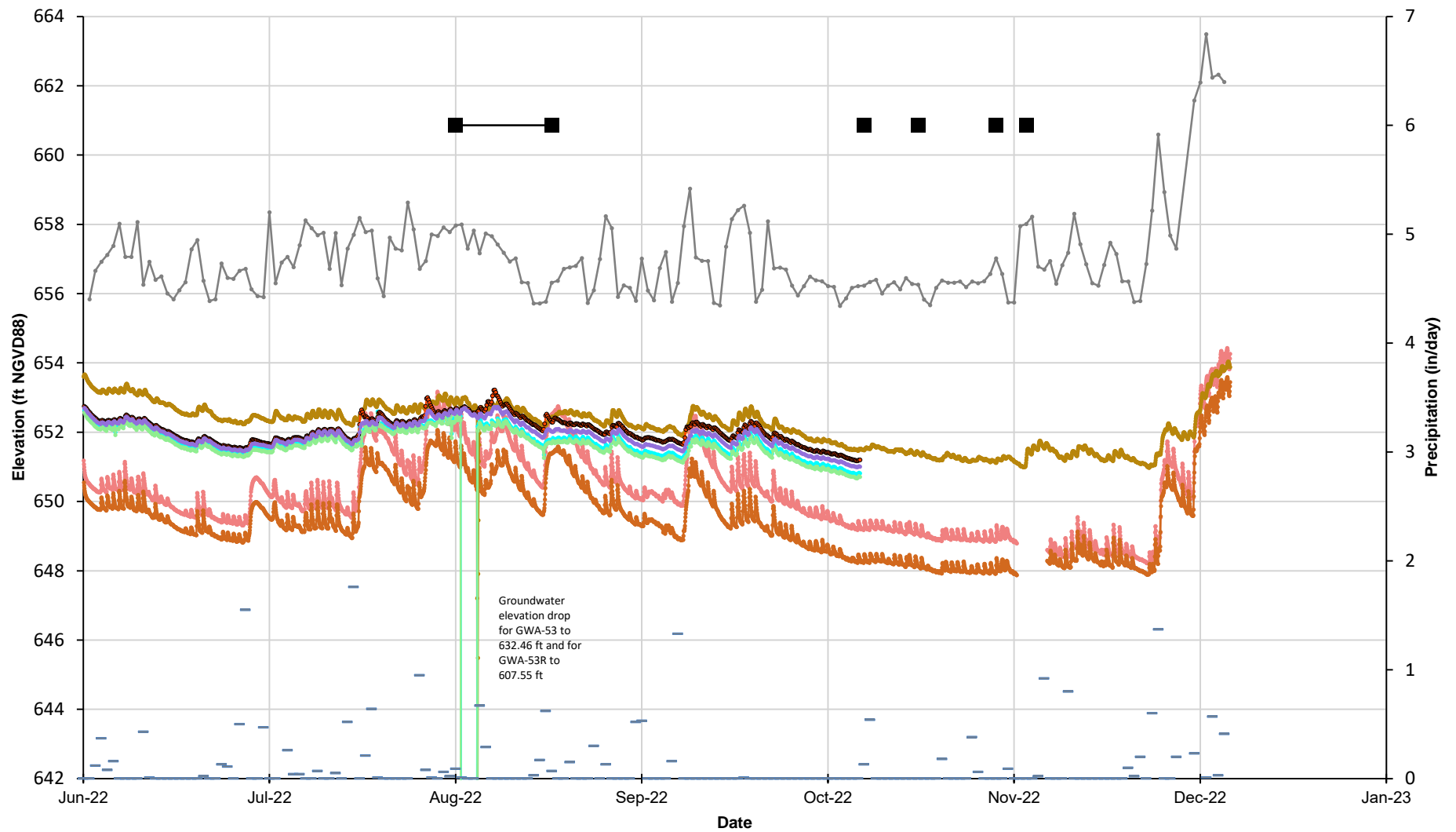
**1B**

Title

**Cell 1&2 Transducer Level Monitoring**







Legend

- GWA-36A
- GWA-36RA
- GWA-53R
- GWA-55R
- USGS Precipitation
- GWA-37
- GWA-53
- GWA-55
- Etowah River Gage
- Monitoring & Maintenance

Client/Project

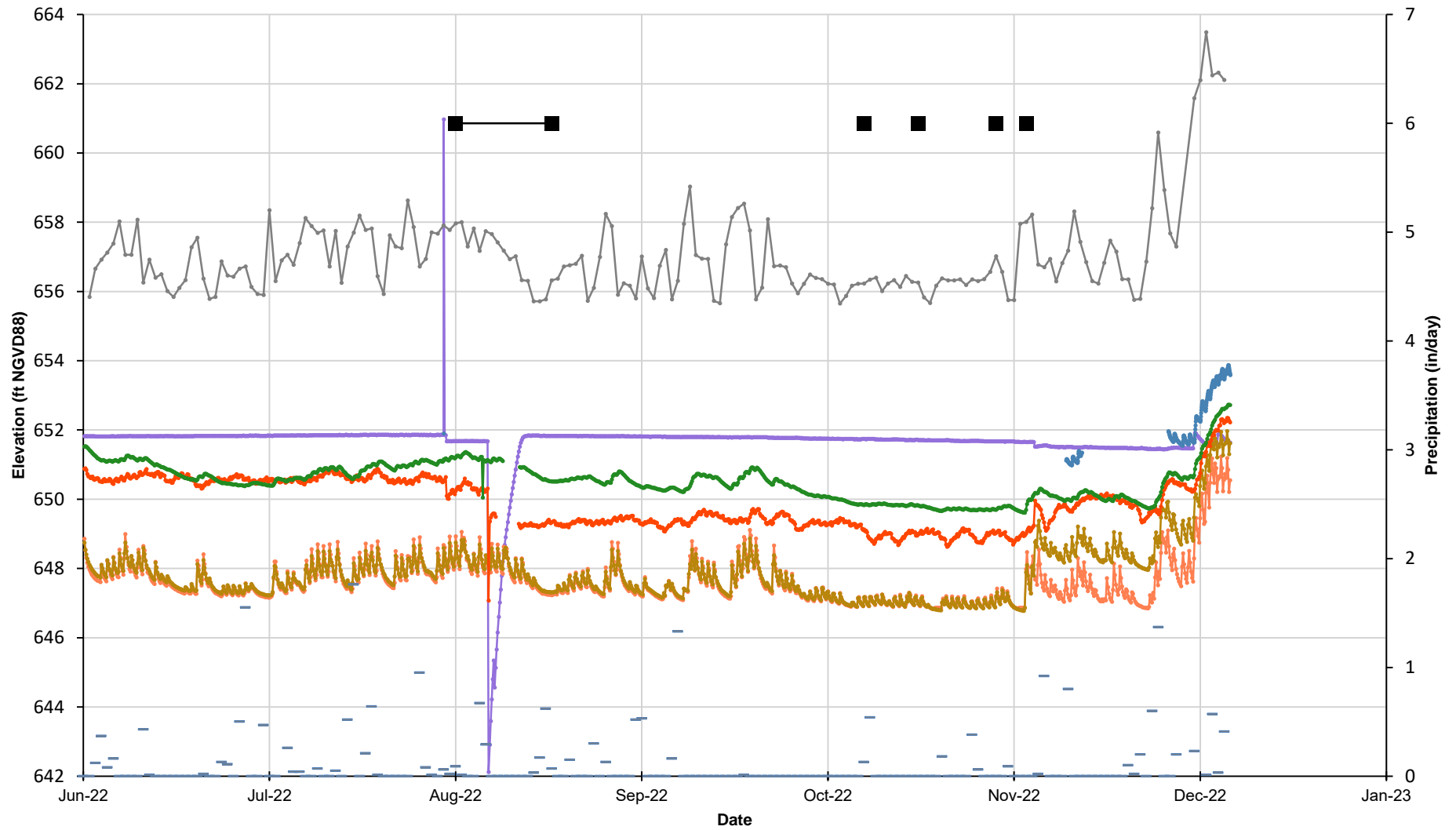
Southern Company Services, Inc.  
Solid Waste Disposal Facility  
Hydrogeological Monitoring Program

Figure/Well No.

2A

Title

Cell 3 & 4 Transducer Level Monitoring



Legend

- GWC-16R
- GWC-18
- ◇— GWC-21R
- GWC-18R
- GWC-24R
- GWC-25R
- Etowah River Gage
- USGS Precipitation
- Monitoring & Maintenance

Client/Project

Southern Company Services, Inc.  
 Solid Waste Disposal Facility  
 Hydrogeological Monitoring Program

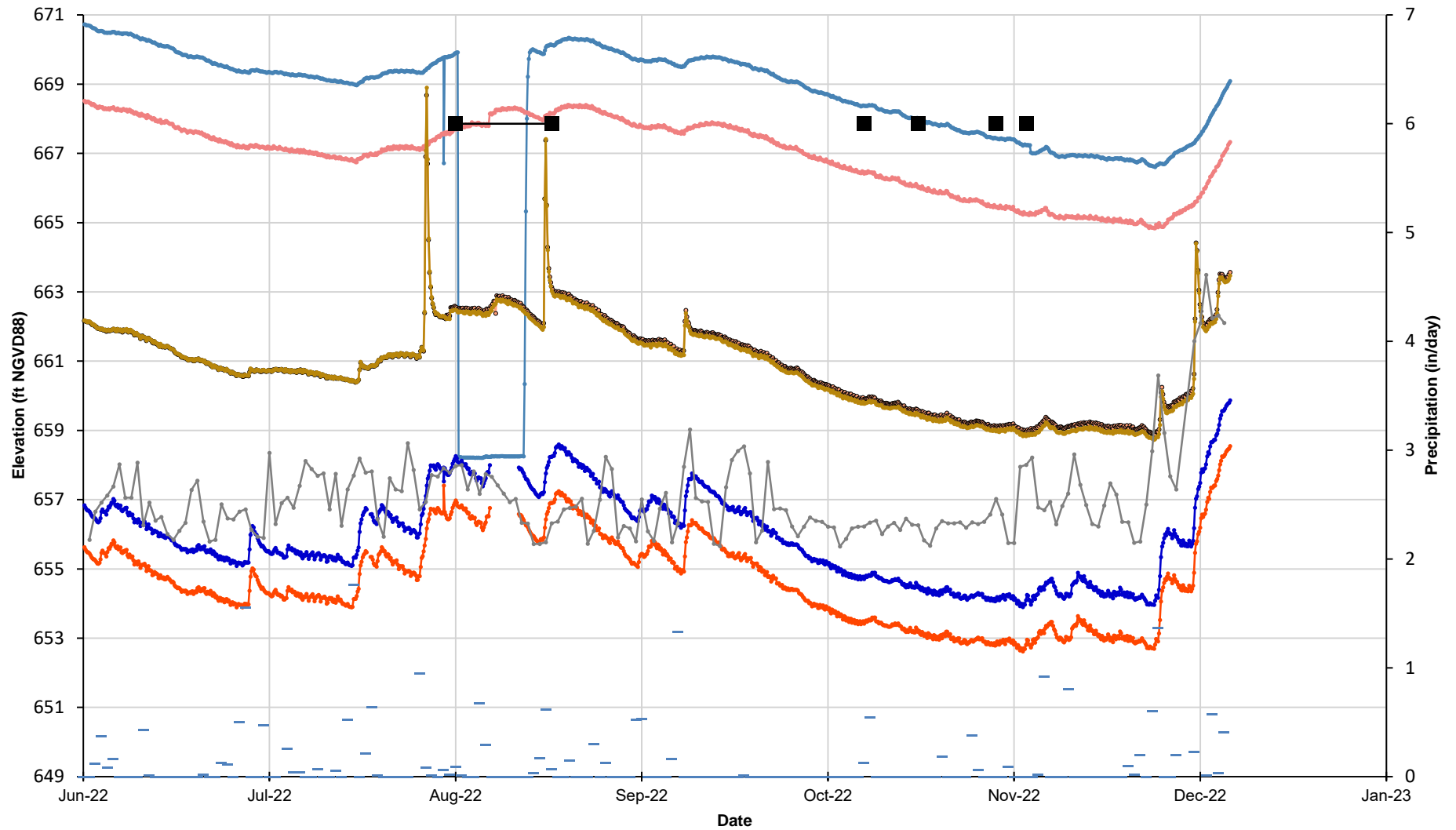
Figure/Well No.

**2B**

Title

**Cell 3 & 4 Transducer Level Monitoring**





Legend

- GWA-39RZ
- GWA-39Z
- GWA-41
- GWA-41R
- GWA-43
- GWA-43R
- Etowah River Gage
- USGS Precipitation
- Monitoring & Maintenance

Client/Project

Southern Company Services, Inc.  
 Solid Waste Disposal Facility  
 Hydrogeological Monitoring Program

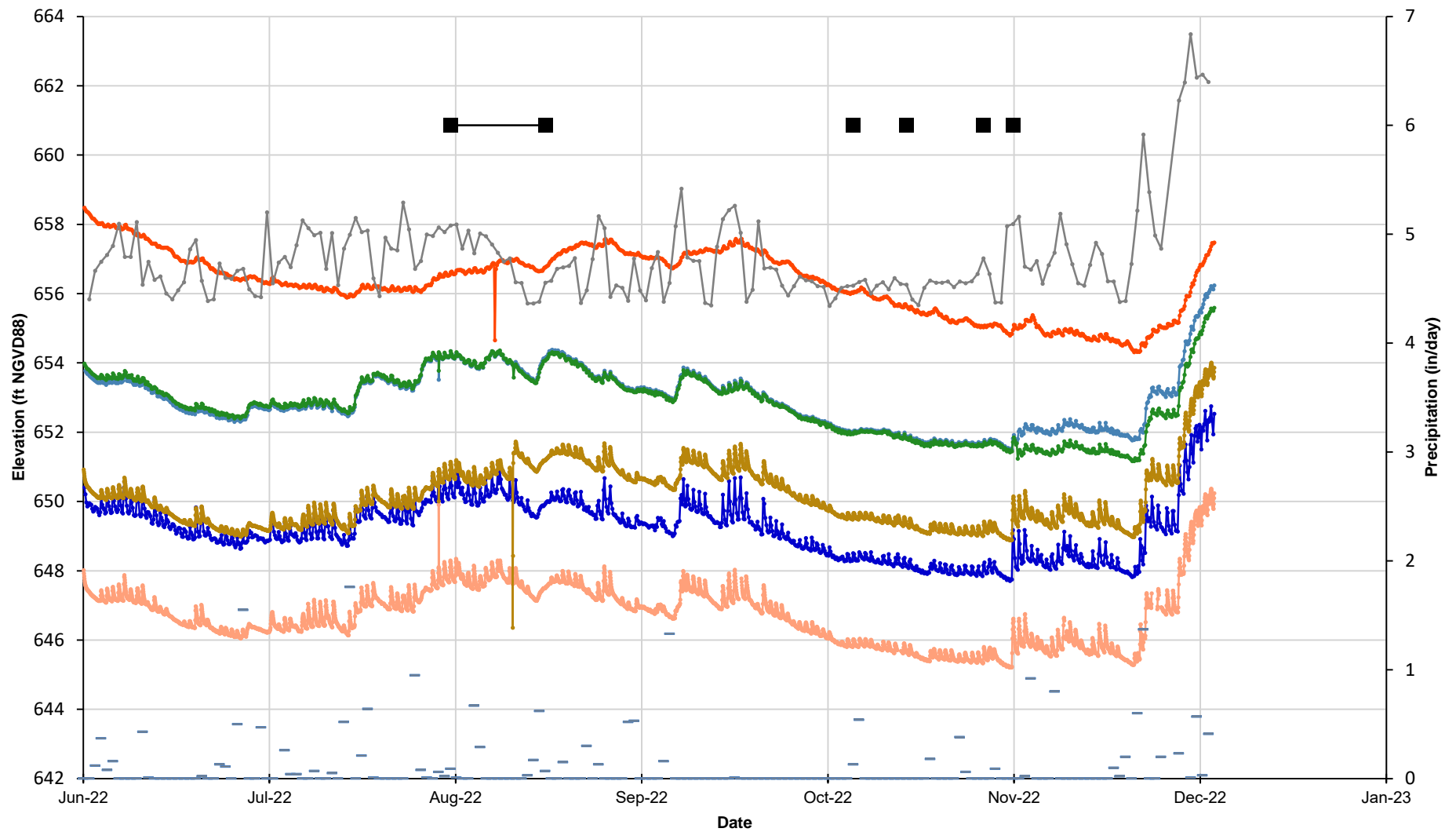
Figure/Well No.

**3A**

Title

**Cell 9 & 10 Transducer Level Monitoring**





Legend

- GWC-45
- GWC-47
- GWC-49R
- Etowah River Gage
- Monitoring & Maintenance
- GWC-45R
- GWC-47R
- GWC-49Z
- USGS Precipitation

Client/Project

Southern Company Services, Inc.  
Solid Waste Disposal Facility  
Hydrogeological Monitoring Program

Figure/Well No.

**3B**

Title

**Cell 9 & 10 Transducer Level Monitoring**

**APPENDIX D**  
**LABORATORY ANALYTICAL DATA AND**  
**FIELD SAMPLING REPORTS**  
**(INCLUDED AS SEPERATE PDF)**



**APPENDIX E  
STATISTICAL RESULTS  
(INCLUDED AS SEPERATE PDF)**



**APPENDIX F  
ALTERNATE SOURCE  
DEMONSTRATION FOR BERYLLIUM,  
CHLORIDE, AND MERCURY,  
NOVEMBER 20 2022**





**ALTERNATE SOURCE DEMONSTRATION  
FOR BERYLLIUM, CHLORIDE, AND  
MERCURY, JANUARY- FEBRUARY 2022  
SEMI-ANNUAL EVENT**

Plant Bowen

Cells 1 & 2

Cells 3 & 4

Cells 9 & 10

Solid Waste Disposal Facility

Permit No. 008-018D (LI)

November 29, 2022

Prepared for:



Prepared by:

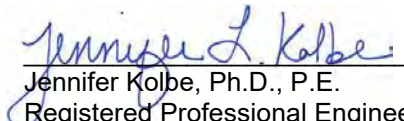
Stantec Consulting Services Inc.  
10745 Westside Way, Suite 250  
Alpharetta, Georgia 30009-7640

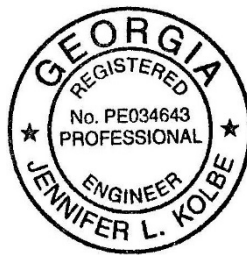


**Alternate Source Demonstration for Beryllium, Chloride, and Mercury, January- February 2022  
Semi-Annual Event  
Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10**

**CERTIFICATION STATEMENT**

This Alternate Source Demonstration was completed in accordance with Georgia Environmental Protection Division's Solid Waste Rules (Chapter 391-3-4-.10) by a qualified groundwater scientist with Stantec Consulting Services, Inc. References to the appropriate Georgia Solid Waste Management 391-3-4 Rules are incorporated throughout this document.


  
Jennifer Kolbe, Ph.D., P.E.  
Registered Professional Engineer  
Professional Engineer No. PE034643



November 29, 2022  
Date

**PROFESSIONAL GROUNDWATER SCIENTIST CERTIFICATION**

I certify that I am a qualified groundwater scientist as demonstrated by Georgia state registered professional geologist certification. I have sufficient training and experience in groundwater hydrology and related fields to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport. I further certify that this Alternate Source Demonstration was completed in accordance with Georgia Environmental Protection Division's Solid Waste Rules (Chapter 391-3-4-.10)

  
Brian Steele, P.G.  
Registered Professional Geologist  
Georgia Registration No. 002171



November 29, 2022  
Date



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## **Acronyms / Abbreviations**

|          |  |
|----------|--|
| ASD      | Alternate Source Demonstration                     |
| CCR      | Coal Combustion Residual                           |
| CCR Rule | Title 40 Code of Federal Regulations 257 Subpart D |
| CFR      | Code of Federal Regulations                        |
| GA EPD   | Georgia Environmental Protection Division          |
| GSC      | Groundwater Stats Consulting, LLC                  |
| mg/L     | milligrams per liter                               |
| RL       | Reporting Limit                                    |
| SSI      | Statistically Significant Increase                 |
| UPL      | Upper Prediction Limit                             |
| USEPA    | United States Environmental Protection Agency      |



# 1 Introduction

## 1.1 Purpose

This document presents an alternate source demonstration (ASD) for the statistically significant increases (SSI) of mercury and chloride detected in compliance well GWC-48 and beryllium detected in compliance well GWC-5 located at Georgia Power Company's (Georgia Power) Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10. These SSIs were identified based on statistical evaluation of the groundwater quality data set reported in the 2022 Semi-Annual Groundwater Monitoring & Corrective Action Report, Georgia Power Company Plant Bowen Cells 1 & 2, 3 & 4, and 9 & 10, dated August 31, 2022 (2022 Semi-Annual Report; Stantec, 2022). During the 2022 semi-annual reporting period, one groundwater sampling event was conducted in January-February 2022 and the resampling event was conducted in April 2022.

This ASD has been prepared pursuant to Title 40 Code of Federal Regulations (CFR) 257.94(e)(2) as adopted in Rule 391-3-4.10(6) of the Georgia Environmental Protection Division's Solid Waste Rules (Chapter 391-3-4-.10), which states that "the owner or operator may demonstrate that a source other than the unit caused the contamination or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality." This language is consistent with the requirements of the United States Environmental Protection Agency (USEPA) coal combustion residual (CCR) rule (CCR Rule) [Title 40 CFR 257 Subpart D] stipulated in 40 CFR 257.94(e)(2), which has been incorporated by reference into the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management Rule 391-3-4-.10(23)(c) of the Georgia Administrative Code. The Site is operated in accordance with GA EPD Solid Waste Permit No. 008-018D (CCR).

## 1.2 Site Description and Background

The Georgia Power Plant Bowen solid waste disposal facility (Site) is located in south Bartow County, Georgia, off State Highway 113, approximately seven miles west-southwest of Cartersville and 20 miles southeast of Rome (Figure 1). The Site is approximately 300 acres in size and located on previously undeveloped land contiguous with the plant property. The Site receives coal combustion by-products from coal-burning and flue gas desulfurization processes. The landfill cells were constructed in accordance with Solid Waste Permit No. 008-018D (LI) and approved under CCR permit No. 008-018D (CCR).

Groundwater monitoring is conducted in accordance with the permit requirements specified in the Design and Operation Plan and in accordance with the USEPA CCR Rule, which was adopted by GA EPD in November 2016 and the GA EPD Rules for Solid Waste Management 391-3-4-.10. This includes semi-annual groundwater sampling and continuous groundwater level measurements at the Site. The Site currently remains in detection monitoring.



## **1.3 CCR Regulatory Framework for Alternate Source Demonstrations**

USEPA published the CCR Rule on April 17, 2015. This rule requires groundwater monitoring of active CCR landfills. The CCR Rule establishes multiple phases of groundwater monitoring, including baseline sampling, detection monitoring, and assessment monitoring.

### **1.3.1 ESTABLISHING GROUNDWATER BASELINE CONDITIONS**

To comply with the CCR Rule, a groundwater monitoring system was installed around each regulated CCR unit consisting of a sufficient number of wells installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer to represent the groundwater quality both upgradient of the unit (i.e., background conditions) and flowing downgradient from the waste boundary of the unit. Based on groundwater flow direction, both upgradient and downgradient wells were installed, and the number of wells varied depending on the size of the CCR unit and the complexity of groundwater flow. Initial groundwater sampling began in 2007 in accordance with the Design and Operation (D&O) Plan, prior to disposal activities, to establish the baseline conditions of groundwater in the vicinity of the CCR unit. The locations of the compliance wells included in the groundwater monitoring system are presented on Figure 2. Following the establishment of baseline conditions, the detection monitoring program commenced.

### **1.3.2 DETECTION MONITORING PROGRAM**

Georgia Power currently monitors groundwater associated with the landfill under the detection groundwater monitoring program in accordance with 40 CFR § 257.94 and Solid Waste Management Rule 391-3-4-.14(22). The semi-annual detection monitoring event occurred in January-February 2022. Groundwater samples were collected from monitoring wells in the groundwater monitoring system (Figure 2) and analyzed for:

- Appendix III constituents according to § 257.94(a) which include boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids.
- A state-modified Appendix I list of detection constituents according to GA EPD Rules for Solid Waste Management 391-3-4-.14 and the approved D&O plan. The state-modified analyte list (D&O Appendix I Metals) includes antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium, silver, thallium, vanadium, and zinc.

The detection monitoring groundwater results are evaluated using a defined statistical method to determine whether there were SSIs above the natural, or background, concentrations for each constituent in downgradient wells, pursuant to 40 CFR § 257.93(f). Depending on the results acquired from the detection monitoring program, there are several different subsequent actions that must be taken:

- If no SSIs are found, then the CCR facility continues with its detection monitoring program during the active life of the CCR unit and the post-closure period (40 CFR 257.9(b)).



**Alternate Source Demonstration for Beryllium, Chloride, and Mercury, January- February 2022**  
**Semi-Annual Event**  
**Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10**  
**1 Introduction**

- If SSIs are discovered, then the data is further evaluated through an ASD (40 CFR 257.94(e)(2)) to evaluate whether there is an alternate source, an error in the sampling, analysis, statistical evaluation, or natural variability in groundwater quality.
- If an ASD cannot be made, then the facility shifts into an assessment monitoring program within 90 days (40 CFR 257.95(a) and (b)).



## **2 Alternate Source Demonstration**

An ASD is used to further evaluate SSIs identified at wells GWC-48 and GWC-5 based on statistical analyses of the January-February 2022 semi-annual groundwater monitoring data and resampling data in April 2022. Based on review of available Site data, the SSIs reported for mercury and chloride at well GWC-48 and beryllium at well GWC-5 are not associated with a release from the Site and are caused by uncertainty associated with assumptions used for the statistical analysis of the January-February 2022 data.

The statistical analysis of the January-February 2022 data was performed in accordance with the USEPA document of *Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance* (Unified Guidance) (USEPA, 2009). A review of the statistical analysis was performed by Stantec Consulting Services Inc. (Stantec) and Groundwater Stats Consulting, LLC (GSC). GSC provided revised reports of the April 2022 resampling data based on modified analysis methods described in the subsequent sections to address the SSIs previously reported in the 2022 Semi-Annual Report (Stantec, 2022). The revised GSC reports are included in Appendix A.

### *Beryllium and Mercury ASD*

As part of the original statistical analysis of the January-February 2022 data, GSC calculated upper prediction limits (UPLs) using historical background data. Prior to calculating UPLs, the historical reporting limits (RLs) for each constituent were replaced with the most recent RLs. Due to the frequency of non-detect results for beryllium (92%) and for mercury (97%), non-parametric methods were used to establish the UPL. Non-parametric UPLs were represented by the highest detected value RL in the background data sets.

The RLs decreased for beryllium (0.003 mg/L to 0.0005 mg/L) and mercury (0.0005 mg/L to 0.0002 mg/L) beginning in 2021. The statistical analysis of the January-February 2022 data included in the 2022 Semi-Annual Report, used the new lower RL as the UPL (beryllium 0.0005 mg/L and mercury 0.0002 mg/L). Two potential SSIs were reported in the 2022 Semi-Annual report due to the substitution of the newest RLs for beryllium and mercury, which resulted in arbitrarily low UPLs. This substitution of the lower RL replaced the previously established UPLs for beryllium (0.003 mg/L) and mercury (0.0005 mg/L) used for the statistical analysis with much lower UPLs that were not representative of majority of the historical data set (2016-2020). After further review for the ASD, these recent lower RLs were determined to be non-representative of historical reporting limits for beryllium and mercury. As part of this ASD, the previous RLs for beryllium and mercury were selected as alternate UPLs. This revision is included in the revised GSC report included as Appendix A.

When using these alternate UPLs for beryllium and mercury, no exceedances were identified for the 2022 data set; therefore, no further action is necessary.



**Alternate Source Demonstration for Beryllium, Chloride, and Mercury, January- February 2022  
Semi-Annual Event  
Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10  
2 Alternate Source Demonstration**

Chloride ASD

Chloride was detected in well GWC-48 at an initial concentration of 4.8 mg/L in January 2022 (Table 1). The statistical exceedance of the chloride UPL in well GWC-48 is likely the result of the statistical analysis methods used, in addition to natural variation of groundwater quality. Information supporting this conclusion includes:

Statistical Analysis Revision (Use of Non-Parametric vs Parametric Method to Calculate UPL):

- The initial statistical analysis from the 2022 Semi-Annual Report (Stantec, 2022) reported an SSI for chloride in GWC-48 from the January 2022 result of 4.8 mg/L based on an interwell parametric UPL of 4.346 mg/L. Prior to calculating this UPL, goodness of fit testing was used to test for normality of the data set to determine whether parametric or non-parametric methods were appropriate. However, the goodness of fit test was conducted on data collected from both upgradient/background and downgradient wells. In practice goodness of fit testing should only evaluate data collected from upgradient/background wells, because UPLs are representative of upgradient/background conditions.

GSC provided a revised report (Appendix A) in which goodness of fit testing was conducted on only data from upgradient/background wells. This data set did not fit the normal distribution, so parametric methods were not appropriate. Parametric methods are only appropriate when historical upgradient/background data are normally distributed. Therefore, non-parametric methods were used to re-calculate a UPL based on historical upgradient/background sampling, resulting in a UPL of 4.9 mg/L.

Chloride was detected in well GWC-48 at an initial concentration of 4.8 mg/L in January 2022, which does not exceed the interwell non-parametric UPL, 4.9 mg/L. Therefore, the January 2022 detection does not represent a potential SSI.

Statistical Analysis Revision (Use of Intrawell Method for Chloride in GWC-48 to Calculate UPL):

- Intrawell methods are more appropriate for chloride in GWC-48 than interwell methods as there is no evidence of historical chloride impacts in well GWC-48. This was demonstrated statistically by comparison of the lower confidence interval of the mean chloride concentration in GWC-48 to the upper tolerance limits for chloride established using pooled background data. GSC provided a revised report (Appendix A) in which intrawell method was used for chloride in GWC-48, resulting in a UPL of 5.485 mg/L.
- Chloride concentrations at GWC-48 indicate natural variability in groundwater as explained in the below sections.

Natural Occurring Concentrations and Variation:

- Recent reported concentrations at downgradient well GWC-48 are similar to those reported historically at upgradient well GWA-43R.





**Alternate Source Demonstration for Beryllium, Chloride, and Mercury, January- February 2022  
Semi-Annual Event**

**Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10  
2 Alternate Source Demonstration**

- Chloride concentrations in GWC-48 are within range of regional concentrations in water supply wells (in the range of 1 to 16 mg/L in wells screened in Knox Dolomite and Newala Limestone, USGS Water Supply Paper 1619-FF26, Table 3).
- Geochemical characterization of groundwater quality data demonstrates little difference between upgradient, and GWC-48 water quality and confirms the absence of a CCR signature in groundwater. A suite of cations and anions were sampled in January-February 2022 from the entire Site groundwater monitoring network and included in the 2022 Semi-Annual Report. Laboratory Analytical Reports are provided in Appendix B. Constituents released from coal ash will shift the relative and absolute abundances cation and anion away from background conditions. These shifts become apparent when plotted on a Piper or Stiff diagram. The size of each stiff diagram corresponds to overall ionic strength and the shape reflects ratios of cations and anions. A CCR impact would characteristically increase the ionic strength and shift ratios away from background. Upgradient wells and GWC-48 are depicted on Figures 3 and 4, Piper and Stiff Diagrams. Upgradient and downgradient groundwater data are generally comingled on the piper plot (Figure 3), indicating that an outside influence such as a CCR release has not altered groundwater chemistry causing downgradient water quality to be different from upgradient.

GWC-48, GWA-50, GWA-50R, and GWA-43 have low concentrations and a mixed composition characterized by calcium, magnesium, and bicarbonate type. The geochemical characterization of GWA-50, GWA-50R, and GWA-43 are generally similar to GWC-48 water. The relatively low TDS concentrations of these wells (15 to 31 mg/L) suggests that there is no variability to the source of groundwater at these locations including GWC-48. Based on a review of Figures 3 and 4, GWC-48 has a pattern similar to background ionic composition. Therefore, GWC-48 indicates a natural groundwater composition (chemistry), reflecting background conditions.

*Lack of Indicator Parameters Boron and Sulfate:*

As stated above, the relatively low TDS concentrations of these wells suggests that there is no variability to the source of groundwater at GWC-48. Typical CCR Appendix III indicator parameters boron and sulfate are historically not detected or detected in very low concentrations in well GWC-48.

- Boron has not been detected above the laboratory RL (0.04 mg/L) in GWC-48 from sampling data between 2016 to 2022.
- Sulfate has been detected in low concentrations ranging from 0.76 mg/L in March 2018 to 20.2 mg/L in May 2021. Sulfate was recently detected at a concentration of 1.2 mg/L from the January 2022 sampling event.

Based on similar background chloride concentrations, minimal Appendix III indicator parameter detections, and geochemical comparison of groundwater quality, data indicate that a release from the Landfill has not occurred and the chloride concentrations detected in GWC-48 is due to natural variability. When an intrawell prediction limit was constructed to evaluate chloride at downgradient well GWC-48, no exceedance was identified; therefore, no further action is necessary.



## **3 Conclusions**

The mercury and chloride concentrations reported for well GWC-48 and beryllium concentration reported for well GWC-5 were identified as potential SSIs during the semi-annual 2022 groundwater detection monitoring event conducted in January-February 2022. A subsequent verification sampling event conducted in April 2022 confirmed the initial concentrations, which resulted in the identification of the SSIs. The lines of evidence summarized in the preceding sections and in the revised GSC statistical report (Appendix A) support the ASD findings that mercury and chloride in GWC-48 and beryllium in GWC-5 are not SSIs. The ASD conclusions are supported by the following information:

- Due to varying detection limits in background data sets over time, a substitution of the most recent, lower reporting limits was used for non-detect concentrations of beryllium and mercury in the historical data used in the January-February 2022 statistical analysis. Use of these lower reporting limits in the statistical analysis resulted in much lower UPLs, resulting in SSIs for beryllium and mercury that are not associated with a release from the Site. When using the original reporting limits as alternate UPLs for beryllium and mercury, no exceedances were identified for the 2022 data set; therefore, no further action is necessary.
- When using non-parametric methods to calculate a UPL for chloride based on historical background sampling, the UPL is reported as 4.9 mg/L, which is above the initial January 2022 chloride detection of 4.8 mg/L in GWC-48. Therefore, the initial exceedance does not represent a potential SSI.
- The apparent chloride SSI at well GWC-48 is a result of using interwell prediction limits which were initially recommended in 2015 to evaluate this constituent. Based on similar background chloride concentrations detected in regional groundwater wells, minimal Appendix III indicator parameter detections, and geochemical comparison of groundwater quality, data indicate that a release from the Landfill has not occurred and indicates that chloride detections are due to natural variability. Due to natural variation in groundwater quality unrelated to practices at the Site, intrawell prediction limits are more appropriate for chloride analysis. When an intrawell prediction limit was constructed, a UPL of 5.485 mg/L was calculated for chloride and no exceedance was identified; therefore, no further action is necessary.

Based on the information presented in this ASD, groundwater monitoring at Plant Bowen Landfill Cells 1 & 2, 3 & 4, 9 & 10 will continue in the detection monitoring phase.



## **4 References**

United States Environmental Protection Agency (US EPA), 2009. Unified Guidance, Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities. USEPA 350/R-09/007 Office of Solid Waste Management Division, U.S. Environmental Protection Agency, Washington, D. C. March 2009.

United States Geologic Survey 1963, Geology and Ground-Water Resources of Bartow County Georgia, Geologic Survey Water-Supply 1619-FF, 1963.

Stantec Consulting Services, Inc. (Stantec), 2022. Semi-Annual Groundwater Monitoring & Corrective Action Report, Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10. August 31, 2022.



# **TABLE**



**TABLE 1**  
**Summary of January 2022 Statistical**  
**Exceedances Not Previously Addressed in**  
**An ASD**

**Georgia Power Company - Plant Bowen**  
**Landfill Cells 1&2, 3&4, and 9&10**  
**Bartow County, Georgia**

| Cell                  | Well   | Parameter | SSI During Previous Monitoring Event (July-August 2022) | Initial Exceedance Concentration (January 2022)(mg/L) | Initial Prediction Limit (mg/L) | Revised Prediction Limit (mg/L) <sup>(1)</sup> | Initial Exceedance SSI <sup>(2)</sup> |
|-----------------------|--------|-----------|---|---|---------------------------------|--|---------------------------------------|
| Cell 1 & 2 and 9 & 10 | GWC-48 | Chloride  | No  | 4.8   | 4.3                             | 4.9  | No                                    |
| Cell 1 & 2 and 9 & 10 | GWC-48 | Mercury   | No  | 0.00039   | 0.0003                          | 0.0005   | No                                    |
| Cell 1 & 2 and 9 & 10 | GWC-5  | Beryllium | No  | 0.00075   | 0.0005                          | 0.0030   | No                                    |

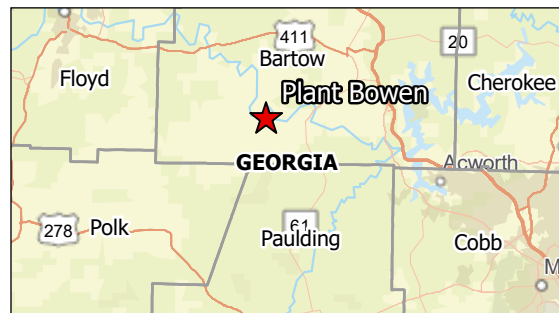
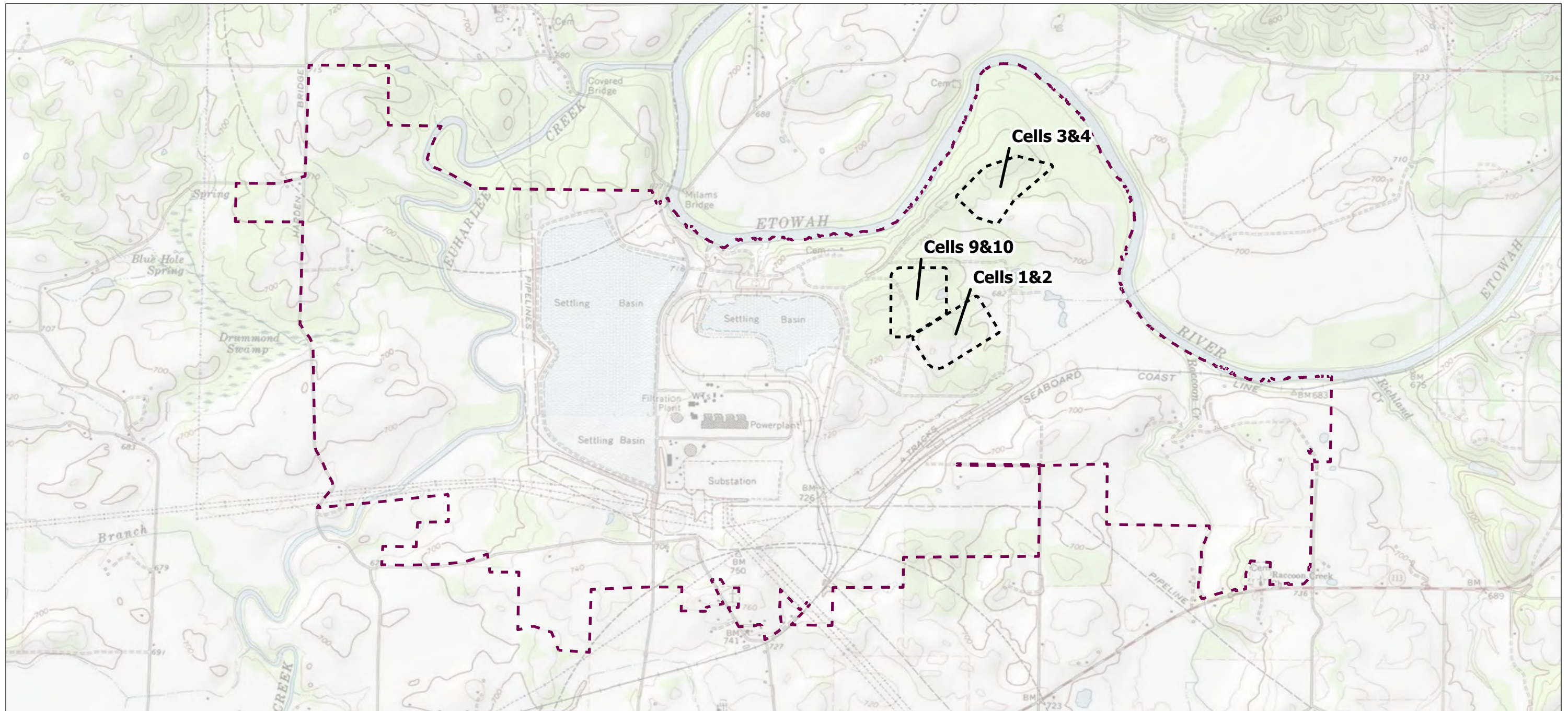
Notes:

1: Revised prediction limits as presented in Groundwater Stats Consulting (GSC) addendum reports (Appendix A)

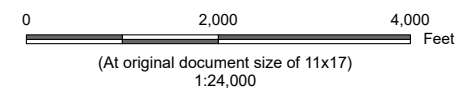
2: The initial exceedances do not exceed the revised prediction limits

# **FIGURES**





- Legend**
- Approximate Site Boundary
  - Landfill Cell Boundary (Approximate)



*Project Location*  
Euharlee, Georgia

Prepared by DMB on 9/28/2022  
TR by MP on 9/28/2022  
IR by MD on 9/28/2022

*Client/Project*  
Georgia Power  
Alternate Source Demonstration for Beryllium, Chloride,  
and Mercury - Plant Bowen Cells 1 & 2, 3 & 4, and 9 & 10

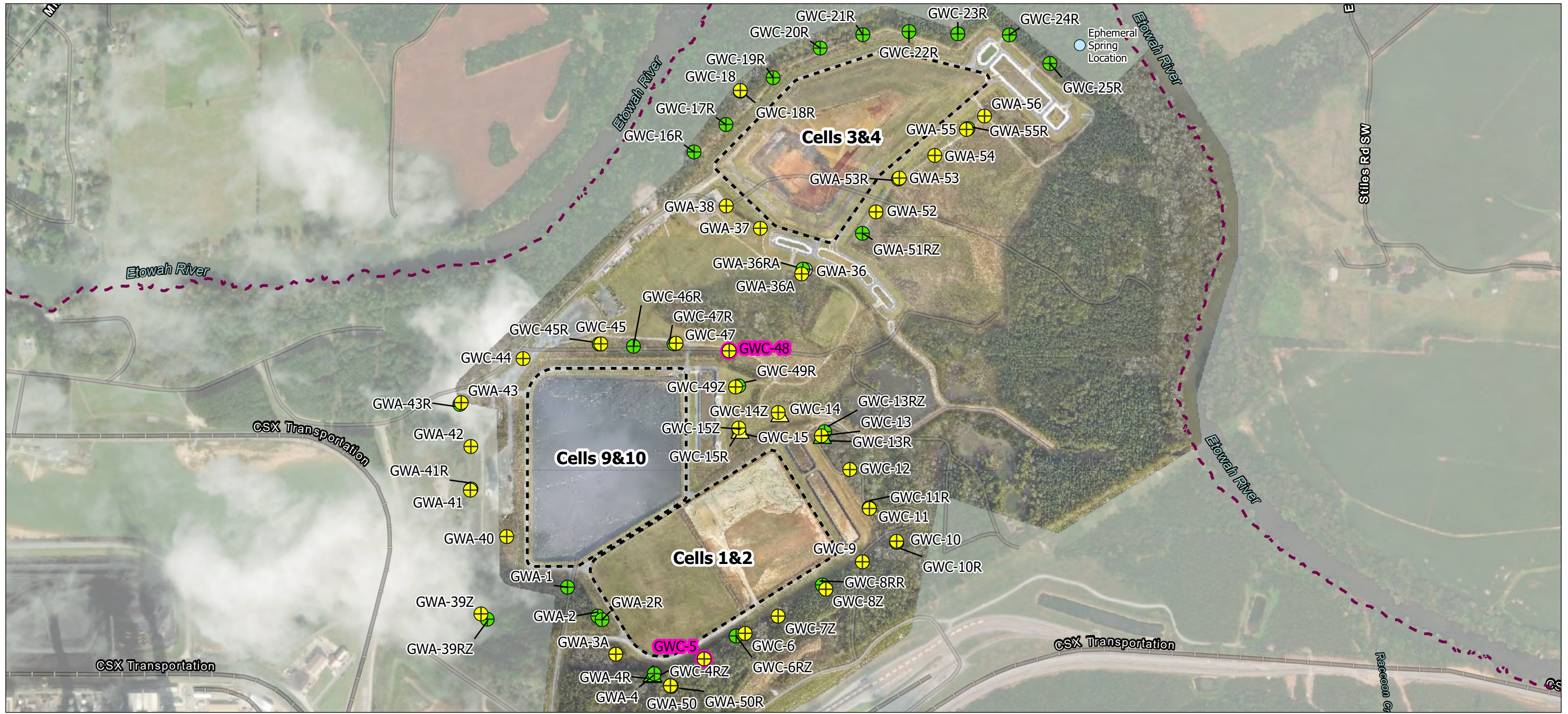
*Figure No.*

**1**

*Title*

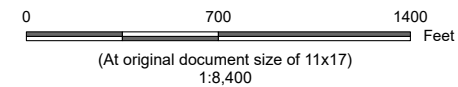
**Site Location Map**

**Notes**  
 1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet  
 2. Data Sources: Site and Landfill Boundaries provided by Southern Company Services and Wood Environment & Infrastructure Solutions  
 3. Background: Copyright © 2013 National Geographic Society, i-cubed, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS



- Legend**
- ⊕ Abandoned Groundwater Monitoring Well
  - △ Abandoned Water Level Piezometer
  - ⊕ Groundwater Monitoring Well (Overburden)
  - ▲ Water Level Piezometer (Overburden)
  - ⊕ Groundwater Monitoring Well (Bedrock)
  - ▲ Water Level Piezometer (Bedrock)
  - Groundwater Monitoring Well (Subjects of ASD)
  - Ephemeral Spring Location
  - - - Approximate Site Boundary
  - - - Landfill Cell Boundary (Approximate)

GWA-36 abandoned 3/16/2022.  
 GWA-4 abandoned 3/15/2022.  
 GWA-36A installed 3/18/2022.



**Project Location**  
 Euharlee, Georgia

Prepared by DMB on 9/28/2022  
 TR by MP on 9/28/2022  
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**Client/Project**  
 Georgia Power  
 Alternate Source Demonstration for Beryllium, Chloride,  
 and Mercury - Plant Bowen Cells 1 & 2, 3 & 4, and 9 & 10

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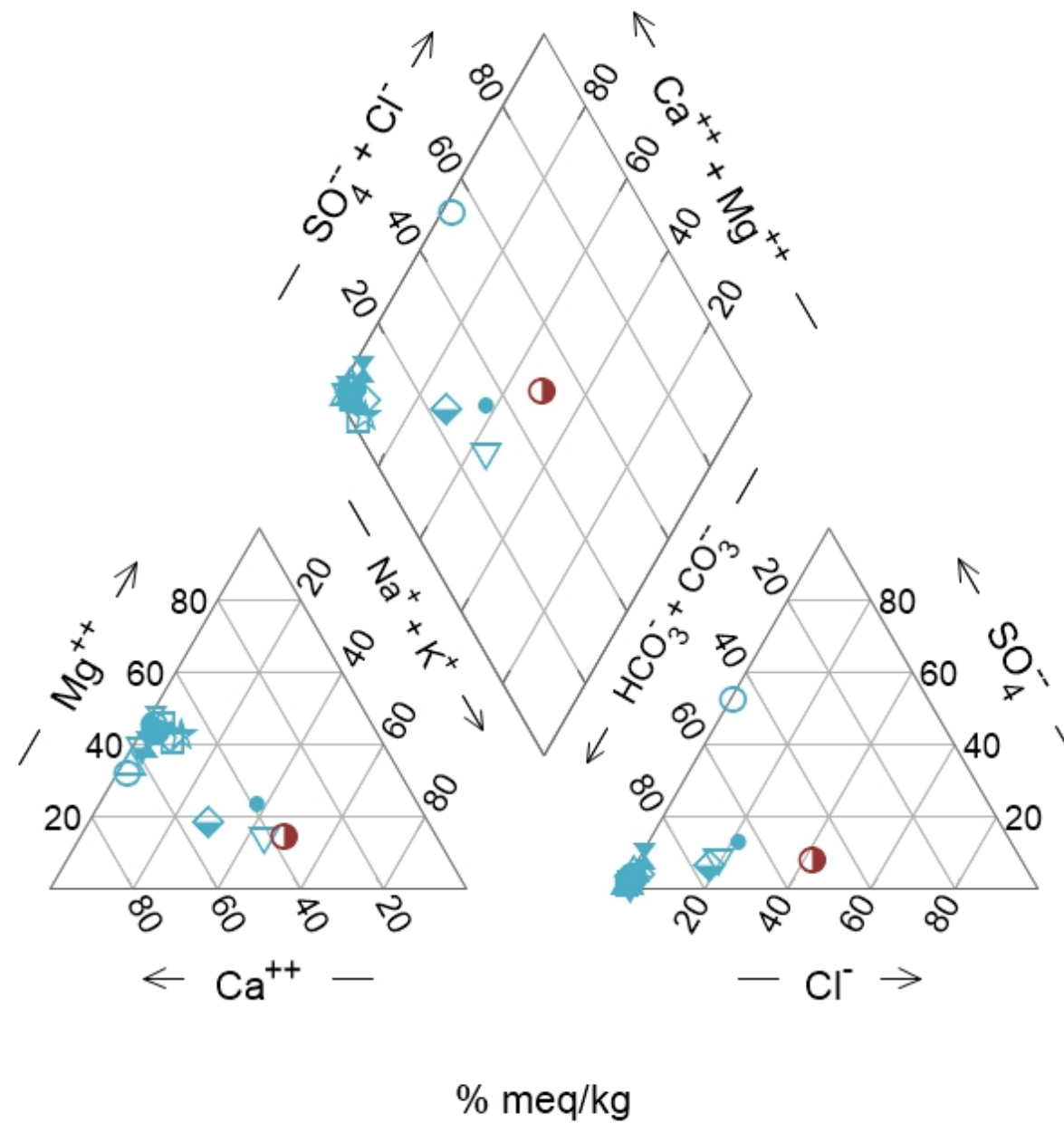
**Figure No.**  
**2**

**Title**  
**Groundwater Monitoring System**

**Notes**

1. Coordinate System: NAD 1983 StatePlane Georgia West FIPS 1002 Feet
2. Data Sources: Landfill Boundaries, Site Boundary, and Monitoring Well locations provided by Southern Company Services and Wood Environment & Infrastructure Solutions
3. Plant imagery provided by client. Supplemental Background: Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

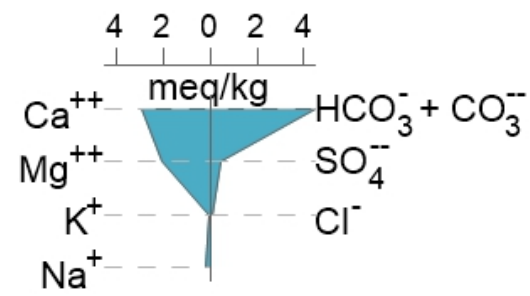




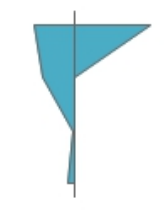
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- GWA-2 20220201
- △ GWA-2R 20220201
- ▽ GWA-50 20220201
- ◇ GWA-3A 20220202
- GWA-50R 20220202
- ✕ GWA-4RZ 20220203
- ☆ GWA-39Z 20220131
- GWA-40 20220131
- GWA-41 20220131
- ▲ GWA-41R 20220131
- ▽ GWA-42 20220131
- ◇ GWA-43 20220131
- ✕ GWA-43R 20220131
- GWC-48 20220131
- GWA-39RZ 20220202

■ Cells 1, 2, 9, 10 Upgradient Wells

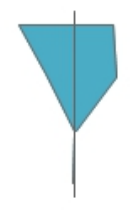
■ GWC-48



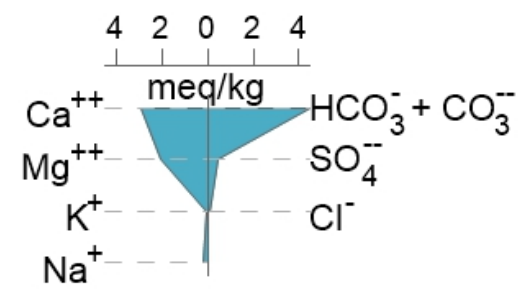
GWA-4RZ 20220203



GWA-1 20220201



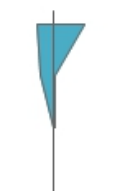
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GWA-4RZ 20220203



GWA-40 20220131



GWA-41 20220131



GWA-2R 20220201



GWA-50 20220201



GWA-3A 20220202



GWA-41R 20220131



GWA-42 20220131



GWA-43 20220131



GWA-50R 20220202



GWA-39Z 20220131



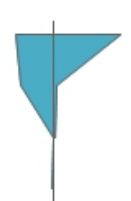
GWA-40 20220131





GWA-43R 20220131





GWC-48 20220131



GWA-39RZ 20220202

 Cells 1, 2, 9, 10 Upgradient Wells  
 GWC-48

 **Stantec** 

*Project Location*  
Euharlee, Georgia

*Prepared by* DMB on 9/28/2022  
TR by MP on 9/28/2022  
IR by MD on 9/28/2022

*Client/Project*  
Georgia Power  
Alternate Source Demonstration for Beryllium, Chloride,  
and Mercury - Plant Bowen Cells 1 & 2, 3 & 4, and 9 & 10

*Figure No.*  
**4**

*Title*  
**Stiff Diagrams**

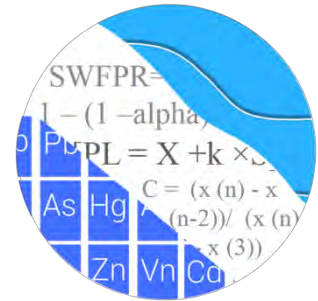
172678190

**Alternate Source Demonstration for Beryllium, Chloride, and Mercury, January- February 2022  
Semi-Annual Event  
Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10**

# **APPENDIX A REVISED GROUNDWATER STATS CONSULTING REPORTS**



# GROUNDWATER STATS CONSULTING



September 15, 2022

Southern Company Services  
Attn: Mr. Joju Abraham  
241 Ralph McGill Blvd. NE, Bin 10160  
Atlanta, Georgia 30308-3374

Re: Plant Bowen Landfill Cells 1, 2, 9, and 10 – Spring 2022 Resample

Dear Mr. Abraham,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the resample report for the February 2022 sample event for Georgia Power Company's Plant Bowen Landfill Cells 1, 2, 9, and 10. The analysis complies with the United States Environmental Protection Agency (USEPA) Coal Combustion Residuals (CCR) Rule 40 Code of Federal Regulations (CFR) 257 Subpart D, the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the USEPA Unified Guidance (2009).

Semi-annual sampling is conducted for USEPA's CCR Appendix III parameters, in addition to 16 parameters in accordance with the Georgia EPD's Solid Waste Permit. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** GWA-1, GWA-2, GWA-2R, GWA-3A GWA-4RZ, GWA-39RZ, GWA-39Z, GWA-40, GWA-41, GWA-41R, GWA-42, GWA-43, GWA-43R, GWA-50R, and GWA-50
- **Downgradient wells:** GWC-5, GWC-6, GWC-6RZ, GWC-7Z, GWC-8RR, GWC-8Z, GWC-9, GWC-10, GWC-10R, GWC-11, GWC-11R, GWC-12, GWC-13, GWC-13RZ, GWC-14Z, GWC-15R, GWC-15Z, GWC-44, GWC-45, GWC-45R, GWC-46R, GWC-47, GWC-47R, GWC-48, GWC-49R, and GWC-49Z

Note that well GWA-3 was replaced with GWA-3A, which was first sampled in March 2021. As requested, data from well GWA-3 have been combined with data from replacement well GWA-3A.

Data were sent electronically to Groundwater Stats Consulting, and the resample report statistical analysis was reviewed by Kristina Rayner, Senior Statistician and Founder to Groundwater Stats Consulting.

The following constituents are evaluated on a semi-annual basis:

- **CCR Appendix III:** boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Georgia EPD Appendix I:** antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium, silver, thallium, vanadium, and zinc

Note that the terms “parameters” and “constituents” are interchangeable throughout this report.

### **Resample Summary – April 2022**

Time series and box plots are provided to include resamples collected in April 2022 for well/constituent pairs identified with apparent prediction limits exceedances during the February 2022 sample event (Figures S and T, respectively). Upgradient well data are included in the plots to represent naturally occurring concentration levels in groundwater upgradient of the landfill. Well/constituent pairs with exceedances during February 2022 where previous Alternate Source Demonstrations (ASDs) were prepared are not included in this analysis. The time series plots provide visual representation of concentrations over time while the box plots provide visual representation of variation within individual wells and between all wells. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs.

Due to varying detection limits in background data sets, a substitution of the most recent reporting limit is typically used for all non-detects. Note that the laboratory reporting limit however, for beryllium decreased from 0.003 mg/L to 0.0005 mg/L and for mercury from 0.0005 mg/L to 0.0002 mg/L in more recent data. Therefore, the historical reporting limits of 0.003 mg/L and 0.0005 mg/L are substituted for all nondetects for beryllium and mercury, respectively. In both cases, the reporting limits are below the established Maximum Contaminant Limits of 0.004 mg/L for beryllium and 0.002 mg/L for mercury.

Resamples were collected in April 2022 and evaluated for the following well/constituent pairs:

### Georgia EPD Appendix I

#### Appendix I Intrawell

- Cadmium: GWC-12

#### Appendix I Interwell

- Beryllium: GWC-5
- Mercury: GWC-48

### CCR Appendix III

#### Appendix III Interwell

- Chloride: GWC-48

An intrawell prediction limit was constructed to evaluate the resample using background data as discussed previously for cadmium (Figure U). No exceedance was identified for cadmium in well GWC-12; thus, the initial exceedance was not confirmed and no further action is necessary.

Interwell prediction limits were constructed using pooled upgradient well data through February 2022 to evaluate the resamples for beryllium at well GWC-5 and mercury at well GWC-48 (Figure V). When interwell prediction limits were constructed, no exceedances were identified; therefore, no further action is required.

While interwell prediction limits were initially recommended in 2015 to evaluate chloride, more recent evidence provided by Stantec Consultants suggests that intrawell prediction limits are appropriate for this constituent due to natural variation in groundwater quality unrelated to practices at the landfill. Additionally, more recent reported concentrations at downgradient well GWC-48 are similar to those reported historically at upgradient well GWA-43R, and concentrations at all wells are less than 10 mg/L compared to the established Maximum Contaminant Limit of 250 mg/L. When an intrawell prediction limit was constructed to evaluate chloride at downgradient well GWC-48, no exceedance was identified; therefore, no further action is necessary (Figure W).

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Plant Bowen Landfill Cells 1, 2, 9 and 10. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Andrew T. Collins  
Project Manager



Kristina L. Rayner  
Senior Statistician

# Appendix I Intrawell Prediction Limits - Resample Results

Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10 Printed 9/15/2022, 4:26 PM

| Constituent    | Well   | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg.N | Bg Mean | Std. Dev. | %NDs  | ND Adj. | Transform | Alpha    | Method                |
|----------------|--------|------------|------------|-----------|---------|------|------|---------|-----------|-------|---------|-----------|----------|-----------------------|
| Cadmium (mg/L) | GWC-12 | 0.001      | n/a        | 4/28/2022 | 0.00067 | No   | 38   | n/a     | n/a       | 57.89 | n/a     | n/a       | 0.001294 | NP Intra (NDs) 1 of 2 |



# Appendix I Interwell Prediction Limits - Resample Results

Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10 Printed 9/15/2022, 4:06 PM

| Constituent      | Well   | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg.N | Bg Mean | Std. Dev. | %NDs  | ND Adj. | Transform | Alpha      | Method                |
|------------------|--------|------------|------------|-----------|---------|------|------|---------|-----------|-------|---------|-----------|------------|-----------------------|
| Beryllium (mg/L) | GWC-5  | 0.003      | n/a        | 4/28/2022 | 0.00078 | No   | 284  | n/a     | n/a       | 91.55 | n/a     | n/a       | 0.00004896 | NP Inter (NDs) 1 of 2 |
| Mercury (mg/L)   | GWC-48 | 0.0005     | n/a        | 4/28/2022 | 0.0004  | No   | 382  | n/a     | n/a       | 96.6  | n/a     | n/a       | 0.00004896 | NP Inter (NDs) 1 of 2 |

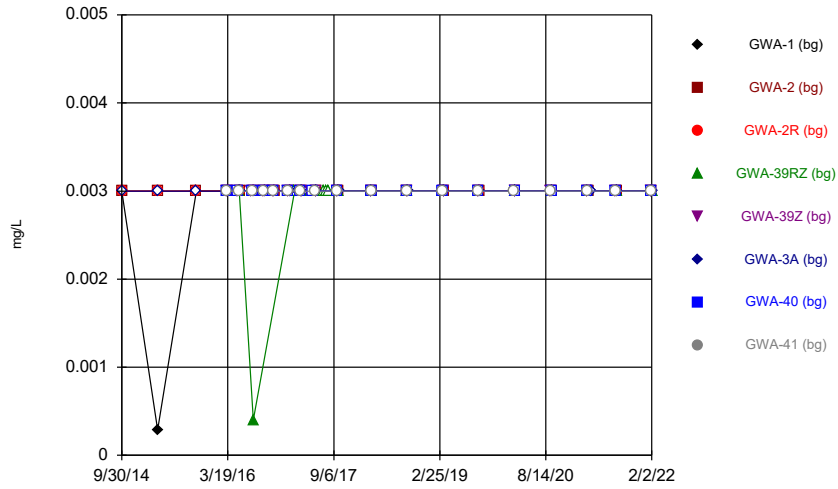
# Appendix III Intrawell Prediction Limits - Resample Results

Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10 Printed 9/15/2022, 4:08 PM

| Constituent            | Well   | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg.N | Bg Mean | Std. Dev. | %NDs | ND Adj. | Transform | Alpha     | Method             |
|------------------------|--------|------------|------------|-----------|---------|------|------|---------|-----------|------|---------|-----------|-----------|--------------------|
| Chloride, Total (mg/L) | GWC-48 | 5.485      | n/a        | 4/28/2022 | 5       | No   | 17   | 1.705   | 0.2373    | 0    | None    | sqrt(x)   | 0.0002894 | Param Intra 1 of 2 |

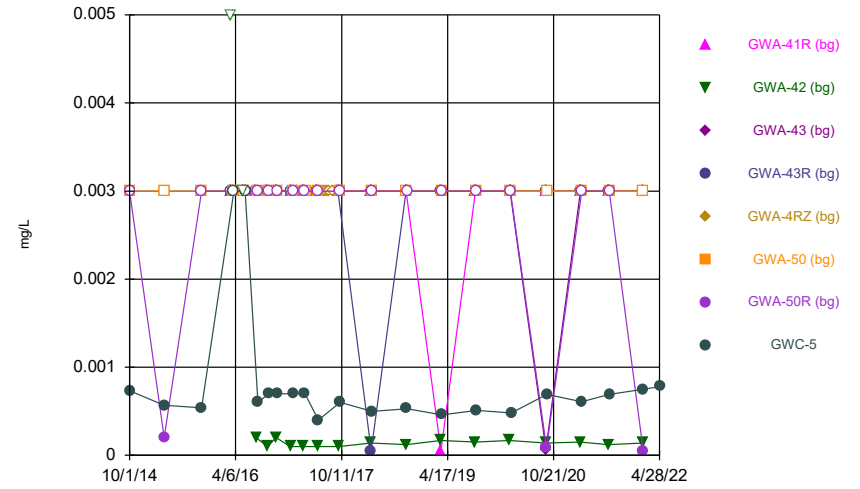
FIGURE S.

Time Series



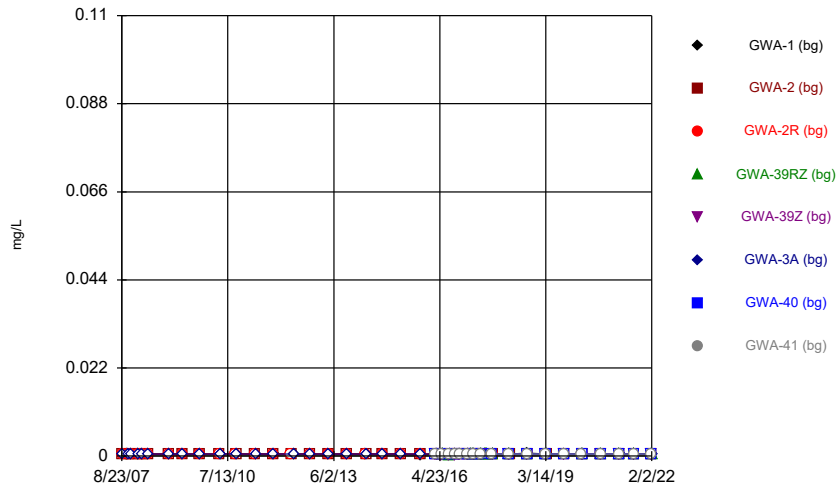
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Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

Time Series



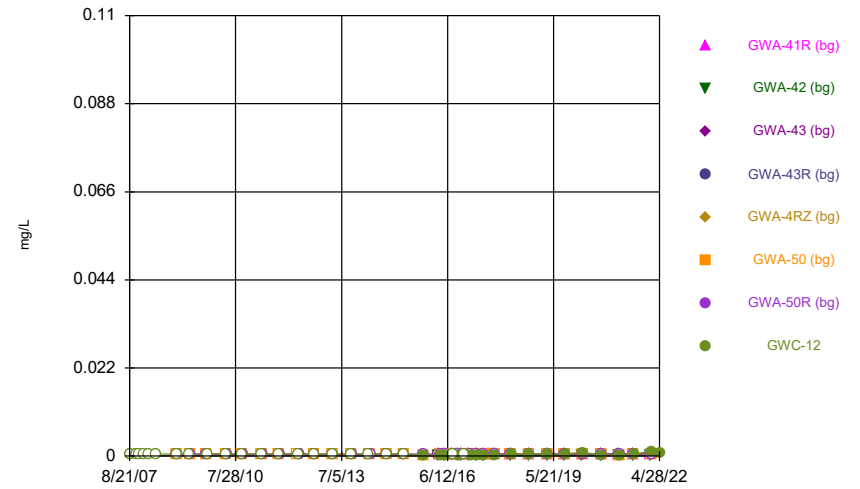
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Time Series



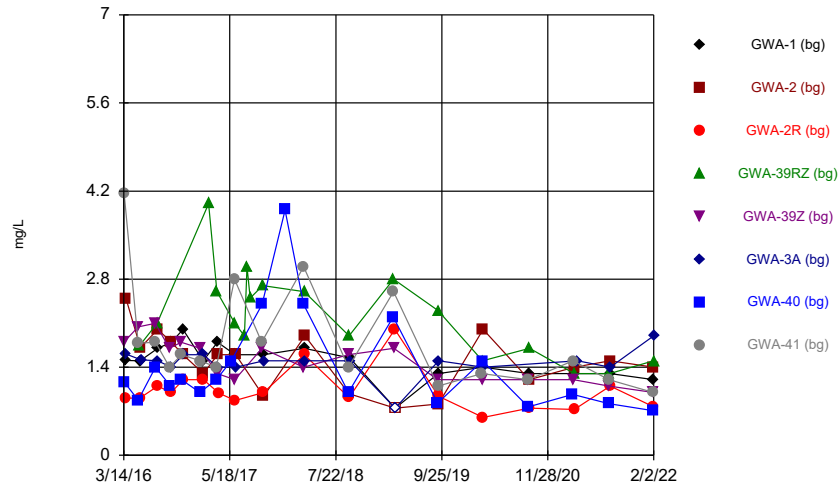
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Time Series



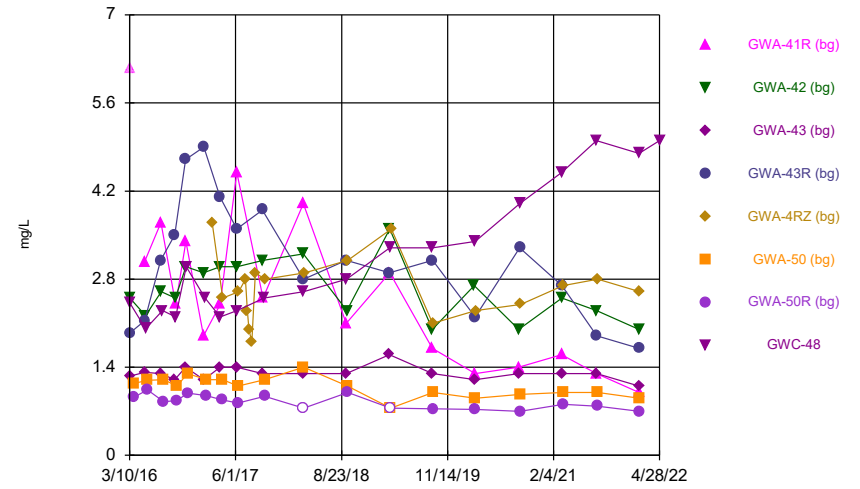
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Time Series



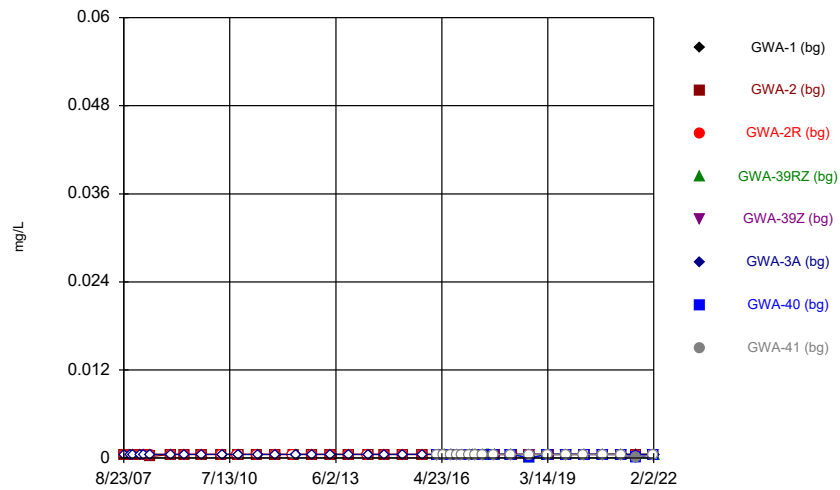
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Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

Time Series



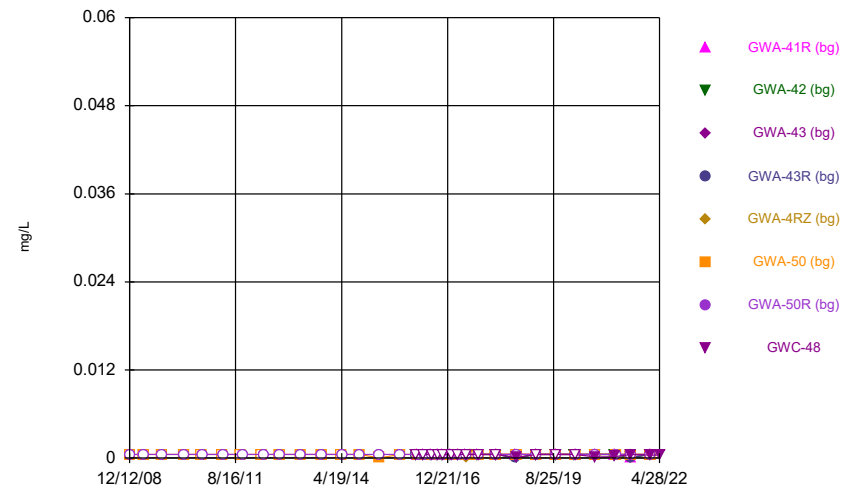
Constituent: Chloride, Total Analysis Run 9/15/2022 4:04 PM View: Resample Reports  
Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

Time Series



Constituent: Mercury Analysis Run 9/15/2022 4:04 PM View: Resample Reports  
Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

Time Series



Constituent: Mercury Analysis Run 9/15/2022 4:04 PM View: Resample Reports  
Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 9/15/2022 4:04 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-1 (bg)  | GWA-2 (bg) | GWA-2R (bg) | GWA-39RZ (bg) | GWA-39Z (bg) | GWA-3A (bg) | GWA-40 (bg) | GWA-41 (bg) |
|------------|-------------|------------|-------------|---------------|--------------|-------------|-------------|-------------|
| 9/30/2014  | <0.003      | <0.003     | <0.003      |               |              |             |             |             |
| 10/4/2014  |             |            |             |               |              | <0.003      |             |             |
| 3/30/2015  | 0.00029 (J) | <0.003     | <0.003      |               |              |             |             |             |
| 3/31/2015  |             |            |             |               |              | <0.003      |             |             |
| 10/12/2015 |             |            |             |               |              | <0.003      |             |             |
| 10/13/2015 | <0.003      | <0.003     | <0.003      |               |              |             |             |             |
| 3/14/2016  |             |            |             |               | <0.003       |             |             |             |
| 3/15/2016  |             |            |             |               |              |             | <0.003      | <0.003      |
| 3/22/2016  | <0.003      |            |             |               |              |             |             |             |
| 3/23/2016  |             | <0.003     | <0.003      |               |              | <0.003      |             |             |
| 5/11/2016  |             |            |             |               | <0.003       |             | <0.003      |             |
| 5/12/2016  |             |            |             |               |              |             |             | <0.003      |
| 5/16/2016  |             |            |             | <0.003 (D)    |              |             |             |             |
| 5/19/2016  | <0.003      |            | <0.003      |               |              |             |             |             |
| 5/20/2016  |             | <0.003     |             |               |              |             |             |             |
| 5/23/2016  |             |            |             |               |              | <0.003      |             |             |
| 7/19/2016  |             |            |             |               | <0.003       |             |             |             |
| 7/20/2016  |             |            |             |               |              |             |             | <0.003      |
| 7/21/2016  |             |            |             |               |              |             | <0.003      |             |
| 7/27/2016  |             |            |             | 0.0004 (JD)   |              |             |             |             |
| 7/29/2016  | <0.003      | <0.003     | <0.003      |               |              | <0.003      |             |             |
| 9/15/2016  |             |            |             |               | <0.003       |             | <0.003      | <0.003      |
| 9/22/2016  |             |            | <0.003      |               |              | <0.003      |             |             |
| 9/23/2016  | <0.003      | <0.003     |             |               |              |             |             |             |
| 11/2/2016  |             |            |             |               | <0.003       |             |             |             |
| 11/3/2016  |             |            |             |               |              |             | <0.003      | <0.003      |
| 11/9/2016  | <0.003      | <0.003     |             |               |              |             |             |             |
| 11/10/2016 |             |            | <0.003      |               |              | <0.003      |             |             |
| 1/17/2017  |             |            |             |               |              |             | <0.003      |             |
| 1/18/2017  |             |            |             |               | <0.003       |             |             | <0.003      |
| 1/30/2017  | <0.003      |            |             |               |              |             |             |             |
| 1/31/2017  |             | <0.003     | <0.003      |               |              | <0.003      |             |             |
| 2/21/2017  |             |            |             | <0.003        |              |             |             |             |
| 3/24/2017  |             |            |             |               |              |             | <0.003      | <0.003      |
| 3/27/2017  |             |            |             | <0.003 (D)    |              |             |             |             |
| 3/28/2017  |             |            |             |               | <0.003       |             |             |             |
| 3/30/2017  | <0.003      | <0.003     |             |               |              | <0.003      |             |             |
| 4/3/2017   |             |            | <0.003      |               |              |             |             |             |
| 5/24/2017  |             |            |             |               |              |             | <0.003      |             |
| 6/6/2017   |             |            |             |               |              |             |             | <0.003      |
| 6/7/2017   |             |            |             |               | <0.003       |             |             |             |
| 6/8/2017   |             |            |             | <0.003 (D)    |              |             |             |             |
| 6/9/2017   | <0.003      |            | <0.003      |               |              |             |             |             |
| 6/12/2017  |             | <0.003     |             |               |              | <0.003      |             |             |
| 7/17/2017  |             |            |             | <0.003 (D)    |              |             |             |             |
| 7/27/2017  |             |            |             | <0.003        |              |             |             |             |
| 8/9/2017   |             |            |             | <0.003        |              |             |             |             |
| 9/25/2017  |             |            |             |               |              |             |             | <0.003      |
| 9/26/2017  |             |            |             |               | <0.003       |             | <0.003      |             |
| 9/29/2017  |             |            |             | <0.003 (D)    |              |             |             |             |
| 10/2/2017  | <0.003      | <0.003     | <0.003      |               |              |             |             |             |
| 10/4/2017  |             |            |             |               |              | <0.003      |             |             |

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 9/15/2022 4:04 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|           | GWA-1 (bg) | GWA-2 (bg) | GWA-2R (bg) | GWA-39RZ (bg) | GWA-39Z (bg) | GWA-3A (bg) | GWA-40 (bg) | GWA-41 (bg) |
|-----------|------------|------------|-------------|---------------|--------------|-------------|-------------|-------------|
| 3/14/2018 |            |            |             |               | <0.003       |             | <0.003      | <0.003      |
| 3/16/2018 | <0.003     |            | <0.003      | <0.003        |              |             |             |             |
| 3/19/2018 |            | <0.003     |             |               |              | <0.003      |             |             |
| 9/12/2018 |            |            |             |               | <0.003       |             | <0.003      | <0.003      |
| 9/14/2018 |            | <0.003     | <0.003      | <0.003        |              |             |             |             |
| 9/17/2018 | <0.003 (D) |            |             |               |              | <0.003      |             |             |
| 3/13/2019 |            |            |             |               |              |             | <0.003      |             |
| 3/14/2019 |            |            |             | <0.003        |              |             |             | <0.003      |
| 3/15/2019 |            |            |             |               | <0.003       |             |             |             |
| 3/19/2019 |            |            | <0.003      |               |              |             |             |             |
| 3/20/2019 | <0.003     | <0.003     |             |               |              | <0.003      |             |             |
| 9/9/2019  |            |            |             |               | <0.003       |             | <0.003      |             |
| 9/10/2019 |            |            |             |               |              |             |             | <0.003 (D)  |
| 9/12/2019 | <0.003     | <0.003 (D) |             |               |              |             |             |             |
| 9/13/2019 |            |            | <0.003      |               |              | <0.003      |             |             |
| 3/6/2020  |            |            |             |               |              |             |             | <0.003      |
| 3/9/2020  |            |            |             | <0.003        | <0.003       |             | <0.003      |             |
| 3/11/2020 | <0.003     | <0.003     | <0.003      |               |              | <0.003      |             |             |
| 9/10/2020 |            |            |             |               | <0.003       |             |             | <0.003      |
| 9/11/2020 |            |            |             |               |              |             | <0.003      |             |
| 9/15/2020 | <0.003     | <0.003     | <0.003      |               |              |             |             |             |
| 9/16/2020 |            |            |             | <0.003        |              |             |             |             |
| 3/10/2021 |            |            |             |               |              |             | <0.003      |             |
| 3/11/2021 |            |            |             |               |              |             |             | <0.003      |
| 3/12/2021 |            |            |             |               | <0.003       |             |             |             |
| 3/16/2021 | <0.003     |            | <0.003      | <0.003        |              |             |             |             |
| 3/17/2021 |            | <0.003     |             |               |              |             |             |             |
| 3/29/2021 |            |            |             |               |              | <0.003      |             |             |
| 8/4/2021  |            |            |             |               | <0.003       |             | <0.003      | <0.003      |
| 8/6/2021  |            |            |             | <0.003        |              |             |             |             |
| 8/9/2021  | <0.003     | <0.003     | <0.003      |               |              | <0.003      |             |             |
| 1/31/2022 |            |            |             |               | <0.003       |             | <0.003      | <0.003      |
| 2/1/2022  | <0.003     | <0.003     | <0.003      |               |              |             |             |             |
| 2/2/2022  |            |            |             | <0.003        |              | <0.003      |             |             |

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 9/15/2022 4:04 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-41R (bg) | GWA-42 (bg) | GWA-43 (bg) | GWA-43R (bg) | GWA-4RZ (bg) | GWA-50 (bg) | GWA-50R (bg) | GWC-5       |
|------------|--------------|-------------|-------------|--------------|--------------|-------------|--------------|-------------|
| 10/1/2014  |              |             |             |              |              | <0.003      | <0.003       |             |
| 10/3/2014  |              |             |             |              |              |             |              | 0.00073 (J) |
| 3/30/2015  |              |             |             |              |              | <0.003      | 0.0002 (J)   |             |
| 3/31/2015  |              |             |             |              |              |             |              | 0.00057 (J) |
| 10/11/2015 |              |             |             |              |              | <0.003      | <0.003       |             |
| 10/12/2015 |              |             |             |              |              |             |              | 0.00054 (J) |
| 3/11/2016  |              | <0.005 (O)  | <0.003      | <0.003       |              |             |              |             |
| 3/15/2016  | <0.003       |             |             |              |              |             |              |             |
| 3/28/2016  |              |             |             |              |              | <0.003      | <0.003       | <0.003      |
| 5/13/2016  | <0.003       |             | <0.003      | <0.003       |              |             |              |             |
| 5/16/2016  |              | <0.003 (O)  |             |              |              |             |              |             |
| 5/23/2016  |              |             |             |              |              | <0.003      |              |             |
| 5/25/2016  |              |             |             |              |              |             | <0.003       | <0.003      |
| 7/19/2016  |              |             | <0.003      | <0.003       |              |             |              |             |
| 7/21/2016  | <0.003       |             |             |              |              |             |              |             |
| 7/22/2016  |              | 0.0002 (J)  |             |              |              |             |              |             |
| 8/1/2016   |              |             |             |              |              | <0.003      | <0.003       | 0.0006 (J)  |
| 9/16/2016  |              |             | <0.003      | <0.003       |              |             |              |             |
| 9/19/2016  |              | 0.0001 (J)  |             |              |              |             |              |             |
| 9/21/2016  | <0.003       |             |             |              |              |             |              |             |
| 9/26/2016  |              |             |             |              |              | <0.003      | <0.003       |             |
| 9/27/2016  |              |             |             |              |              |             |              | 0.0007 (J)  |
| 11/2/2016  |              |             | <0.003      | <0.003       |              |             |              |             |
| 11/3/2016  | <0.003       | 0.0002 (J)  |             |              |              |             |              |             |
| 11/10/2016 |              |             |             |              |              | <0.003      |              |             |
| 11/11/2016 |              |             |             |              |              |             | <0.003       | 0.0007 (J)  |
| 1/17/2017  | <0.003       | 0.0001 (J)  |             |              |              |             |              |             |
| 1/18/2017  |              |             | <0.003      | <0.003       |              |             |              |             |
| 1/30/2017  |              |             |             |              |              | <0.003      | <0.003       |             |
| 1/31/2017  |              |             |             |              |              |             |              | 0.0007 (J)  |
| 2/22/2017  |              |             |             |              | <0.003       |             |              |             |
| 3/27/2017  | <0.003       | 0.0001 (J)  |             |              |              |             |              |             |
| 3/28/2017  |              |             | <0.003      | <0.003       |              |             |              |             |
| 4/3/2017   |              |             |             |              |              |             | <0.003       | 0.0007 (J)  |
| 4/7/2017   |              |             |             |              | <0.003       | <0.003      |              |             |
| 6/6/2017   | <0.003       |             | <0.003      | <0.003       |              |             |              |             |
| 6/7/2017   |              | 0.0001 (J)  |             |              |              |             |              |             |
| 6/12/2017  |              |             |             |              |              | <0.003      | <0.003       | 0.0004 (J)  |
| 6/14/2017  |              |             |             |              | <0.003 (D)   |             |              |             |
| 7/12/2017  |              |             |             |              | <0.003 (D)   |             |              |             |
| 7/20/2017  |              |             |             |              | <0.003 (D)   |             |              |             |
| 7/28/2017  |              |             |             |              | <0.003       |             |              |             |
| 8/9/2017   |              |             |             |              | <0.003       |             |              |             |
| 8/24/2017  |              |             |             |              | <0.003       |             |              |             |
| 9/22/2017  |              |             | <0.003      | <0.003       |              |             |              |             |
| 9/25/2017  | <0.003       |             |             |              |              |             |              |             |
| 9/26/2017  |              | 0.0001 (J)  |             |              |              |             |              |             |
| 10/2/2017  |              |             |             |              |              | <0.003      | <0.003       |             |
| 10/3/2017  |              |             |             |              | <0.003 (D)   |             |              | 0.0006 (J)  |
| 3/14/2018  | <0.003       | 0.00014 (J) | <0.003      |              |              |             |              |             |
| 3/15/2018  |              |             |             | 5.1E-05 (J)  |              |             |              |             |
| 3/16/2018  |              |             |             |              |              | <0.003      | <0.003       |             |





# Time Series

Constituent: Cadmium (mg/L) Analysis Run 9/15/2022 4:04 PM View: Resample Reports

Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-1 (bg) | GWA-2 (bg) | GWA-2R (bg) | GWA-39RZ (bg) | GWA-39Z (bg) | GWA-3A (bg) | GWA-40 (bg) | GWA-41 (bg) |
|------------|------------|------------|-------------|---------------|--------------|-------------|-------------|-------------|
| 8/23/2007  | <0.0005    | <0.0005    | <0.0005     |               |              | <0.0005     |             |             |
| 10/23/2007 | <0.0005    |            |             |               |              |             |             |             |
| 10/24/2007 |            | <0.0005    | <0.0005     |               |              |             |             |             |
| 11/2/2007  |            |            |             |               |              | <0.0005     |             |             |
| 11/18/2007 | <0.0005    | <0.0005    | <0.0005     |               |              | <0.0005     |             |             |
| 1/30/2008  | <0.0005    |            |             |               |              |             |             |             |
| 1/31/2008  |            | <0.0005    | <0.0005     |               |              | <0.0005     |             |             |
| 3/10/2008  | <0.0005    |            | <0.0005     |               |              |             |             |             |
| 3/11/2008  |            | <0.0005    |             |               |              | <0.0005     |             |             |
| 5/6/2008   |            | <0.0005    |             |               |              |             |             |             |
| 5/13/2008  | <0.0005    |            | <0.0005     |               |              |             |             |             |
| 5/14/2008  |            |            |             |               |              | <0.0005     |             |             |
| 12/4/2008  |            | <0.0005    | <0.0005     |               |              |             |             |             |
| 12/5/2008  | <0.0005    |            |             |               |              | <0.0005     |             |             |
| 4/15/2009  | <0.0005    |            |             |               |              | <0.0005     |             |             |
| 4/21/2009  |            | <0.0005    | <0.0005     |               |              |             |             |             |
| 10/7/2009  | <0.0005    | <0.0005    |             |               |              |             |             |             |
| 10/8/2009  |            |            | <0.0005     |               |              | <0.0005     |             |             |
| 4/21/2010  |            |            | <0.0005     |               |              |             |             |             |
| 4/26/2010  |            | <0.0005    |             |               |              |             |             |             |
| 4/28/2010  |            |            |             |               |              | <0.0005     |             |             |
| 5/3/2010   | <0.0005    |            |             |               |              |             |             |             |
| 9/28/2010  |            |            | <0.0005     |               |              |             |             |             |
| 10/4/2010  |            | <0.0005    |             |               |              |             |             |             |
| 10/6/2010  |            |            |             |               |              | <0.0005     |             |             |
| 10/12/2010 | <0.0005    |            |             |               |              |             |             |             |
| 4/12/2011  |            |            | <0.0005     |               |              |             |             |             |
| 4/13/2011  |            | <0.0005    |             |               |              |             |             |             |
| 4/21/2011  |            |            |             |               |              | <0.0005     |             |             |
| 4/27/2011  | <0.0005    |            |             |               |              |             |             |             |
| 10/4/2011  |            |            | <0.0005     |               |              |             |             |             |
| 10/5/2011  |            | <0.0005    |             |               |              |             |             |             |
| 10/13/2011 |            |            |             |               |              | <0.0005     |             |             |
| 10/17/2011 | <0.0005    |            |             |               |              |             |             |             |
| 4/3/2012   |            |            | <0.0005     |               |              |             |             |             |
| 4/11/2012  |            | <0.0005    |             |               |              |             |             |             |
| 5/1/2012   |            |            |             |               |              | <0.0005     |             |             |
| 5/2/2012   | <0.0005    |            |             |               |              |             |             |             |
| 10/8/2012  | <0.0005    |            |             |               |              |             |             |             |
| 10/9/2012  |            | <0.0005    | <0.0005     |               |              | <0.0005     |             |             |
| 4/11/2013  |            |            | <0.0005     |               |              | <0.0005     |             |             |
| 4/12/2013  | <0.0005    |            |             |               |              |             |             |             |
| 4/15/2013  |            | <0.0005    |             |               |              |             |             |             |
| 10/15/2013 |            | <0.0005    |             |               |              |             |             |             |
| 10/16/2013 | <0.0005    |            | <0.0005     |               |              | <0.0005     |             |             |
| 4/10/2014  |            |            | <0.0005     |               |              |             |             |             |
| 4/11/2014  | <0.0005    |            |             |               |              |             |             |             |
| 4/22/2014  |            | <0.0005    |             |               |              |             |             |             |
| 4/23/2014  |            |            |             |               |              | <0.0005     |             |             |
| 9/30/2014  | <0.0005    | <0.0005    | <0.0005     |               |              |             |             |             |
| 10/4/2014  |            |            |             |               |              | <0.0005     |             |             |
| 3/30/2015  | <0.0005    | <0.0005    | <0.0005     |               |              |             |             |             |

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 9/15/2022 4:04 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-1 (bg) | GWA-2 (bg) | GWA-2R (bg) | GWA-39RZ (bg) | GWA-39Z (bg) | GWA-3A (bg) | GWA-40 (bg) | GWA-41 (bg) |
|------------|------------|------------|-------------|---------------|--------------|-------------|-------------|-------------|
| 3/31/2015  |            |            |             |               |              | <0.0005     |             |             |
| 10/12/2015 |            |            |             |               |              | <0.0005     |             |             |
| 10/13/2015 | 0.0003 (J) | <0.0005    | <0.0005     |               |              |             |             |             |
| 3/14/2016  |            |            |             |               | <0.0005      |             |             |             |
| 3/15/2016  |            |            |             |               |              |             | <0.0005     | <0.0005     |
| 3/22/2016  | <0.0005    |            |             |               |              |             |             |             |
| 3/23/2016  |            | <0.0005    | <0.0005     |               |              | <0.0005     |             |             |
| 5/11/2016  |            |            |             |               | 0.000177 (J) |             | <0.0005     |             |
| 5/12/2016  |            |            |             |               |              |             |             | <0.0005     |
| 5/16/2016  |            |            |             | <0.0005 (D)   |              |             |             |             |
| 5/19/2016  | <0.0005    |            | <0.0005     |               |              |             |             |             |
| 5/20/2016  |            | <0.0005    |             |               |              |             |             |             |
| 5/23/2016  |            |            |             |               |              | <0.0005     |             |             |
| 7/19/2016  |            |            |             |               | 0.0001 (J)   |             |             |             |
| 7/20/2016  |            |            |             |               |              |             |             | <0.0005     |
| 7/21/2016  |            |            |             |               |              |             | <0.0005     |             |
| 7/27/2016  |            |            |             | 0.0001 (JD)   |              |             |             |             |
| 7/29/2016  | <0.0005    | <0.0005    | <0.0005     |               |              | <0.0005     |             |             |
| 9/15/2016  |            |            |             |               | 8E-05 (J)    |             | <0.0005     | <0.0005     |
| 9/22/2016  |            |            | <0.0005     |               |              | <0.0005     |             |             |
| 9/23/2016  | <0.0005    | <0.0005    |             |               |              |             |             |             |
| 11/2/2016  |            |            |             |               | <0.0005      |             |             |             |
| 11/3/2016  |            |            |             |               |              |             | <0.0005     | <0.0005     |
| 11/9/2016  | <0.0005    | <0.0005    |             |               |              |             |             |             |
| 11/10/2016 |            |            | <0.0005     |               |              | <0.0005     |             |             |
| 1/17/2017  |            |            |             |               |              |             | <0.0005     |             |
| 1/18/2017  |            |            |             |               | <0.0005      |             |             | <0.0005     |
| 1/30/2017  | <0.0005    |            |             |               |              |             |             |             |
| 1/31/2017  |            | <0.0005    | <0.0005     |               |              | <0.0005     |             |             |
| 2/21/2017  |            |            |             | <0.0005       |              |             |             |             |
| 3/24/2017  |            |            |             |               |              |             | <0.0005     | <0.0005     |
| 3/27/2017  |            |            |             | <0.0005 (D)   |              |             |             |             |
| 3/28/2017  |            |            |             |               | <0.0005      |             |             |             |
| 3/30/2017  | <0.0005    | <0.0005    |             |               |              | <0.0005     |             |             |
| 4/3/2017   |            |            | <0.0005     |               |              |             |             |             |
| 5/24/2017  |            |            |             |               |              |             | <0.0005     |             |
| 6/6/2017   |            |            |             |               |              |             |             | <0.0005     |
| 6/7/2017   |            |            |             |               | <0.0005      |             |             |             |
| 6/8/2017   |            |            |             | <0.0005 (D)   |              |             |             |             |
| 6/9/2017   | <0.0005    |            | <0.0005     |               |              |             |             |             |
| 6/12/2017  |            | <0.0005    |             |               |              | <0.0005     |             |             |
| 7/17/2017  |            |            |             | <0.0005 (D)   |              |             |             |             |
| 7/27/2017  |            |            |             | <0.0005       |              |             |             |             |
| 8/9/2017   |            |            |             | <0.0005       |              |             |             |             |
| 9/25/2017  |            |            |             |               |              |             |             | <0.0005     |
| 9/26/2017  |            |            |             |               | <0.0005      |             | <0.0005     |             |
| 9/29/2017  |            |            |             | <0.0005 (D)   |              |             |             |             |
| 10/2/2017  | <0.0005    | <0.0005    | <0.0005     |               |              |             |             |             |
| 10/4/2017  |            |            |             |               |              | <0.0005     |             |             |
| 3/14/2018  |            |            |             |               | <0.0005      |             | <0.0005     | <0.0005     |
| 3/16/2018  | <0.0005    |            | <0.0005     | <0.0005       |              |             |             |             |
| 3/19/2018  |            | <0.0005    |             |               |              | <0.0005     |             |             |

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 9/15/2022 4:04 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|           | GWA-1 (bg)   | GWA-2 (bg)  | GWA-2R (bg) | GWA-39RZ (bg) | GWA-39Z (bg) | GWA-3A (bg) | GWA-40 (bg) | GWA-41 (bg) |
|-----------|--------------|-------------|-------------|---------------|--------------|-------------|-------------|-------------|
| 9/12/2018 |              |             |             |               | <0.0005      |             | <0.0005     | <0.0005     |
| 9/14/2018 |              | <0.0005     | <0.0005     | <0.0005       |              |             |             |             |
| 9/17/2018 | 0.00076 (JD) |             |             |               |              | <0.0005     |             |             |
| 3/13/2019 |              |             |             |               |              |             | <0.0005     |             |
| 3/14/2019 |              |             |             | <0.0005       |              |             |             | <0.0005     |
| 3/15/2019 |              |             |             |               | <0.0005      |             |             |             |
| 3/19/2019 |              |             | <0.0005     |               |              |             |             |             |
| 3/20/2019 | <0.0005      | <0.0005     |             |               |              | <0.0005     |             |             |
| 9/9/2019  |              |             |             |               | <0.0005      |             | <0.0005     |             |
| 9/10/2019 |              |             |             |               |              |             |             | <0.0005 (D) |
| 9/12/2019 | <0.0005      | <0.0005 (D) |             |               |              |             |             |             |
| 9/13/2019 |              |             | <0.0005     |               |              | <0.0005     |             |             |
| 3/6/2020  |              |             |             |               |              |             |             | <0.0005     |
| 3/9/2020  |              |             |             | <0.0005       | <0.0005      |             | <0.0005     |             |
| 3/11/2020 | <0.0005      | <0.0005     | <0.0005     |               |              | <0.0005     |             |             |
| 9/10/2020 |              |             |             |               | <0.0005      |             |             | <0.0005     |
| 9/11/2020 |              |             |             |               |              |             | <0.0005     |             |
| 9/15/2020 | <0.0005      | <0.0005     | <0.0005     |               |              |             |             |             |
| 9/16/2020 |              |             |             | <0.0005       |              |             |             |             |
| 3/10/2021 |              |             |             |               |              |             | <0.0005     |             |
| 3/11/2021 |              |             |             |               |              |             |             | <0.0005     |
| 3/12/2021 |              |             |             |               | <0.0005      |             |             |             |
| 3/16/2021 | <0.0005      |             | <0.0005     | <0.0005       |              |             |             |             |
| 3/17/2021 |              | <0.0005     |             |               |              |             |             |             |
| 3/29/2021 |              |             |             |               |              | <0.0005     |             |             |
| 8/4/2021  |              |             |             |               | <0.0005      |             | <0.0005     | <0.0005     |
| 8/6/2021  |              |             |             | <0.0005       |              |             |             |             |
| 8/9/2021  | <0.0005      | <0.0005     | <0.0005     |               |              | <0.0005     |             |             |
| 1/31/2022 |              |             |             |               | <0.0005      |             | <0.0005     | <0.0005     |
| 2/1/2022  | <0.0005      | <0.0005     | <0.0005     |               |              |             |             |             |
| 2/2/2022  |              |             |             | <0.0005       |              | <0.0005     |             |             |

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 9/15/2022 4:04 PM View: Resample Reports

Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-41R (bg) | GWA-42 (bg)  | GWA-43 (bg) | GWA-43R (bg) | GWA-4RZ (bg) | GWA-50 (bg) | GWA-50R (bg) | GWC-12       |
|------------|--------------|--------------|-------------|--------------|--------------|-------------|--------------|--------------|
| 8/21/2007  |              |              |             |              |              |             |              | <0.0005      |
| 11/1/2007  |              |              |             |              |              |             |              | <0.0005      |
| 11/19/2007 |              |              |             |              |              |             |              | <0.0005      |
| 1/16/2008  |              |              |             |              |              |             |              | <0.0005      |
| 3/5/2008   |              |              |             |              |              |             |              | <0.0005      |
| 5/13/2008  |              |              |             |              |              |             |              | <0.0005      |
| 12/12/2008 |              |              |             |              |              | <0.0005     | <0.0005      |              |
| 12/13/2008 |              |              |             |              |              |             |              | <0.0005      |
| 4/16/2009  |              |              |             |              |              |             |              | <0.0005      |
| 4/23/2009  |              |              |             |              |              | <0.0005     | <0.0005      |              |
| 10/6/2009  |              |              |             |              |              | <0.0005     | <0.0005      |              |
| 10/21/2009 |              |              |             |              |              |             |              | <0.0005      |
| 4/27/2010  |              |              |             |              |              | <0.0005     |              | <0.0005      |
| 5/3/2010   |              |              |             |              |              |             | <0.0005      |              |
| 9/30/2010  |              |              |             |              |              | <0.0005     |              |              |
| 10/5/2010  |              |              |             |              |              |             |              | <0.0005      |
| 10/11/2010 |              |              |             |              |              |             | <0.0005      |              |
| 4/14/2011  |              |              |             |              |              | <0.0005     |              |              |
| 4/19/2011  |              |              |             |              |              |             |              | <0.0005      |
| 4/27/2011  |              |              |             |              |              |             | <0.0005      |              |
| 10/5/2011  |              |              |             |              |              | <0.0005     |              |              |
| 10/12/2011 |              |              |             |              |              |             |              | <0.0005      |
| 10/19/2011 |              |              |             |              |              |             | <0.0005      |              |
| 4/11/2012  |              |              |             |              |              | <0.0005     |              |              |
| 4/24/2012  |              |              |             |              |              |             |              | <0.0005      |
| 5/1/2012   |              |              |             |              |              |             | <0.0005      |              |
| 10/2/2012  |              |              |             |              |              | <0.0005     | <0.0005      | <0.0005      |
| 4/2/2013   |              |              |             |              |              |             |              | <0.0005      |
| 4/9/2013   |              |              |             |              |              | <0.0005     |              |              |
| 4/10/2013  |              |              |             |              |              |             | <0.0005      |              |
| 10/9/2013  |              |              |             |              |              |             |              | <0.0005      |
| 10/15/2013 |              |              |             |              |              | <0.0005     |              |              |
| 10/16/2013 |              |              |             |              |              |             | <0.0005      |              |
| 4/1/2014   |              |              |             |              |              |             |              | <0.0005      |
| 4/10/2014  |              |              |             |              |              | <0.0005     |              |              |
| 4/22/2014  |              |              |             |              |              |             | <0.0005      |              |
| 10/1/2014  |              |              |             |              |              | <0.0005     | <0.0005      |              |
| 10/2/2014  |              |              |             |              |              |             |              | <0.0005      |
| 3/30/2015  |              |              |             |              |              | <0.0005     | <0.0005      |              |
| 4/1/2015   |              |              |             |              |              |             |              | <0.0005      |
| 10/11/2015 |              |              |             |              |              | 0.00026 (J) | <0.0005      |              |
| 10/14/2015 |              |              |             |              |              |             |              | 0.00025 (J)  |
| 3/11/2016  |              | 0.000121 (J) | <0.0005     | <0.0005      |              |             |              |              |
| 3/15/2016  | <0.0005      |              |             |              |              |             |              |              |
| 3/28/2016  |              |              |             |              |              | <0.0005     | <0.0005      |              |
| 4/4/2016   |              |              |             |              |              |             |              | 0.000136 (J) |
| 5/13/2016  | <0.0005      |              | <0.0005     | <0.0005      |              |             |              |              |
| 5/16/2016  |              | 0.000145 (J) |             |              |              |             |              |              |
| 5/23/2016  |              |              |             |              |              | <0.0005     |              |              |
| 5/25/2016  |              |              |             |              |              |             | <0.0005      |              |
| 5/27/2016  |              |              |             |              |              |             |              | 0.000131 (J) |
| 7/19/2016  |              |              | <0.0005     | <0.0005      |              |             |              |              |

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 9/15/2022 4:04 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-41R (bg) | GWA-42 (bg) | GWA-43 (bg) | GWA-43R (bg) | GWA-4RZ (bg) | GWA-50 (bg) | GWA-50R (bg) | GWC-12      |
|------------|--------------|-------------|-------------|--------------|--------------|-------------|--------------|-------------|
| 7/21/2016  | <0.0005      |             |             |              |              |             |              |             |
| 7/22/2016  |              | <0.0005     |             |              |              |             |              |             |
| 8/1/2016   |              |             |             |              |              | <0.0005     | <0.0005      |             |
| 8/3/2016   |              |             |             |              |              |             |              | <0.0005     |
| 9/16/2016  |              |             | <0.0005     | <0.0005      |              |             |              |             |
| 9/19/2016  |              | 0.0001 (J)  |             |              |              |             |              |             |
| 9/21/2016  | <0.0005      |             |             |              |              |             |              |             |
| 9/26/2016  |              |             |             |              |              | <0.0005     | <0.0005      |             |
| 9/30/2016  |              |             |             |              |              |             |              | 9E-05 (J)   |
| 11/2/2016  |              |             | <0.0005     | <0.0005      |              |             |              |             |
| 11/3/2016  | <0.0005      | 8E-05 (J)   |             |              |              |             |              |             |
| 11/10/2016 |              |             |             |              |              | <0.0005     |              |             |
| 11/11/2016 |              |             |             |              |              |             | <0.0005      |             |
| 11/22/2016 |              |             |             |              |              |             |              | <0.0005     |
| 1/17/2017  | <0.0005      | 0.0001 (J)  |             |              |              |             |              |             |
| 1/18/2017  |              |             | <0.0005     | <0.0005      |              |             |              |             |
| 1/30/2017  |              |             |             |              |              | <0.0005     | <0.0005      |             |
| 2/13/2017  |              |             |             |              |              |             |              | 0.0001 (J)  |
| 2/22/2017  |              |             |             |              | <0.0005      |             |              |             |
| 3/27/2017  | <0.0005      | 0.0002 (J)  |             |              |              |             |              |             |
| 3/28/2017  |              |             | <0.0005     | <0.0005      |              |             |              |             |
| 4/3/2017   |              |             |             |              |              |             | <0.0005      |             |
| 4/7/2017   |              |             |             |              | <0.0005      | <0.0005     |              |             |
| 4/11/2017  |              |             |             |              |              |             |              | 0.0003 (J)  |
| 6/6/2017   | <0.0005      |             | 8E-05 (J)   | <0.0005      |              |             |              |             |
| 6/7/2017   |              | 0.0001 (J)  |             |              |              |             |              |             |
| 6/12/2017  |              |             |             |              |              | <0.0005     | <0.0005      |             |
| 6/14/2017  |              |             |             |              | <0.0005 (D)  |             |              | 0.0003 (J)  |
| 7/12/2017  |              |             |             |              | <0.0005 (D)  |             |              |             |
| 7/20/2017  |              |             |             |              | <0.0005 (D)  |             |              |             |
| 7/28/2017  |              |             |             |              | <0.0005      |             |              |             |
| 8/9/2017   |              |             |             |              | <0.0005      |             |              |             |
| 8/24/2017  |              |             |             |              | <0.0005      |             |              |             |
| 9/22/2017  |              |             | <0.0005     | <0.0005      |              |             |              |             |
| 9/25/2017  | <0.0005      |             |             |              |              |             |              |             |
| 9/26/2017  |              | <0.0005     |             |              |              |             |              |             |
| 10/2/2017  |              |             |             |              |              | <0.0005     | <0.0005      |             |
| 10/3/2017  |              |             |             |              | <0.0005 (D)  |             |              |             |
| 10/4/2017  |              |             |             |              |              |             |              | 0.0002 (J)  |
| 3/14/2018  | <0.0005      | 0.00011 (J) | <0.0005     |              |              |             |              |             |
| 3/15/2018  |              |             |             | <0.0005      |              |             |              |             |
| 3/16/2018  |              |             |             |              |              | <0.0005     | <0.0005      |             |
| 3/21/2018  |              |             |             |              | <0.0005      |             |              |             |
| 3/22/2018  |              |             |             |              |              |             |              | 0.00032 (J) |
| 9/12/2018  | <0.0005      |             | <0.0005     | <0.0005      |              |             |              |             |
| 9/14/2018  |              | 0.00013 (J) |             |              |              |             |              |             |
| 9/17/2018  |              |             |             |              |              | <0.0005     |              |             |
| 9/18/2018  |              |             |             |              | <0.0005      |             | <0.0005      | 0.00057 (J) |
| 3/13/2019  |              |             | <0.0005     | <0.0005      |              |             |              |             |
| 3/14/2019  | <0.0005      | 0.00013 (J) |             |              |              |             |              |             |
| 3/19/2019  |              |             |             |              |              | <0.0005     | <0.0005      |             |
| 3/21/2019  |              |             |             |              | <0.0005 (D)  |             |              |             |



# Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 9/15/2022 4:04 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-1 (bg) | GWA-2 (bg) | GWA-2R (bg) | GWA-39RZ (bg) | GWA-39Z (bg) | GWA-3A (bg) | GWA-40 (bg) | GWA-41 (bg) |
|------------|------------|------------|-------------|---------------|--------------|-------------|-------------|-------------|
| 3/14/2016  |            |            |             |               | 1.795        |             |             |             |
| 3/15/2016  |            |            |             |               |              |             | 1.1671      | 4.1666      |
| 3/22/2016  | 1.5101     |            |             |               |              |             |             |             |
| 3/23/2016  |            | 2.4904     | 0.9079      |               |              | 1.6092      |             |             |
| 5/11/2016  |            |            |             |               | 2.04         |             | 0.8763      |             |
| 5/12/2016  |            |            |             |               |              |             |             | 1.78        |
| 5/16/2016  |            |            |             | 1.74 (D)      |              |             |             |             |
| 5/19/2016  | 1.5        |            | 0.9136      |               |              |             |             |             |
| 5/20/2016  |            | 1.71       |             |               |              |             |             |             |
| 5/23/2016  |            |            |             |               |              | 1.52        |             |             |
| 7/19/2016  |            |            |             |               | 2.1          |             |             |             |
| 7/20/2016  |            |            |             |               |              |             |             | 1.8         |
| 7/21/2016  |            |            |             |               |              |             | 1.4         |             |
| 7/27/2016  |            |            |             | 2.1 (D)       |              |             |             |             |
| 7/29/2016  | 1.7        | 2          | 1.1         |               |              | 1.5         |             |             |
| 9/15/2016  |            |            |             |               | 1.7          |             |             | 1.4         |
| 9/19/2016  |            |            |             |               |              |             | 1.1         |             |
| 9/22/2016  |            |            | 1           |               |              | 1.4         |             |             |
| 9/23/2016  | 1.8        | 1.8        |             |               |              |             |             |             |
| 11/2/2016  |            |            |             |               | 1.8          |             |             |             |
| 11/3/2016  |            |            |             |               |              |             | 1.2         | 1.6         |
| 11/9/2016  | 2          | 1.6        |             |               |              |             |             |             |
| 11/10/2016 |            |            | 1.2         |               |              | 1.6         |             |             |
| 1/17/2017  |            |            |             |               |              |             | 1           |             |
| 1/18/2017  |            |            |             |               | 1.7          |             |             | 1.5         |
| 1/30/2017  | 1.5        |            |             |               |              |             |             |             |
| 1/31/2017  |            | 1.3        | 1.2         |               |              | 1.6         |             |             |
| 2/21/2017  |            |            |             | 4 (D)         |              |             |             |             |
| 3/24/2017  |            |            |             |               |              |             | 1.2         | 1.4         |
| 3/27/2017  |            |            |             | 2.6 (D)       |              |             |             |             |
| 3/28/2017  |            |            |             |               | 1.3          |             |             |             |
| 3/30/2017  | 1.8        | 1.6        |             |               |              | 1.4         |             |             |
| 4/3/2017   |            |            | 0.99        |               |              |             |             |             |
| 5/24/2017  |            |            |             |               |              |             | 1.5         |             |
| 6/6/2017   |            |            |             |               |              |             |             | 2.8         |
| 6/7/2017   |            |            |             |               | 1.2          |             |             |             |
| 6/8/2017   |            |            |             | 2.1 (D)       |              |             |             |             |
| 6/9/2017   | 1.6        |            | 0.87        |               |              |             |             |             |
| 6/12/2017  |            | 1.6        |             |               |              | 1.4         |             |             |
| 7/17/2017  |            |            |             | 1.9 (D)       |              |             |             |             |
| 7/27/2017  |            |            |             | 3 (D)         |              |             |             |             |
| 8/9/2017   |            |            |             | 2.5 (D)       |              |             |             |             |
| 9/25/2017  |            |            |             |               |              |             |             | 1.8         |
| 9/26/2017  |            |            |             |               | 1.7          |             | 2.4         |             |
| 9/29/2017  |            |            |             | 2.7 (D)       |              |             |             |             |
| 10/2/2017  | 1.6        | 0.94       | 1           |               |              |             |             |             |
| 10/4/2017  |            |            |             |               |              | 1.5         |             |             |
| 12/28/2017 |            |            |             |               |              |             | 3.9 (Y)     |             |
| 3/14/2018  |            |            |             |               | 1.4          |             | 2.4         | 3           |
| 3/16/2018  | 1.7        |            | 1.6         | 2.6           |              |             |             |             |
| 3/19/2018  |            | 1.9        |             |               |              | 1.5         |             |             |
| 9/12/2018  |            |            |             |               | 1.6          |             | 1           | 1.4         |



# Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 9/15/2022 4:04 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|           | GWA-1 (bg) | GWA-2 (bg) | GWA-2R (bg) | GWA-39RZ (bg) | GWA-39Z (bg) | GWA-3A (bg) | GWA-40 (bg) | GWA-41 (bg) |
|-----------|------------|------------|-------------|---------------|--------------|-------------|-------------|-------------|
| 9/14/2018 |            | 0.98       | 0.92        | 1.9           |              |             |             |             |
| 9/17/2018 | 1.55 (D)   |            |             |               |              | 1.5         |             |             |
| 3/13/2019 |            |            |             |               |              |             | 2.2         |             |
| 3/14/2019 |            |            |             | 2.8           |              |             |             | 2.6         |
| 3/15/2019 |            |            |             |               | 1.7          |             |             |             |
| 3/19/2019 |            |            | 2           |               |              |             |             |             |
| 3/20/2019 | <1.5       | <1.5       |             |               |              | <1.5        |             |             |
| 9/9/2019  |            |            |             |               | 1.2          |             | 0.83 (X)    |             |
| 9/10/2019 |            |            |             | 2.3           |              |             |             | 1.1         |
| 9/12/2019 | 1.3        | 0.815 (JD) |             |               |              |             |             |             |
| 9/13/2019 |            |            | 0.94 (J)    |               |              | 1.5         |             |             |
| 3/6/2020  |            |            |             |               |              |             |             | 1.3         |
| 3/9/2020  |            |            |             | 1.5           | 1.2          |             | 1.5         |             |
| 3/11/2020 | 1.4        | 2          | 0.6 (J)     |               |              | 1.4         |             |             |
| 9/10/2020 |            |            |             |               | 1.2          |             |             | 1.2         |
| 9/11/2020 |            |            |             |               |              |             | 0.77 (J)    |             |
| 9/15/2020 | 1.3        | 1.2        | 0.75 (J)    |               |              |             |             |             |
| 9/16/2020 |            |            |             | 1.7           |              |             |             |             |
| 3/10/2021 |            |            |             |               |              |             | 0.97 (J)    |             |
| 3/11/2021 |            |            |             |               |              |             |             | 1.5         |
| 3/12/2021 |            |            |             |               | 1.2          |             |             |             |
| 3/16/2021 | 1.3        |            | 0.73 (J)    | 1.3           |              |             |             |             |
| 3/17/2021 |            | 1.4        |             |               |              |             |             |             |
| 3/29/2021 |            |            |             |               |              | 1.5         |             |             |
| 8/4/2021  |            |            |             |               | 1.1          |             | 0.82 (J)    | 1.2         |
| 8/6/2021  |            |            |             | 1.3           |              |             |             |             |
| 8/9/2021  | 1.3        | 1.5        | 1.1         |               |              | 1.4         |             |             |
| 1/31/2022 |            |            |             |               | 1            |             | 0.71 (J)    | 1           |
| 2/1/2022  | 1.2        | 1.4        | 0.77 (J)    |               |              |             |             |             |
| 2/2/2022  |            |            |             | 1.5           |              | 1.9         |             |             |

# Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 9/15/2022 4:04 PM View: Resample Reports

Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-41R (bg) | GWA-42 (bg) | GWA-43 (bg) | GWA-43R (bg) | GWA-4RZ (bg) | GWA-50 (bg) | GWA-50R (bg) | GWC-48 |
|------------|--------------|-------------|-------------|--------------|--------------|-------------|--------------|--------|
| 3/10/2016  |              |             |             |              |              |             |              | 2.4266 |
| 3/11/2016  |              | 2.4984      | 1.2562      | 1.9467       |              |             |              |        |
| 3/15/2016  | 6.1465 (o)   |             |             |              |              |             |              |        |
| 3/28/2016  |              |             |             |              |              | 1.14        | 0.9204       |        |
| 5/13/2016  | 3.08         |             | 1.32        | 2.14         |              |             |              |        |
| 5/16/2016  |              | 2.22        |             |              |              |             |              |        |
| 5/17/2016  |              |             |             |              |              |             |              | 2.01   |
| 5/23/2016  |              |             |             |              |              | 1.19        |              |        |
| 5/25/2016  |              |             |             |              |              |             | 1.04         |        |
| 7/19/2016  |              |             | 1.3         | 3.1          |              |             |              |        |
| 7/21/2016  | 3.7          |             |             |              |              |             |              |        |
| 7/22/2016  |              | 2.6         |             |              |              |             |              |        |
| 7/27/2016  |              |             |             |              |              |             |              | 2.3    |
| 8/1/2016   |              |             |             |              |              | 1.2         | 0.85         |        |
| 9/16/2016  |              |             | 1.2         | 3.5          |              |             |              |        |
| 9/19/2016  |              | 2.5         |             |              |              |             |              |        |
| 9/20/2016  |              |             |             |              |              |             |              | 2.2    |
| 9/21/2016  | 2.4          |             |             |              |              |             |              |        |
| 9/26/2016  |              |             |             |              |              | 1.1         | 0.87         |        |
| 11/2/2016  |              |             | 1.4         | 4.7          |              |             |              |        |
| 11/3/2016  | 3.4          | 3           |             |              |              |             |              |        |
| 11/4/2016  |              |             |             |              |              |             |              | 3      |
| 11/10/2016 |              |             |             |              |              | 1.3         |              |        |
| 11/11/2016 |              |             |             |              |              |             | 0.99         |        |
| 1/17/2017  | 1.9          | 2.9         |             |              |              |             |              |        |
| 1/18/2017  |              |             | 1.2         | 4.9          |              |             |              |        |
| 1/23/2017  |              |             |             |              |              |             |              | 2.5    |
| 1/30/2017  |              |             |             |              |              | 1.2         | 0.95         |        |
| 2/22/2017  |              |             |             |              | 3.7 (D)      |             |              |        |
| 3/27/2017  | 2.4          | 3           |             |              |              |             |              |        |
| 3/28/2017  |              |             | 1.4         | 4.1          |              |             |              | 2.2    |
| 4/3/2017   |              |             |             |              |              |             | 0.88         |        |
| 4/7/2017   |              |             |             |              | 2.5 (D)      | 1.2         |              |        |
| 6/6/2017   | 4.5          |             | 1.4         | 3.6          |              |             |              |        |
| 6/7/2017   |              | 3           |             |              |              |             |              |        |
| 6/8/2017   |              |             |             |              |              |             |              | 2.3    |
| 6/12/2017  |              |             |             |              |              | 1.1         | 0.83         |        |
| 6/14/2017  |              |             |             |              | 2.6 (D)      |             |              |        |
| 7/12/2017  |              |             |             |              | 2.8 (D)      |             |              |        |
| 7/20/2017  |              |             |             |              | 2.3 (D)      |             |              |        |
| 7/28/2017  |              |             |             |              | 2 (D)        |             |              |        |
| 8/9/2017   |              |             |             |              | 1.8 (D)      |             |              |        |
| 8/24/2017  |              |             |             |              | 2.9 (D)      |             |              |        |
| 9/22/2017  |              |             | 1.3         | 3.9          |              |             |              |        |
| 9/25/2017  | 2.5          |             |             |              |              |             |              |        |
| 9/26/2017  |              | 3.1         |             |              |              |             |              |        |
| 9/29/2017  |              |             |             |              |              |             |              | 2.5    |
| 10/2/2017  |              |             |             |              |              | 1.2         | 0.94         |        |
| 10/3/2017  |              |             |             |              | 2.8 (D)      |             |              |        |
| 3/14/2018  | 4 (J)        | 3.2         | 1.3         |              |              |             |              |        |
| 3/15/2018  |              |             |             | 2.8          |              |             |              | 2.6    |
| 3/16/2018  |              |             |             |              |              | 1.4         | <1.5         |        |



# Time Series

Constituent: Mercury (mg/L) Analysis Run 9/15/2022 4:04 PM View: Resample Reports

Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-1 (bg) | GWA-2 (bg) | GWA-2R (bg) | GWA-39RZ (bg) | GWA-39Z (bg) | GWA-3A (bg) | GWA-40 (bg) | GWA-41 (bg) |
|------------|------------|------------|-------------|---------------|--------------|-------------|-------------|-------------|
| 8/23/2007  | <0.0005    | <0.0005    | <0.0005     |               |              | <0.0005     |             |             |
| 10/23/2007 | <0.0005    |            |             |               |              |             |             |             |
| 10/24/2007 |            | <0.0005    | <0.0005     |               |              |             |             |             |
| 11/2/2007  |            |            |             |               |              | <0.0005     |             |             |
| 11/18/2007 | <0.0005    | <0.0005    | <0.0005     |               |              | <0.0005     |             |             |
| 1/30/2008  | <0.0005    |            |             |               |              |             |             |             |
| 1/31/2008  |            | <0.0005    | <0.0005     |               |              | <0.0005     |             |             |
| 3/10/2008  | <0.0005    |            | <0.0005     |               |              |             |             |             |
| 3/11/2008  |            | <0.0005    |             |               |              | <0.0005     |             |             |
| 5/6/2008   |            | 0.000175   |             |               |              |             |             |             |
| 5/13/2008  | <0.0005    |            | <0.0005     |               |              |             |             |             |
| 5/14/2008  |            |            |             |               |              | <0.0005     |             |             |
| 12/4/2008  |            | <0.0005    | <0.0005     |               |              |             |             |             |
| 12/5/2008  | <0.0005    |            |             |               |              | <0.0005     |             |             |
| 4/15/2009  | <0.0005    |            |             |               |              | <0.0005     |             |             |
| 4/21/2009  |            | <0.0005    | <0.0005     |               |              |             |             |             |
| 10/7/2009  | <0.0005    | <0.0005    |             |               |              |             |             |             |
| 10/8/2009  |            |            | <0.0005     |               |              | <0.0005     |             |             |
| 4/21/2010  |            |            | <0.0005     |               |              |             |             |             |
| 4/26/2010  |            | <0.0005    |             |               |              |             |             |             |
| 4/28/2010  |            |            |             |               |              | <0.0005     |             |             |
| 5/3/2010   | <0.0005    |            |             |               |              |             |             |             |
| 9/28/2010  |            |            | <0.0005     |               |              |             |             |             |
| 10/4/2010  |            | <0.0005    |             |               |              |             |             |             |
| 10/6/2010  |            |            |             |               |              | <0.0005     |             |             |
| 10/12/2010 | <0.0005    |            |             |               |              |             |             |             |
| 4/12/2011  |            |            | <0.0005     |               |              |             |             |             |
| 4/13/2011  |            | <0.0005    |             |               |              |             |             |             |
| 4/21/2011  |            |            |             |               |              | <0.0005     |             |             |
| 4/27/2011  | <0.0005    |            |             |               |              |             |             |             |
| 10/4/2011  |            |            | <0.0005     |               |              |             |             |             |
| 10/5/2011  |            | <0.0005    |             |               |              |             |             |             |
| 10/13/2011 |            |            |             |               |              | <0.0005     |             |             |
| 10/17/2011 | <0.0005    |            |             |               |              |             |             |             |
| 4/3/2012   |            |            | <0.0005     |               |              |             |             |             |
| 4/11/2012  |            | <0.0005    |             |               |              |             |             |             |
| 5/1/2012   |            |            |             |               |              | <0.0005     |             |             |
| 5/2/2012   | <0.0005    |            |             |               |              |             |             |             |
| 10/8/2012  | <0.0005    |            |             |               |              |             |             |             |
| 10/9/2012  |            | <0.0005    | <0.0005     |               |              | <0.0005     |             |             |
| 4/11/2013  |            |            | <0.0005     |               |              | <0.0005     |             |             |
| 4/12/2013  | <0.0005    |            |             |               |              |             |             |             |
| 4/15/2013  |            | <0.0005    |             |               |              |             |             |             |
| 10/15/2013 |            | <0.0005    |             |               |              |             |             |             |
| 10/16/2013 | <0.0005    |            | <0.0005     |               |              | <0.0005     |             |             |
| 4/10/2014  |            |            | <0.0005     |               |              |             |             |             |
| 4/11/2014  | <0.0005    |            |             |               |              |             |             |             |
| 4/22/2014  |            | <0.0005    |             |               |              |             |             |             |
| 4/23/2014  |            |            |             |               |              | <0.0005     |             |             |
| 9/30/2014  | <0.0005    | <0.0005    | <0.0005     |               |              |             |             |             |
| 10/4/2014  |            |            |             |               |              | <0.0005     |             |             |
| 3/30/2015  | <0.0005    | <0.0005    | <0.0005     |               |              |             |             |             |

# Time Series

Constituent: Mercury (mg/L) Analysis Run 9/15/2022 4:04 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-1 (bg) | GWA-2 (bg) | GWA-2R (bg) | GWA-39RZ (bg) | GWA-39Z (bg) | GWA-3A (bg) | GWA-40 (bg) | GWA-41 (bg) |
|------------|------------|------------|-------------|---------------|--------------|-------------|-------------|-------------|
| 3/31/2015  |            |            |             |               |              | <0.0005     |             |             |
| 10/12/2015 |            |            |             |               |              | <0.0005     |             |             |
| 10/13/2015 | <0.0005    | <0.0005    | <0.0005     |               |              |             |             |             |
| 3/14/2016  |            |            |             |               | <0.0005      |             |             |             |
| 3/15/2016  |            |            |             |               |              |             | <0.0005     | <0.0005     |
| 3/22/2016  | <0.0005    |            |             |               |              |             |             |             |
| 3/23/2016  |            | <0.0005    | <0.0005     |               |              | <0.0005     |             |             |
| 5/11/2016  |            |            |             |               | <0.0005      |             | <0.0005     |             |
| 5/12/2016  |            |            |             |               |              |             |             | <0.0005     |
| 5/16/2016  |            |            |             | <0.0005 (D)   |              |             |             |             |
| 5/19/2016  | <0.0005    |            | <0.0005     |               |              |             |             |             |
| 5/20/2016  |            | <0.0005    |             |               |              |             |             |             |
| 5/23/2016  |            |            |             |               |              | <0.0005     |             |             |
| 7/19/2016  |            |            |             |               | <0.0005      |             |             |             |
| 7/20/2016  |            |            |             |               |              |             |             | <0.0005     |
| 7/21/2016  |            |            |             |               |              |             | <0.0005     |             |
| 7/27/2016  |            |            |             | <0.0005 (D)   |              |             |             |             |
| 7/29/2016  | <0.0005    | <0.0005    | <0.0005     |               |              | <0.0005     |             |             |
| 9/15/2016  |            |            |             |               | <0.0005      |             | <0.0005     | <0.0005     |
| 9/22/2016  |            |            | <0.0005     |               |              | <0.0005     |             |             |
| 9/23/2016  | <0.0005    | <0.0005    |             |               |              |             |             |             |
| 11/2/2016  |            |            |             |               | <0.0005      |             |             |             |
| 11/3/2016  |            |            |             |               |              |             | <0.0005     | <0.0005     |
| 11/9/2016  | <0.0005    | <0.0005    |             |               |              |             |             |             |
| 11/10/2016 |            |            | <0.0005     |               |              | <0.0005     |             |             |
| 1/17/2017  |            |            |             |               |              |             | <0.0005     |             |
| 1/18/2017  |            |            |             |               | <0.0005      |             |             | <0.0005     |
| 1/30/2017  | <0.0005    |            |             |               |              |             |             |             |
| 1/31/2017  |            | <0.0005    | <0.0005     |               |              | <0.0005     |             |             |
| 2/21/2017  |            |            |             | <0.0005       |              |             |             |             |
| 3/24/2017  |            |            |             |               |              |             | <0.0005     | <0.0005     |
| 3/27/2017  |            |            |             | <0.0005 (D)   |              |             |             |             |
| 3/28/2017  |            |            |             |               | <0.0005      |             |             |             |
| 3/30/2017  | <0.0005    | <0.0005    |             |               |              | <0.0005     |             |             |
| 4/3/2017   |            |            | <0.0005     |               |              |             |             |             |
| 5/24/2017  |            |            |             |               |              |             | <0.0005     |             |
| 6/6/2017   |            |            |             |               |              |             |             | <0.0005     |
| 6/7/2017   |            |            |             |               | <0.0005      |             |             |             |
| 6/8/2017   |            |            |             | <0.0005 (D)   |              |             |             |             |
| 6/9/2017   | <0.0005    |            | <0.0005     |               |              |             |             |             |
| 6/12/2017  |            | <0.0005    |             |               |              | <0.0005     |             |             |
| 7/17/2017  |            |            |             | <0.0005 (D)   |              |             |             |             |
| 7/27/2017  |            |            |             | <0.0005       |              |             |             |             |
| 8/9/2017   |            |            |             | <0.0005       |              |             |             |             |
| 9/25/2017  |            |            |             |               |              |             |             | <0.0005     |
| 9/26/2017  |            |            |             |               | <0.0005      |             | <0.0005     |             |
| 9/29/2017  |            |            |             | <0.0005 (D)   |              |             |             |             |
| 10/2/2017  | <0.0005    | <0.0005    | <0.0005     |               |              |             |             |             |
| 10/4/2017  |            |            |             |               |              | <0.0005     |             |             |
| 3/14/2018  |            |            |             |               | <0.0005      |             | <0.0005     | <0.0005     |
| 3/16/2018  | <0.0005    |            | <0.0005     | <0.0005       |              |             |             |             |
| 3/19/2018  |            | <0.0005    |             |               |              | <0.0005     |             |             |

# Time Series

Constituent: Mercury (mg/L) Analysis Run 9/15/2022 4:04 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|           | GWA-1 (bg)  | GWA-2 (bg)  | GWA-2R (bg) | GWA-39RZ (bg) | GWA-39Z (bg) | GWA-3A (bg) | GWA-40 (bg) | GWA-41 (bg) |
|-----------|-------------|-------------|-------------|---------------|--------------|-------------|-------------|-------------|
| 9/12/2018 |             |             |             |               | <0.0005      |             | 3.8E-05 (J) | <0.0005     |
| 9/14/2018 |             | <0.0005     | <0.0005     | 4.1E-05 (J)   |              |             |             |             |
| 9/17/2018 | <0.0005 (D) |             |             |               |              | <0.0005     |             |             |
| 3/13/2019 |             |             |             |               |              |             | <0.0005     |             |
| 3/14/2019 |             |             |             | <0.0005       |              |             |             | <0.0005     |
| 3/15/2019 |             |             |             |               | <0.0005      |             |             |             |
| 3/19/2019 |             |             | <0.0005     |               |              |             |             |             |
| 3/20/2019 | <0.0005     | <0.0005     |             |               |              | <0.0005     |             |             |
| 9/9/2019  |             |             |             |               | <0.0005      |             | <0.0005     |             |
| 9/10/2019 |             |             |             |               |              |             |             | <0.0005 (D) |
| 9/12/2019 | <0.0005     | <0.0005 (D) |             |               |              |             |             |             |
| 9/13/2019 |             |             | <0.0005     |               |              | <0.0005     |             |             |
| 3/6/2020  |             |             |             |               |              |             |             | <0.0005     |
| 3/9/2020  |             |             |             | <0.0005       | <0.0005      |             | <0.0005     |             |
| 3/11/2020 | <0.0005     | <0.0005     | <0.0005     |               |              | <0.0005     |             |             |
| 9/10/2020 |             |             |             |               | <0.0005      |             |             | <0.0005     |
| 9/11/2020 |             |             |             |               |              |             | <0.0005     |             |
| 9/15/2020 | <0.0005     | <0.0005     | <0.0005     |               |              |             |             |             |
| 9/16/2020 |             |             |             | <0.0005       |              |             |             |             |
| 3/10/2021 |             |             |             |               |              |             | <0.0005     |             |
| 3/11/2021 |             |             |             |               |              |             |             | <0.0005     |
| 3/12/2021 |             |             |             |               | <0.0005      |             |             |             |
| 3/16/2021 | <0.0005     |             | <0.0005     | <0.0005       |              |             |             |             |
| 3/17/2021 |             | <0.0005     |             |               |              |             |             |             |
| 3/29/2021 |             |             |             |               |              | <0.0005     |             |             |
| 8/4/2021  |             |             |             |               | 0.00012 (J)  |             | 9.4E-05 (J) | 9E-05 (J)   |
| 8/6/2021  |             |             |             | <0.0005       |              |             |             |             |
| 8/9/2021  | <0.0005     | <0.0005     | <0.0005     |               |              | <0.0005     |             |             |
| 1/31/2022 |             |             |             |               | <0.0005      |             | <0.0005     | <0.0005     |
| 2/1/2022  | <0.0005     | <0.0005     | <0.0005     |               |              |             |             |             |
| 2/2/2022  |             |             |             | <0.0005       |              | <0.0005     |             |             |

# Time Series

Constituent: Mercury (mg/L) Analysis Run 9/15/2022 4:04 PM View: Resample Reports

Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-41R (bg) | GWA-42 (bg) | GWA-43 (bg) | GWA-43R (bg) | GWA-4RZ (bg) | GWA-50 (bg)  | GWA-50R (bg) | GWC-48  |
|------------|--------------|-------------|-------------|--------------|--------------|--------------|--------------|---------|
| 12/12/2008 |              |             |             |              |              | <0.0005      | <0.0005      |         |
| 4/23/2009  |              |             |             |              |              | <0.0005      | <0.0005      |         |
| 10/6/2009  |              |             |             |              |              | <0.0005      | <0.0005      |         |
| 4/27/2010  |              |             |             |              |              | <0.0005      |              |         |
| 5/3/2010   |              |             |             |              |              |              | <0.0005      |         |
| 9/30/2010  |              |             |             |              |              | <0.0005      |              |         |
| 10/11/2010 |              |             |             |              |              |              | <0.0005      |         |
| 4/14/2011  |              |             |             |              |              | <0.0005      |              |         |
| 4/27/2011  |              |             |             |              |              |              | <0.0005      |         |
| 10/5/2011  |              |             |             |              |              | <0.0005      |              |         |
| 10/19/2011 |              |             |             |              |              |              | <0.0005      |         |
| 4/11/2012  |              |             |             |              |              | <0.0005      |              |         |
| 5/1/2012   |              |             |             |              |              |              | <0.0005      |         |
| 10/2/2012  |              |             |             |              |              | <0.0005      | <0.0005      |         |
| 4/9/2013   |              |             |             |              |              | <0.0005      |              |         |
| 4/10/2013  |              |             |             |              |              |              | <0.0005      |         |
| 10/15/2013 |              |             |             |              |              | <0.0005      |              |         |
| 10/16/2013 |              |             |             |              |              |              | <0.0005      |         |
| 4/10/2014  |              |             |             |              |              | <0.0005      |              |         |
| 4/22/2014  |              |             |             |              |              |              | <0.0005      |         |
| 10/1/2014  |              |             |             |              |              | <0.0005      | <0.0005      |         |
| 3/30/2015  |              |             |             |              |              | 2.02E-05 (J) | <0.0005      |         |
| 10/11/2015 |              |             |             |              |              | <0.0005      | <0.0005      |         |
| 3/10/2016  |              |             |             |              |              |              |              | <0.0005 |
| 3/11/2016  |              | <0.0005     | <0.0005     | <0.0005      |              |              |              |         |
| 3/15/2016  | <0.0005      |             |             |              |              |              |              |         |
| 3/28/2016  |              |             |             |              |              | <0.0005      | <0.0005      |         |
| 5/13/2016  | <0.0005      |             | <0.0005     | <0.0005      |              |              |              |         |
| 5/16/2016  |              | <0.0005     |             |              |              |              |              |         |
| 5/17/2016  |              |             |             |              |              |              |              | <0.0005 |
| 5/23/2016  |              |             |             |              |              | <0.0005      |              |         |
| 5/25/2016  |              |             |             |              |              |              | <0.0005      |         |
| 7/19/2016  |              |             | <0.0005     | <0.0005      |              |              |              |         |
| 7/21/2016  | <0.0005      |             |             |              |              |              |              |         |
| 7/22/2016  |              | <0.0005     |             |              |              |              |              |         |
| 7/27/2016  |              |             |             |              |              |              |              | <0.0005 |
| 8/1/2016   |              |             |             |              |              | <0.0005      | <0.0005      |         |
| 9/16/2016  |              |             | <0.0005     | <0.0005      |              |              |              |         |
| 9/19/2016  |              | <0.0005     |             |              |              |              |              |         |
| 9/20/2016  |              |             |             |              |              |              |              | <0.0005 |
| 9/21/2016  | <0.0005      |             |             |              |              |              |              |         |
| 9/26/2016  |              |             |             |              |              | <0.0005      | <0.0005      |         |
| 11/2/2016  |              |             | <0.0005     | <0.0005      |              |              |              |         |
| 11/3/2016  | <0.0005      | <0.0005     |             |              |              |              |              |         |
| 11/4/2016  |              |             |             |              |              |              |              | <0.0005 |
| 11/10/2016 |              |             |             |              |              | <0.0005      |              |         |
| 11/11/2016 |              |             |             |              |              |              | <0.0005      |         |
| 1/17/2017  | <0.0005      | <0.0005     |             |              |              |              |              |         |
| 1/18/2017  |              |             | <0.0005     | <0.0005      |              |              |              |         |
| 1/23/2017  |              |             |             |              |              |              |              | <0.0005 |
| 1/30/2017  |              |             |             |              |              | <0.0005      | <0.0005      |         |
| 2/22/2017  |              |             |             |              | <0.0005      |              |              |         |

# Time Series

Constituent: Mercury (mg/L) Analysis Run 9/15/2022 4:04 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

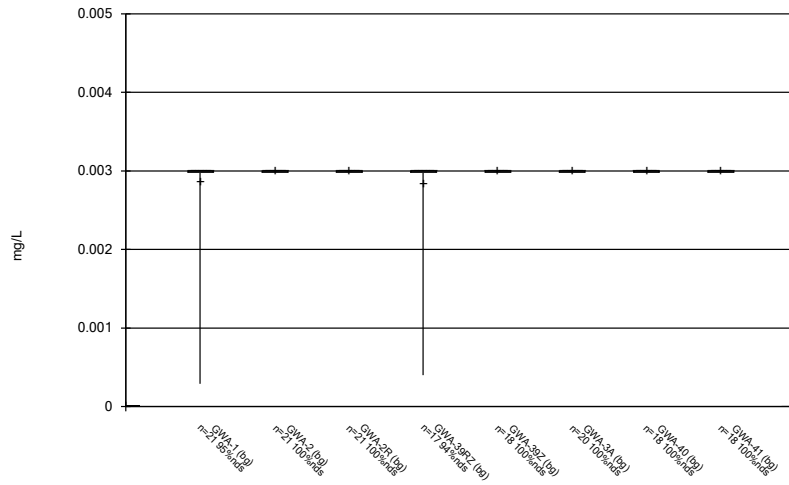
|           | GWA-41R (bg) | GWA-42 (bg) | GWA-43 (bg) | GWA-43R (bg) | GWA-4RZ (bg)  | GWA-50 (bg) | GWA-50R (bg) | GWC-48      |
|-----------|--------------|-------------|-------------|--------------|---------------|-------------|--------------|-------------|
| 3/27/2017 | <0.0005      | <0.0005     |             |              |               |             |              |             |
| 3/28/2017 |              |             | <0.0005     | <0.0005      |               |             |              | <0.0005     |
| 4/3/2017  |              |             |             |              |               |             | <0.0005      |             |
| 4/7/2017  |              |             |             |              | <0.0005       | <0.0005     |              |             |
| 6/6/2017  | <0.0005      |             | <0.0005     | <0.0005      |               |             |              |             |
| 6/7/2017  |              | <0.0005     |             |              |               |             |              |             |
| 6/8/2017  |              |             |             |              |               |             |              | <0.0005     |
| 6/12/2017 |              |             |             |              |               | <0.0005     | <0.0005      |             |
| 6/14/2017 |              |             |             |              | 0.000161 (JD) |             |              |             |
| 7/12/2017 |              |             |             |              | <0.0005 (D)   |             |              |             |
| 7/20/2017 |              |             |             |              | <0.0005 (D)   |             |              |             |
| 7/28/2017 |              |             |             |              | <0.0005       |             |              |             |
| 8/9/2017  |              |             |             |              | <0.0005       |             |              |             |
| 8/24/2017 |              |             |             |              | <0.0005       |             |              |             |
| 9/22/2017 |              |             | <0.0005     | <0.0005      |               |             |              |             |
| 9/25/2017 | <0.0005      |             |             |              |               |             |              |             |
| 9/26/2017 |              | <0.0005     |             |              |               |             |              |             |
| 9/29/2017 |              |             |             |              |               |             |              | <0.0005     |
| 10/2/2017 |              |             |             |              |               | <0.0005     | <0.0005      |             |
| 10/3/2017 |              |             |             |              | <0.0005 (D)   |             |              |             |
| 3/14/2018 | <0.0005      | <0.0005     | <0.0005     |              |               |             |              |             |
| 3/15/2018 |              |             |             | <0.0005      |               |             |              | <0.0005     |
| 3/16/2018 |              |             |             |              |               | <0.0005     | <0.0005      |             |
| 3/21/2018 |              |             |             |              | <0.0005       |             |              |             |
| 9/12/2018 | <0.0005      |             | <0.0005     | 3.9E-05 (J)  |               |             |              |             |
| 9/13/2018 |              |             |             |              |               |             |              | 6.2E-05 (J) |
| 9/14/2018 |              | 3.8E-05 (J) |             |              |               |             |              |             |
| 9/17/2018 |              |             |             |              |               | <0.0005     |              |             |
| 9/18/2018 |              |             |             |              | <0.0005       |             | <0.0005      |             |
| 3/13/2019 |              |             | <0.0005     | <0.0005      |               |             |              |             |
| 3/14/2019 | <0.0005      | <0.0005     |             |              |               |             |              |             |
| 3/15/2019 |              |             |             |              |               |             |              | <0.0005     |
| 3/19/2019 |              |             |             |              |               | <0.0005     | <0.0005      |             |
| 3/21/2019 |              |             |             |              | <0.0005 (D)   |             |              |             |
| 9/10/2019 | <0.0005      | <0.0005     |             |              |               |             |              |             |
| 9/11/2019 |              |             | <0.0005     | <0.0005      |               |             |              | <0.0005 (D) |
| 9/12/2019 |              |             |             |              | <0.0005 (D)   |             | <0.0005      |             |
| 9/13/2019 |              |             |             |              |               | <0.0005     |              |             |
| 3/6/2020  |              | <0.0005     |             |              |               |             |              |             |
| 3/9/2020  | <0.0005      |             | <0.0005     | <0.0005      |               |             |              | <0.0005     |
| 3/11/2020 |              |             |             |              |               | <0.0005     | <0.0005      |             |
| 3/12/2020 |              |             |             |              | <0.0005       |             |              |             |
| 9/10/2020 | <0.0005      | <0.0005     |             |              |               |             |              |             |
| 9/11/2020 |              |             | <0.0005     |              |               |             |              |             |
| 9/14/2020 |              |             |             | <0.0005      |               |             |              | 0.00015 (J) |
| 9/15/2020 |              |             |             |              |               |             | <0.0005      |             |
| 9/16/2020 |              |             |             |              |               | <0.0005     |              |             |
| 9/17/2020 |              |             |             |              | <0.0005       |             |              |             |
| 3/10/2021 | <0.0005      |             |             |              |               |             |              |             |
| 3/11/2021 |              | <0.0005     | <0.0005     | <0.0005      |               |             |              | 0.0002 (J)  |
| 3/16/2021 |              |             |             |              | <0.0005       |             |              |             |
| 3/17/2021 |              |             |             |              |               | <0.0005     | <0.0005      |             |





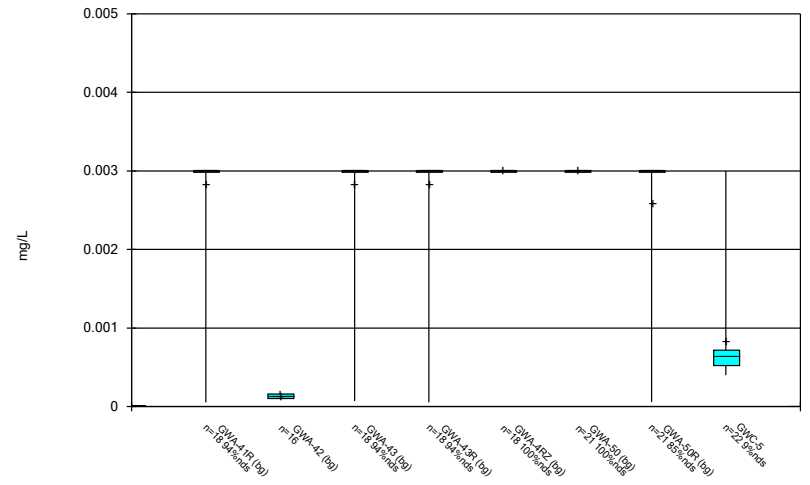
FIGURE T.

Box & Whiskers Plot



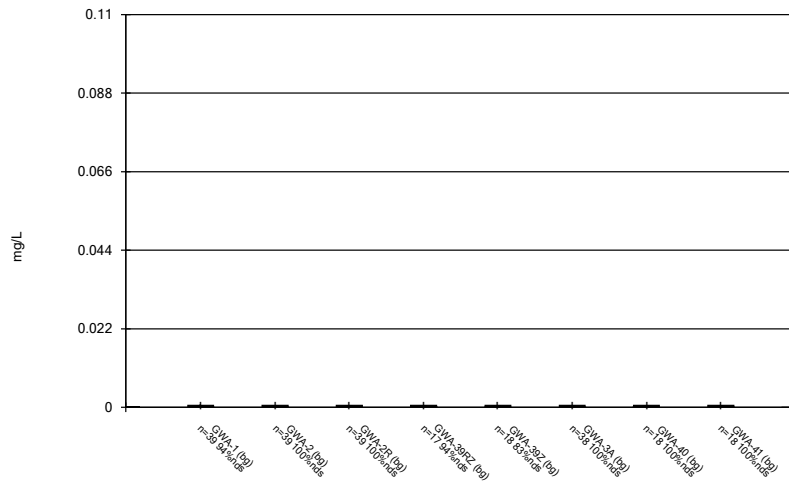
Constituent: Beryllium Analysis Run 9/15/2022 4:02 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

Box & Whiskers Plot



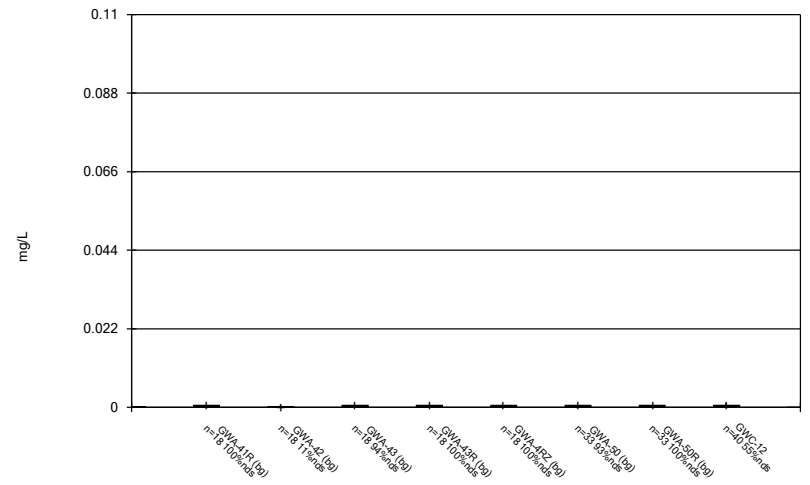
Constituent: Beryllium Analysis Run 9/15/2022 4:02 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

Box & Whiskers Plot



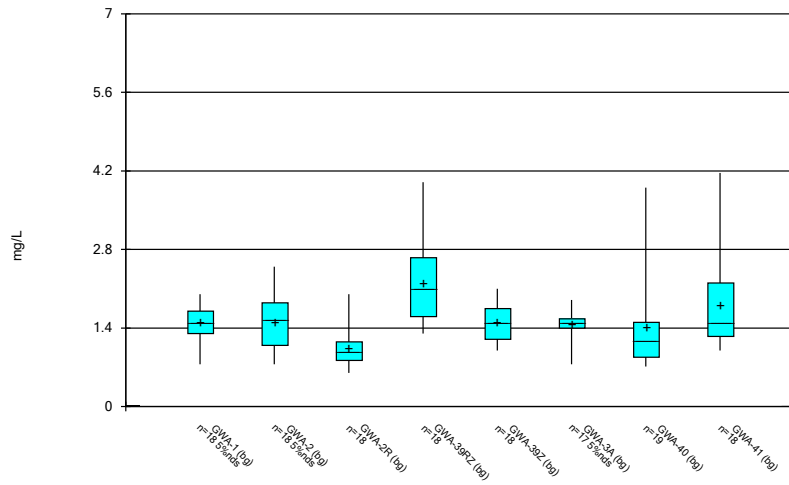
Constituent: Cadmium Analysis Run 9/15/2022 4:02 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

Box & Whiskers Plot



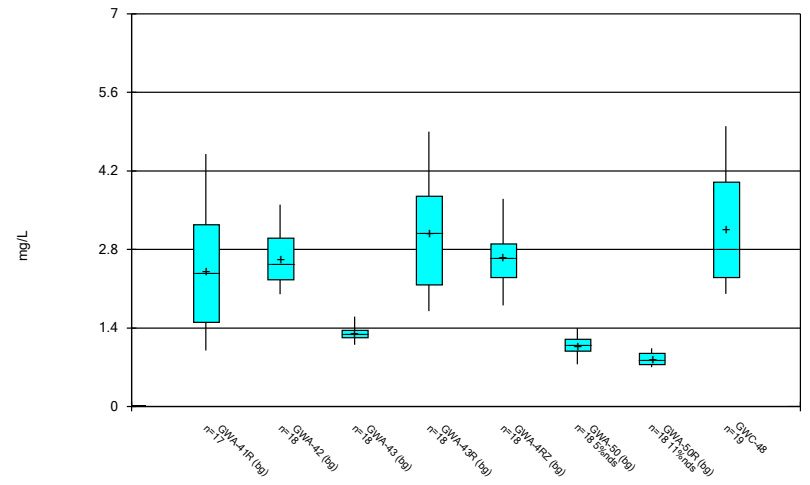
Constituent: Cadmium Analysis Run 9/15/2022 4:02 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

Box & Whiskers Plot



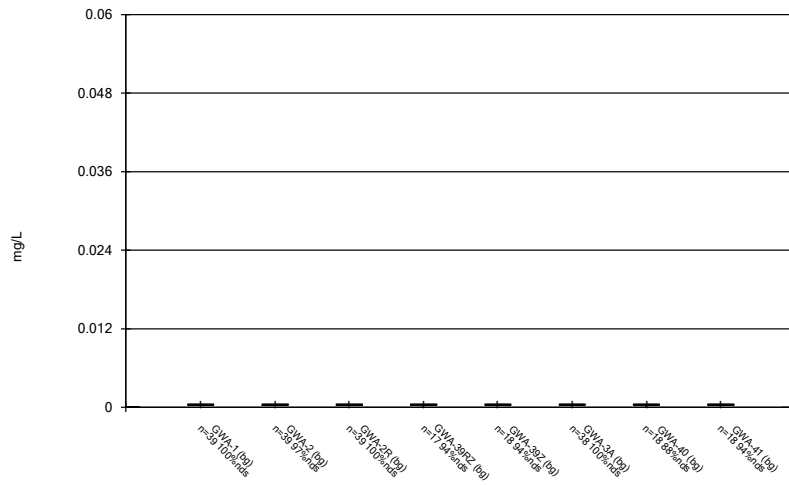
Constituent: Chloride, Total Analysis Run 9/15/2022 4:02 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

Box & Whiskers Plot



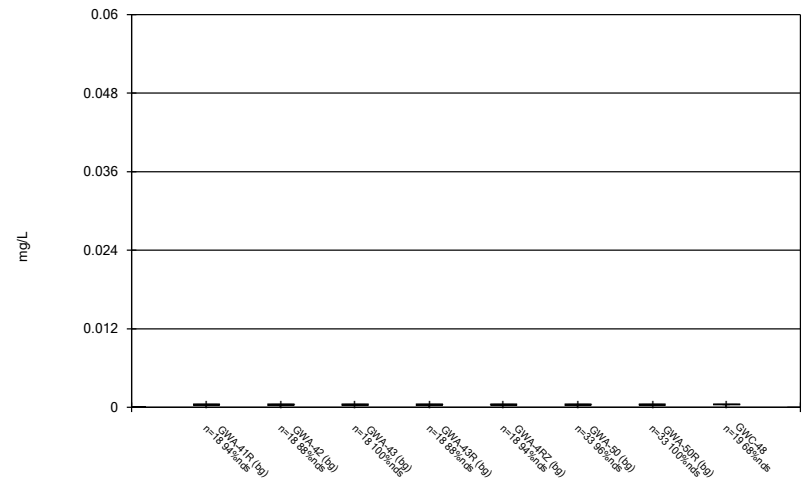
Constituent: Chloride, Total Analysis Run 9/15/2022 4:02 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

Box & Whiskers Plot



Constituent: Mercury Analysis Run 9/15/2022 4:02 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

Box & Whiskers Plot



Constituent: Mercury Analysis Run 9/15/2022 4:02 PM View: Resample Reports  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

FIGURE U.

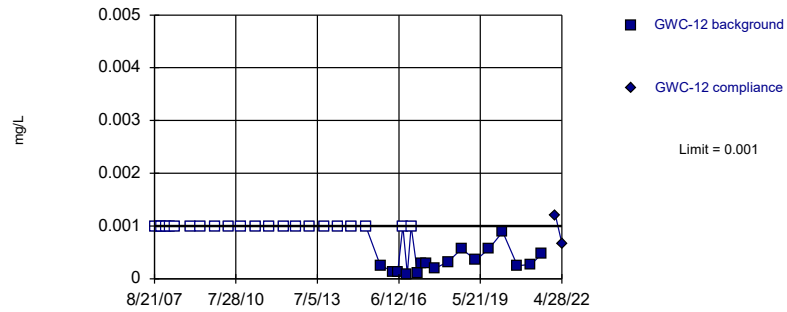
# Appendix I Intrawell Prediction Limits - Resample Results

Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10 Printed 9/15/2022, 4:26 PM

| Constituent    | Well   | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg.N | Bg Mean | Std. Dev. | %NDs  | ND Adj. | Transform | Alpha    | Method                |
|----------------|--------|------------|------------|-----------|---------|------|------|---------|-----------|-------|---------|-----------|----------|-----------------------|
| Cadmium (mg/L) | GWC-12 | 0.001      | n/a        | 4/28/2022 | 0.00067 | No   | 38   | n/a     | n/a       | 57.89 | n/a     | n/a       | 0.001294 | NP Intra (NDs) 1 of 2 |

Within Limit

### Prediction Limit Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 38 background values. 57.89% NDs. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Constituent: Cadmium Analysis Run 9/15/2022 4:25 PM View: Appendix I Intrawell - Resample  
Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

# Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 9/15/2022 4:26 PM View: Appendix I IntraWell - Resample  
Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWC-12        | GWC-12  |
|------------|---------------|---------|
| 8/21/2007  | <0.001        |         |
| 11/1/2007  | <0.001        |         |
| 11/19/2007 | <0.001        |         |
| 1/16/2008  | <0.001        |         |
| 3/5/2008   | <0.001        |         |
| 5/13/2008  | <0.001        |         |
| 12/13/2008 | <0.001        |         |
| 4/16/2009  | <0.001        |         |
| 10/21/2009 | <0.001        |         |
| 4/27/2010  | <0.001        |         |
| 10/5/2010  | <0.001        |         |
| 4/19/2011  | <0.001        |         |
| 10/12/2011 | <0.001        |         |
| 4/24/2012  | <0.001        |         |
| 10/2/2012  | <0.001        |         |
| 4/2/2013   | <0.001        |         |
| 10/9/2013  | <0.001        |         |
| 4/1/2014   | <0.001        |         |
| 10/2/2014  | <0.001        |         |
| 4/1/2015   | <0.001        |         |
| 10/14/2015 | 0.00025 (J)   |         |
| 4/4/2016   | 0.000136 (J)  |         |
| 5/27/2016  | 0.000131 (J)  |         |
| 8/3/2016   | <0.001        |         |
| 9/30/2016  | 9E-05 (J)     |         |
| 11/22/2016 | <0.001        |         |
| 2/13/2017  | 0.0001 (J)    |         |
| 4/11/2017  | 0.0003 (J)    |         |
| 6/14/2017  | 0.0003 (J)    |         |
| 10/4/2017  | 0.0002 (J)    |         |
| 3/22/2018  | 0.00032 (J)   |         |
| 9/18/2018  | 0.00057 (J)   |         |
| 3/23/2019  | 0.00035 (J)   |         |
| 9/17/2019  | 0.000575 (JD) |         |
| 3/12/2020  | 0.00089 (J)   |         |
| 9/21/2020  | 0.00025 (J)   |         |
| 3/19/2021  | 0.00027 (J)   |         |
| 8/11/2021  | 0.00048 (J)   |         |
| 2/2/2022   |               | 0.0012  |
| 4/28/2022  |               | 0.00067 |



FIGURE V.

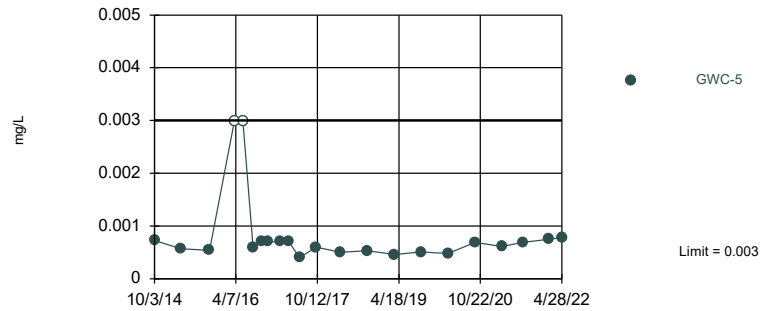
# Appendix I Interwell Prediction Limits - Resample Results

Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10 Printed 9/15/2022, 4:06 PM

| Constituent      | Well   | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg.N | Bg Mean | Std. Dev. | %NDs  | ND Adj. | Transform | Alpha      | Method                |
|------------------|--------|------------|------------|-----------|---------|------|------|---------|-----------|-------|---------|-----------|------------|-----------------------|
| Beryllium (mg/L) | GWC-5  | 0.003      | n/a        | 4/28/2022 | 0.00078 | No   | 284  | n/a     | n/a       | 91.55 | n/a     | n/a       | 0.00004896 | NP Inter (NDs) 1 of 2 |
| Mercury (mg/L)   | GWC-48 | 0.0005     | n/a        | 4/28/2022 | 0.0004  | No   | 382  | n/a     | n/a       | 96.6  | n/a     | n/a       | 0.00004896 | NP Inter (NDs) 1 of 2 |

Within Limit

Prediction Limit  
 Interwell Non-parametric

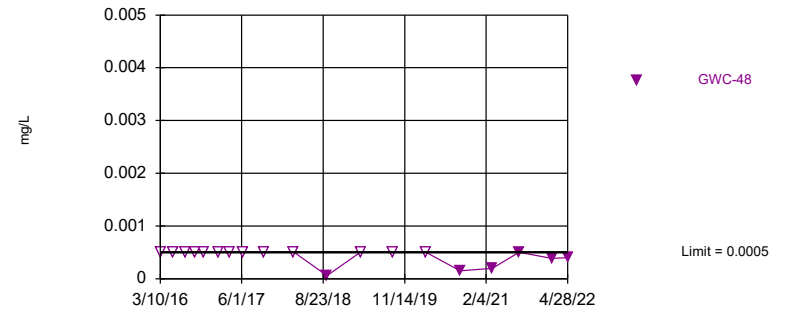


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 284 background values. 91.55% NDs. Annual per-constituent alpha = 0.002543. Individual comparison alpha = 0.00004896 (1 of 2). Assumes 25 future values.

Constituent: Beryllium Analysis Run 9/15/2022 4:05 PM View: Appendix I Interwell - Resample  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

Within Limit

Prediction Limit  
 Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 382 background values. 96.6% NDs. Annual per-constituent alpha = 0.002543. Individual comparison alpha = 0.00004896 (1 of 2). Assumes 25 future values.

Constituent: Mercury Analysis Run 9/15/2022 4:05 PM View: Appendix I Interwell - Resample  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

# Prediction Limit

Constituent: Beryllium (mg/L) Analysis Run 9/15/2022 4:06 PM View: Appendix I Interwell - Resample  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-1 (bg)  | GWA-2 (bg) | GWA-2R (bg) | GWA-50R (bg) | GWA-50 (bg) | GWC-5       | GWA-3A (bg) | GWA-43 (bg) | GWA-43R (bg) |
|------------|-------------|------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|
| 9/30/2014  | <0.003      | <0.003     | <0.003      |              |             |             |             |             |              |
| 10/1/2014  |             |            |             | <0.003       | <0.003      |             |             |             |              |
| 10/3/2014  |             |            |             |              |             | 0.00073 (J) |             |             |              |
| 10/4/2014  |             |            |             |              |             |             | <0.003      |             |              |
| 3/30/2015  | 0.00029 (J) | <0.003     | <0.003      | 0.0002 (J)   | <0.003      |             |             |             |              |
| 3/31/2015  |             |            |             |              |             | 0.00057 (J) | <0.003      |             |              |
| 10/11/2015 |             |            |             | <0.003       | <0.003      |             |             |             |              |
| 10/12/2015 |             |            |             |              |             | 0.00054 (J) | <0.003      |             |              |
| 10/13/2015 | <0.003      | <0.003     | <0.003      |              |             |             |             |             |              |
| 3/11/2016  |             |            |             |              |             |             |             | <0.003      | <0.003       |
| 3/14/2016  |             |            |             |              |             |             |             |             |              |
| 3/15/2016  |             |            |             |              |             |             |             |             |              |
| 3/22/2016  | <0.003      |            |             |              |             |             |             |             |              |
| 3/23/2016  |             | <0.003     | <0.003      |              |             |             | <0.003      |             |              |
| 3/28/2016  |             |            |             | <0.003       | <0.003      | <0.003      |             |             |              |
| 5/11/2016  |             |            |             |              |             |             |             |             |              |
| 5/12/2016  |             |            |             |              |             |             |             |             |              |
| 5/13/2016  |             |            |             |              |             |             |             | <0.003      | <0.003       |
| 5/16/2016  |             |            |             |              |             |             |             |             |              |
| 5/19/2016  | <0.003      |            | <0.003      |              |             |             |             |             |              |
| 5/20/2016  |             | <0.003     |             |              |             |             |             |             |              |
| 5/23/2016  |             |            |             |              | <0.003      |             | <0.003      |             |              |
| 5/25/2016  |             |            |             | <0.003       |             | <0.003      |             |             |              |
| 7/19/2016  |             |            |             |              |             |             | <0.003      | <0.003      |              |
| 7/20/2016  |             |            |             |              |             |             |             |             |              |
| 7/21/2016  |             |            |             |              |             |             |             |             |              |
| 7/22/2016  |             |            |             |              |             |             |             |             |              |
| 7/27/2016  |             |            |             |              |             |             |             |             |              |
| 7/29/2016  | <0.003      | <0.003     | <0.003      |              |             |             | <0.003      |             |              |
| 8/1/2016   |             |            |             | <0.003       | <0.003      | 0.0006 (J)  |             |             |              |
| 9/15/2016  |             |            |             |              |             |             |             |             |              |
| 9/16/2016  |             |            |             |              |             |             | <0.003      | <0.003      |              |
| 9/19/2016  |             |            |             |              |             |             |             |             |              |
| 9/21/2016  |             |            |             |              |             |             |             |             |              |
| 9/22/2016  |             |            | <0.003      |              |             |             | <0.003      |             |              |
| 9/23/2016  | <0.003      | <0.003     |             |              |             |             |             |             |              |
| 9/26/2016  |             |            |             | <0.003       | <0.003      |             |             |             |              |
| 9/27/2016  |             |            |             |              |             | 0.0007 (J)  |             |             |              |
| 11/2/2016  |             |            |             |              |             |             | <0.003      | <0.003      |              |
| 11/3/2016  |             |            |             |              |             |             |             |             |              |
| 11/9/2016  | <0.003      | <0.003     |             |              |             |             |             |             |              |
| 11/10/2016 |             |            | <0.003      |              | <0.003      |             | <0.003      |             |              |
| 11/11/2016 |             |            |             | <0.003       |             | 0.0007 (J)  |             |             |              |
| 1/17/2017  |             |            |             |              |             |             |             |             |              |
| 1/18/2017  |             |            |             |              |             |             | <0.003      | <0.003      |              |
| 1/30/2017  | <0.003      |            |             | <0.003       | <0.003      |             |             |             |              |
| 1/31/2017  |             | <0.003     | <0.003      |              |             | 0.0007 (J)  | <0.003      |             |              |
| 2/21/2017  |             |            |             |              |             |             |             |             |              |
| 2/22/2017  |             |            |             |              |             |             |             |             |              |
| 3/24/2017  |             |            |             |              |             |             |             |             |              |
| 3/27/2017  |             |            |             |              |             |             |             |             |              |
| 3/28/2017  |             |            |             |              |             |             | <0.003      | <0.003      |              |

# Prediction Limit

Constituent: Beryllium (mg/L) Analysis Run 9/15/2022 4:06 PM View: Appendix I Interwell - Resample  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|           | GWA-1 (bg) | GWA-2 (bg) | GWA-2R (bg) | GWA-50R (bg) | GWA-50 (bg) | GWC-5       | GWA-3A (bg) | GWA-43 (bg) | GWA-43R (bg) |
|-----------|------------|------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|
| 3/30/2017 | <0.003     | <0.003     |             |              |             |             | <0.003      |             |              |
| 4/3/2017  |            |            | <0.003      | <0.003       |             | 0.0007 (J)  |             |             |              |
| 4/7/2017  |            |            |             |              | <0.003      |             |             |             |              |
| 5/24/2017 |            |            |             |              |             |             |             |             |              |
| 6/6/2017  |            |            |             |              |             |             |             | <0.003      | <0.003       |
| 6/7/2017  |            |            |             |              |             |             |             |             |              |
| 6/8/2017  |            |            |             |              |             |             |             |             |              |
| 6/9/2017  | <0.003     |            | <0.003      |              |             |             |             |             |              |
| 6/12/2017 |            | <0.003     |             | <0.003       | <0.003      | 0.0004 (J)  | <0.003      |             |              |
| 6/14/2017 |            |            |             |              |             |             |             |             |              |
| 7/12/2017 |            |            |             |              |             |             |             |             |              |
| 7/17/2017 |            |            |             |              |             |             |             |             |              |
| 7/20/2017 |            |            |             |              |             |             |             |             |              |
| 7/27/2017 |            |            |             |              |             |             |             |             |              |
| 7/28/2017 |            |            |             |              |             |             |             |             |              |
| 8/9/2017  |            |            |             |              |             |             |             |             |              |
| 8/24/2017 |            |            |             |              |             |             |             |             |              |
| 9/22/2017 |            |            |             |              |             |             |             | <0.003      | <0.003       |
| 9/25/2017 |            |            |             |              |             |             |             |             |              |
| 9/26/2017 |            |            |             |              |             |             |             |             |              |
| 9/29/2017 |            |            |             |              |             |             |             |             |              |
| 10/2/2017 | <0.003     | <0.003     | <0.003      | <0.003       | <0.003      |             |             |             |              |
| 10/3/2017 |            |            |             |              |             | 0.0006 (J)  |             |             |              |
| 10/4/2017 |            |            |             |              |             |             | <0.003      |             |              |
| 3/14/2018 |            |            |             |              |             |             |             | <0.003      |              |
| 3/15/2018 |            |            |             |              |             |             |             |             | 5.1E-05 (J)  |
| 3/16/2018 | <0.003     |            | <0.003      | <0.003       | <0.003      |             |             |             |              |
| 3/19/2018 |            | <0.003     |             |              |             | 0.0005 (J)  | <0.003      |             |              |
| 3/21/2018 |            |            |             |              |             |             |             |             |              |
| 9/12/2018 |            |            |             |              |             |             |             | <0.003      | <0.003       |
| 9/14/2018 |            | <0.003     | <0.003      |              |             |             |             |             |              |
| 9/17/2018 | <0.003 (D) |            |             |              | <0.003      | 0.00053 (J) | <0.003      |             |              |
| 9/18/2018 |            |            |             | <0.003       |             |             |             |             |              |
| 3/13/2019 |            |            |             |              |             |             |             | <0.003      | <0.003       |
| 3/14/2019 |            |            |             |              |             |             |             |             |              |
| 3/15/2019 |            |            |             |              |             |             |             |             |              |
| 3/19/2019 |            |            | <0.003      | <0.003       | <0.003      |             |             |             |              |
| 3/20/2019 | <0.003     | <0.003     |             |              |             | 0.00046 (J) | <0.003      |             |              |
| 3/21/2019 |            |            |             |              |             |             |             |             |              |
| 9/9/2019  |            |            |             |              |             |             |             |             |              |
| 9/10/2019 |            |            |             |              |             |             |             |             |              |
| 9/11/2019 |            |            |             |              |             |             |             | <0.003      | <0.003       |
| 9/12/2019 | <0.003     | <0.003 (D) |             | <0.003       |             |             |             |             |              |
| 9/13/2019 |            |            | <0.003      |              | <0.003      |             | <0.003      |             |              |
| 9/16/2019 |            |            |             |              |             | 0.00051 (J) |             |             |              |
| 3/6/2020  |            |            |             |              |             |             |             |             |              |
| 3/9/2020  |            |            |             |              |             |             |             | <0.003      | <0.003       |
| 3/11/2020 | <0.003     | <0.003     | <0.003      | <0.003       | <0.003      |             | <0.003      |             |              |
| 3/12/2020 |            |            |             |              |             |             |             |             |              |
| 3/16/2020 |            |            |             |              |             | 0.00048 (J) |             |             |              |
| 9/10/2020 |            |            |             |              |             |             |             |             |              |
| 9/11/2020 |            |            |             |              |             |             |             | 6.9E-05 (J) |              |

# Prediction Limit

Constituent: Beryllium (mg/L) Analysis Run 9/15/2022 4:06 PM View: Appendix I Interwell - Resample  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|           | GWA-1 (bg) | GWA-2 (bg) | GWA-2R (bg) | GWA-50R (bg) | GWA-50 (bg) | GWC-5       | GWA-3A (bg) | GWA-43 (bg) | GWA-43R (bg) |
|-----------|------------|------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|
| 9/14/2020 |            |            |             |              |             |             |             |             | <0.003       |
| 9/15/2020 | <0.003     | <0.003     | <0.003      | 8.5E-05 (J)  |             |             |             |             |              |
| 9/16/2020 |            |            |             |              | <0.003      | 0.00069 (J) |             |             |              |
| 9/17/2020 |            |            |             |              |             |             |             |             |              |
| 3/10/2021 |            |            |             |              |             |             |             |             |              |
| 3/11/2021 |            |            |             |              |             |             |             | <0.003      | <0.003       |
| 3/12/2021 |            |            |             |              |             |             |             |             |              |
| 3/16/2021 | <0.003     |            | <0.003      |              |             |             |             |             |              |
| 3/17/2021 |            | <0.003     |             | <0.003       | <0.003      | 0.00061     |             |             |              |
| 3/29/2021 |            |            |             |              |             |             | <0.003      |             |              |
| 8/4/2021  |            |            |             |              |             |             |             |             |              |
| 8/5/2021  |            |            |             |              |             |             |             |             | <0.003       |
| 8/6/2021  |            |            |             |              |             |             |             | <0.003      |              |
| 8/9/2021  | <0.003     | <0.003     | <0.003      | <0.003       | <0.003      | 0.00069     | <0.003      |             |              |
| 8/10/2021 |            |            |             |              |             |             |             |             |              |
| 1/31/2022 |            |            |             |              |             |             |             | <0.003      | <0.003       |
| 2/1/2022  | <0.003     | <0.003     | <0.003      |              | <0.003      |             |             |             |              |
| 2/2/2022  |            |            |             | 5.5E-05 (J)  |             | 0.00075     | <0.003      |             |              |
| 2/3/2022  |            |            |             |              |             |             |             |             |              |
| 4/28/2022 |            |            |             |              |             | 0.00078     |             |             |              |

# Prediction Limit

Constituent: Beryllium (mg/L) Analysis Run 9/15/2022 4:06 PM View: Appendix I Interwell - Resample  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-39Z (bg) | GWA-40 (bg) | GWA-41R (bg) | GWA-41 (bg) | GWA-39RZ (bg) | GWA-42 (bg) | GWA-4RZ (bg) |
|------------|--------------|-------------|--------------|-------------|---------------|-------------|--------------|
| 9/30/2014  |              |             |              |             |               |             |              |
| 10/1/2014  |              |             |              |             |               |             |              |
| 10/3/2014  |              |             |              |             |               |             |              |
| 10/4/2014  |              |             |              |             |               |             |              |
| 3/30/2015  |              |             |              |             |               |             |              |
| 3/31/2015  |              |             |              |             |               |             |              |
| 10/11/2015 |              |             |              |             |               |             |              |
| 10/12/2015 |              |             |              |             |               |             |              |
| 10/13/2015 |              |             |              |             |               |             |              |
| 3/11/2016  |              |             |              |             |               | <0.005 (O)  |              |
| 3/14/2016  | <0.003       |             |              |             |               |             |              |
| 3/15/2016  |              | <0.003      | <0.003       | <0.003      |               |             |              |
| 3/22/2016  |              |             |              |             |               |             |              |
| 3/23/2016  |              |             |              |             |               |             |              |
| 3/28/2016  |              |             |              |             |               |             |              |
| 5/11/2016  | <0.003       | <0.003      |              |             |               |             |              |
| 5/12/2016  |              |             |              | <0.003      |               |             |              |
| 5/13/2016  |              |             | <0.003       |             |               |             |              |
| 5/16/2016  |              |             |              |             | <0.003 (D)    | <0.003 (O)  |              |
| 5/19/2016  |              |             |              |             |               |             |              |
| 5/20/2016  |              |             |              |             |               |             |              |
| 5/23/2016  |              |             |              |             |               |             |              |
| 5/25/2016  |              |             |              |             |               |             |              |
| 7/19/2016  | <0.003       |             |              |             |               |             |              |
| 7/20/2016  |              |             |              | <0.003      |               |             |              |
| 7/21/2016  |              | <0.003      | <0.003       |             |               |             |              |
| 7/22/2016  |              |             |              |             |               | 0.0002 (J)  |              |
| 7/27/2016  |              |             |              |             | 0.0004 (JD)   |             |              |
| 7/29/2016  |              |             |              |             |               |             |              |
| 8/1/2016   |              |             |              |             |               |             |              |
| 9/15/2016  | <0.003       | <0.003      |              | <0.003      |               |             |              |
| 9/16/2016  |              |             |              |             |               |             |              |
| 9/19/2016  |              |             |              |             |               | 0.0001 (J)  |              |
| 9/21/2016  |              |             | <0.003       |             |               |             |              |
| 9/22/2016  |              |             |              |             |               |             |              |
| 9/23/2016  |              |             |              |             |               |             |              |
| 9/26/2016  |              |             |              |             |               |             |              |
| 9/27/2016  |              |             |              |             |               |             |              |
| 11/2/2016  | <0.003       |             |              |             |               |             |              |
| 11/3/2016  |              | <0.003      | <0.003       | <0.003      |               | 0.0002 (J)  |              |
| 11/9/2016  |              |             |              |             |               |             |              |
| 11/10/2016 |              |             |              |             |               |             |              |
| 11/11/2016 |              |             |              |             |               |             |              |
| 1/17/2017  |              | <0.003      | <0.003       |             |               | 0.0001 (J)  |              |
| 1/18/2017  | <0.003       |             |              | <0.003      |               |             |              |
| 1/30/2017  |              |             |              |             |               |             |              |
| 1/31/2017  |              |             |              |             |               |             |              |
| 2/21/2017  |              |             |              |             | <0.003        |             |              |
| 2/22/2017  |              |             |              |             |               |             | <0.003       |
| 3/24/2017  |              | <0.003      |              | <0.003      |               |             |              |
| 3/27/2017  |              |             | <0.003       |             | <0.003 (D)    | 0.0001 (J)  |              |
| 3/28/2017  | <0.003       |             |              |             |               |             |              |

# Prediction Limit

Constituent: Beryllium (mg/L)    Analysis Run 9/15/2022 4:06 PM    View: Appendix I Interwell - Resample  
 Plant Bowen    Client: Southern Company    Data: Bowen 1, 2, 9, and 10

|           | GWA-39Z (bg) | GWA-40 (bg) | GWA-41R (bg) | GWA-41 (bg) | GWA-39RZ (bg) | GWA-42 (bg) | GWA-4RZ (bg) |
|-----------|--------------|-------------|--------------|-------------|---------------|-------------|--------------|
| 3/30/2017 |              |             |              |             |               |             |              |
| 4/3/2017  |              |             |              |             |               |             |              |
| 4/7/2017  |              |             |              |             |               |             | <0.003       |
| 5/24/2017 |              | <0.003      |              |             |               |             |              |
| 6/6/2017  |              |             | <0.003       | <0.003      |               |             |              |
| 6/7/2017  | <0.003       |             |              |             |               | 0.0001 (J)  |              |
| 6/8/2017  |              |             |              |             | <0.003 (D)    |             |              |
| 6/9/2017  |              |             |              |             |               |             |              |
| 6/12/2017 |              |             |              |             |               |             |              |
| 6/14/2017 |              |             |              |             |               |             | <0.003 (D)   |
| 7/12/2017 |              |             |              |             |               |             | <0.003 (D)   |
| 7/17/2017 |              |             |              |             | <0.003 (D)    |             |              |
| 7/20/2017 |              |             |              |             |               |             | <0.003 (D)   |
| 7/27/2017 |              |             |              |             | <0.003        |             |              |
| 7/28/2017 |              |             |              |             |               |             | <0.003       |
| 8/9/2017  |              |             |              |             | <0.003        |             | <0.003       |
| 8/24/2017 |              |             |              |             |               |             | <0.003       |
| 9/22/2017 |              |             |              |             |               |             |              |
| 9/25/2017 |              |             | <0.003       | <0.003      |               |             |              |
| 9/26/2017 | <0.003       | <0.003      |              |             |               | 0.0001 (J)  |              |
| 9/29/2017 |              |             |              |             | <0.003 (D)    |             |              |
| 10/2/2017 |              |             |              |             |               |             |              |
| 10/3/2017 |              |             |              |             |               |             | <0.003 (D)   |
| 10/4/2017 |              |             |              |             |               |             |              |
| 3/14/2018 | <0.003       | <0.003      | <0.003       | <0.003      |               | 0.00014 (J) |              |
| 3/15/2018 |              |             |              |             |               |             |              |
| 3/16/2018 |              |             |              |             | <0.003        |             |              |
| 3/19/2018 |              |             |              |             |               |             |              |
| 3/21/2018 |              |             |              |             |               |             | <0.003       |
| 9/12/2018 | <0.003       | <0.003      | <0.003       | <0.003      |               |             |              |
| 9/14/2018 |              |             |              |             | <0.003        | 0.00012 (J) |              |
| 9/17/2018 |              |             |              |             |               |             |              |
| 9/18/2018 |              |             |              |             |               |             | <0.003       |
| 3/13/2019 |              | <0.003      |              |             |               |             |              |
| 3/14/2019 |              |             | 5.2E-05 (J)  | <0.003      | <0.003        | 0.00017 (J) |              |
| 3/15/2019 | <0.003       |             |              |             |               |             |              |
| 3/19/2019 |              |             |              |             |               |             |              |
| 3/20/2019 |              |             |              |             |               |             |              |
| 3/21/2019 |              |             |              |             |               |             | <0.003 (D)   |
| 9/9/2019  | <0.003       | <0.003      |              |             |               |             |              |
| 9/10/2019 |              |             | <0.003       | <0.003 (D)  |               | 0.00015 (J) |              |
| 9/11/2019 |              |             |              |             |               |             |              |
| 9/12/2019 |              |             |              |             |               |             | <0.003 (D)   |
| 9/13/2019 |              |             |              |             |               |             |              |
| 9/16/2019 |              |             |              |             |               |             |              |
| 3/6/2020  |              |             |              | <0.003      |               | 0.00017 (J) |              |
| 3/9/2020  | <0.003       | <0.003      | <0.003       |             | <0.003        |             |              |
| 3/11/2020 |              |             |              |             |               |             |              |
| 3/12/2020 |              |             |              |             |               |             | <0.003       |
| 3/16/2020 |              |             |              |             |               |             |              |
| 9/10/2020 | <0.003       |             | <0.003       | <0.003      |               | 0.00014 (J) |              |
| 9/11/2020 |              | <0.003      |              |             |               |             |              |



# Prediction Limit

Constituent: Beryllium (mg/L) Analysis Run 9/15/2022 4:06 PM View: Appendix I Interwell - Resample  
Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|           | GWA-39Z (bg) | GWA-40 (bg) | GWA-41R (bg) | GWA-41 (bg) | GWA-39RZ (bg) | GWA-42 (bg) | GWA-4RZ (bg) |
|-----------|--------------|-------------|--------------|-------------|---------------|-------------|--------------|
| 9/14/2020 |              |             |              |             |               |             |              |
| 9/15/2020 |              |             |              |             |               |             |              |
| 9/16/2020 |              |             |              |             | <0.003        |             |              |
| 9/17/2020 |              |             |              |             |               |             | <0.003       |
| 3/10/2021 |              | <0.003      | <0.003       |             |               |             |              |
| 3/11/2021 |              |             |              | <0.003      |               | 0.00015 (J) |              |
| 3/12/2021 | <0.003       |             |              |             |               |             |              |
| 3/16/2021 |              |             |              |             | <0.003        |             | <0.003       |
| 3/17/2021 |              |             |              |             |               |             |              |
| 3/29/2021 |              |             |              |             |               |             |              |
| 8/4/2021  | <0.003       | <0.003      | <0.003       | <0.003      |               | 0.00012 (J) |              |
| 8/5/2021  |              |             |              |             |               |             |              |
| 8/6/2021  |              |             |              |             | <0.003        |             |              |
| 8/9/2021  |              |             |              |             |               |             |              |
| 8/10/2021 |              |             |              |             |               |             | <0.003       |
| 1/31/2022 | <0.003       | <0.003      | <0.003       | <0.003      |               | 0.00014 (J) |              |
| 2/1/2022  |              |             |              |             |               |             |              |
| 2/2/2022  |              |             |              |             | <0.003        |             |              |
| 2/3/2022  |              |             |              |             |               |             | <0.003       |
| 4/28/2022 |              |             |              |             |               |             |              |

# Prediction Limit

Constituent: Mercury (mg/L) Analysis Run 9/15/2022 4:06 PM View: Appendix I Interwell - Resample

Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-1 (bg) | GWA-3A (bg) | GWA-2R (bg) | GWA-2 (bg) | GWA-50 (bg) | GWA-50R (bg) | GWC-48 | GWA-42 (bg) | GWA-43 (bg) |
|------------|------------|-------------|-------------|------------|-------------|--------------|--------|-------------|-------------|
| 8/23/2007  | <0.0005    | <0.0005     | <0.0005     | <0.0005    |             |              |        |             |             |
| 10/23/2007 | <0.0005    |             |             |            |             |              |        |             |             |
| 10/24/2007 |            |             | <0.0005     | <0.0005    |             |              |        |             |             |
| 11/2/2007  |            | <0.0005     |             |            |             |              |        |             |             |
| 11/18/2007 | <0.0005    | <0.0005     | <0.0005     | <0.0005    |             |              |        |             |             |
| 1/30/2008  | <0.0005    |             |             |            |             |              |        |             |             |
| 1/31/2008  |            | <0.0005     | <0.0005     | <0.0005    |             |              |        |             |             |
| 3/10/2008  | <0.0005    |             | <0.0005     |            |             |              |        |             |             |
| 3/11/2008  |            | <0.0005     |             | <0.0005    |             |              |        |             |             |
| 5/6/2008   |            |             |             | 0.000175   |             |              |        |             |             |
| 5/13/2008  | <0.0005    |             | <0.0005     |            |             |              |        |             |             |
| 5/14/2008  |            | <0.0005     |             |            |             |              |        |             |             |
| 12/4/2008  |            |             | <0.0005     | <0.0005    |             |              |        |             |             |
| 12/5/2008  | <0.0005    | <0.0005     |             |            |             |              |        |             |             |
| 12/12/2008 |            |             |             |            | <0.0005     | <0.0005      |        |             |             |
| 4/15/2009  | <0.0005    | <0.0005     |             |            |             |              |        |             |             |
| 4/21/2009  |            |             | <0.0005     | <0.0005    |             |              |        |             |             |
| 4/23/2009  |            |             |             |            | <0.0005     | <0.0005      |        |             |             |
| 10/6/2009  |            |             |             |            | <0.0005     | <0.0005      |        |             |             |
| 10/7/2009  | <0.0005    |             |             | <0.0005    |             |              |        |             |             |
| 10/8/2009  |            | <0.0005     | <0.0005     |            |             |              |        |             |             |
| 4/21/2010  |            |             | <0.0005     |            |             |              |        |             |             |
| 4/26/2010  |            |             |             | <0.0005    |             |              |        |             |             |
| 4/27/2010  |            |             |             |            | <0.0005     |              |        |             |             |
| 4/28/2010  |            | <0.0005     |             |            |             |              |        |             |             |
| 5/3/2010   | <0.0005    |             |             |            |             |              |        | <0.0005     |             |
| 9/28/2010  |            |             | <0.0005     |            |             |              |        |             |             |
| 9/30/2010  |            |             |             |            | <0.0005     |              |        |             |             |
| 10/4/2010  |            |             |             | <0.0005    |             |              |        |             |             |
| 10/6/2010  |            | <0.0005     |             |            |             |              |        |             |             |
| 10/11/2010 |            |             |             |            |             |              |        | <0.0005     |             |
| 10/12/2010 | <0.0005    |             |             |            |             |              |        |             |             |
| 4/12/2011  |            |             | <0.0005     |            |             |              |        |             |             |
| 4/13/2011  |            |             |             | <0.0005    |             |              |        |             |             |
| 4/14/2011  |            |             |             |            | <0.0005     |              |        |             |             |
| 4/21/2011  |            | <0.0005     |             |            |             |              |        |             |             |
| 4/27/2011  | <0.0005    |             |             |            |             |              |        | <0.0005     |             |
| 10/4/2011  |            |             | <0.0005     |            |             |              |        |             |             |
| 10/5/2011  |            |             |             | <0.0005    | <0.0005     |              |        |             |             |
| 10/13/2011 |            | <0.0005     |             |            |             |              |        |             |             |
| 10/17/2011 | <0.0005    |             |             |            |             |              |        |             |             |
| 10/19/2011 |            |             |             |            |             |              |        | <0.0005     |             |
| 4/3/2012   |            |             | <0.0005     |            |             |              |        |             |             |
| 4/11/2012  |            |             |             | <0.0005    | <0.0005     |              |        |             |             |
| 5/1/2012   |            | <0.0005     |             |            |             |              |        | <0.0005     |             |
| 5/2/2012   | <0.0005    |             |             |            |             |              |        |             |             |
| 10/2/2012  |            |             |             |            | <0.0005     | <0.0005      |        |             |             |
| 10/8/2012  | <0.0005    |             |             |            |             |              |        |             |             |
| 10/9/2012  |            | <0.0005     | <0.0005     | <0.0005    |             |              |        |             |             |
| 4/9/2013   |            |             |             |            | <0.0005     |              |        |             |             |
| 4/10/2013  |            |             |             |            |             |              |        | <0.0005     |             |
| 4/11/2013  |            | <0.0005     | <0.0005     |            |             |              |        |             |             |

# Prediction Limit

Constituent: Mercury (mg/L) Analysis Run 9/15/2022 4:06 PM View: Appendix I Interwell - Resample  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-1 (bg) | GWA-3A (bg) | GWA-2R (bg) | GWA-2 (bg) | GWA-50 (bg)  | GWA-50R (bg) | GWC-48  | GWA-42 (bg) | GWA-43 (bg) |
|------------|------------|-------------|-------------|------------|--------------|--------------|---------|-------------|-------------|
| 4/12/2013  | <0.0005    |             |             |            |              |              |         |             |             |
| 4/15/2013  |            |             |             | <0.0005    |              |              |         |             |             |
| 10/15/2013 |            |             |             | <0.0005    | <0.0005      |              |         |             |             |
| 10/16/2013 | <0.0005    | <0.0005     | <0.0005     |            |              | <0.0005      |         |             |             |
| 4/10/2014  |            |             | <0.0005     |            | <0.0005      |              |         |             |             |
| 4/11/2014  | <0.0005    |             |             |            |              |              |         |             |             |
| 4/22/2014  |            |             |             | <0.0005    |              | <0.0005      |         |             |             |
| 4/23/2014  |            | <0.0005     |             |            |              |              |         |             |             |
| 9/30/2014  | <0.0005    |             | <0.0005     | <0.0005    |              |              |         |             |             |
| 10/1/2014  |            |             |             |            | <0.0005      | <0.0005      |         |             |             |
| 10/4/2014  |            | <0.0005     |             |            |              |              |         |             |             |
| 3/30/2015  | <0.0005    |             | <0.0005     | <0.0005    | 2.02E-05 (J) | <0.0005      |         |             |             |
| 3/31/2015  |            | <0.0005     |             |            |              |              |         |             |             |
| 10/11/2015 |            |             |             |            | <0.0005      | <0.0005      |         |             |             |
| 10/12/2015 |            | <0.0005     |             |            |              |              |         |             |             |
| 10/13/2015 | <0.0005    |             | <0.0005     | <0.0005    |              |              |         |             |             |
| 3/10/2016  |            |             |             |            |              |              | <0.0005 |             |             |
| 3/11/2016  |            |             |             |            |              |              |         | <0.0005     | <0.0005     |
| 3/14/2016  |            |             |             |            |              |              |         |             |             |
| 3/15/2016  |            |             |             |            |              |              |         |             |             |
| 3/22/2016  | <0.0005    |             |             |            |              |              |         |             |             |
| 3/23/2016  |            | <0.0005     | <0.0005     | <0.0005    |              |              |         |             |             |
| 3/28/2016  |            |             |             |            | <0.0005      | <0.0005      |         |             |             |
| 5/11/2016  |            |             |             |            |              |              |         |             |             |
| 5/12/2016  |            |             |             |            |              |              |         |             |             |
| 5/13/2016  |            |             |             |            |              |              |         |             | <0.0005     |
| 5/16/2016  |            |             |             |            |              |              |         | <0.0005     |             |
| 5/17/2016  |            |             |             |            |              |              | <0.0005 |             |             |
| 5/19/2016  | <0.0005    |             | <0.0005     |            |              |              |         |             |             |
| 5/20/2016  |            |             |             | <0.0005    |              |              |         |             |             |
| 5/23/2016  |            | <0.0005     |             |            | <0.0005      |              |         |             |             |
| 5/25/2016  |            |             |             |            |              | <0.0005      |         |             |             |
| 7/19/2016  |            |             |             |            |              |              |         |             | <0.0005     |
| 7/20/2016  |            |             |             |            |              |              |         |             |             |
| 7/21/2016  |            |             |             |            |              |              |         |             |             |
| 7/22/2016  |            |             |             |            |              |              |         | <0.0005     |             |
| 7/27/2016  |            |             |             |            |              |              | <0.0005 |             |             |
| 7/29/2016  | <0.0005    | <0.0005     | <0.0005     | <0.0005    |              |              |         |             |             |
| 8/1/2016   |            |             |             |            | <0.0005      | <0.0005      |         |             |             |
| 9/15/2016  |            |             |             |            |              |              |         |             |             |
| 9/16/2016  |            |             |             |            |              |              |         |             | <0.0005     |
| 9/19/2016  |            |             |             |            |              |              |         | <0.0005     |             |
| 9/20/2016  |            |             |             |            |              |              | <0.0005 |             |             |
| 9/21/2016  |            |             |             |            |              |              |         |             |             |
| 9/22/2016  |            | <0.0005     | <0.0005     |            |              |              |         |             |             |
| 9/23/2016  | <0.0005    |             |             | <0.0005    |              |              |         |             |             |
| 9/26/2016  |            |             |             |            | <0.0005      | <0.0005      |         |             |             |
| 11/2/2016  |            |             |             |            |              |              |         |             | <0.0005     |
| 11/3/2016  |            |             |             |            |              |              |         | <0.0005     |             |
| 11/4/2016  |            |             |             |            |              |              | <0.0005 |             |             |
| 11/9/2016  | <0.0005    |             |             | <0.0005    |              |              |         |             |             |
| 11/10/2016 |            | <0.0005     | <0.0005     |            | <0.0005      |              |         |             |             |



# Prediction Limit

Constituent: Mercury (mg/L) Analysis Run 9/15/2022 4:06 PM View: Appendix I Interwell - Resample  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|           | GWA-1 (bg) | GWA-3A (bg) | GWA-2R (bg) | GWA-2 (bg)  | GWA-50 (bg) | GWA-50R (bg) | GWC-48      | GWA-42 (bg) | GWA-43 (bg) |
|-----------|------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|
| 9/10/2019 |            |             |             |             |             |              |             | <0.0005     |             |
| 9/11/2019 |            |             |             |             |             |              | <0.0005 (D) |             | <0.0005     |
| 9/12/2019 | <0.0005    |             |             | <0.0005 (D) |             | <0.0005      |             |             |             |
| 9/13/2019 |            | <0.0005     | <0.0005     |             | <0.0005     |              |             |             |             |
| 3/6/2020  |            |             |             |             |             |              |             | <0.0005     |             |
| 3/9/2020  |            |             |             |             |             |              | <0.0005     |             | <0.0005     |
| 3/11/2020 | <0.0005    | <0.0005     | <0.0005     | <0.0005     | <0.0005     | <0.0005      |             |             |             |
| 3/12/2020 |            |             |             |             |             |              |             |             |             |
| 9/10/2020 |            |             |             |             |             |              |             | <0.0005     |             |
| 9/11/2020 |            |             |             |             |             |              |             |             | <0.0005     |
| 9/14/2020 |            |             |             |             |             |              | 0.00015 (J) |             |             |
| 9/15/2020 | <0.0005    |             | <0.0005     | <0.0005     |             | <0.0005      |             |             |             |
| 9/16/2020 |            |             |             |             | <0.0005     |              |             |             |             |
| 9/17/2020 |            |             |             |             |             |              |             |             |             |
| 3/10/2021 |            |             |             |             |             |              |             |             |             |
| 3/11/2021 |            |             |             |             |             |              | 0.0002 (J)  | <0.0005     | <0.0005     |
| 3/12/2021 |            |             |             |             |             |              |             |             |             |
| 3/16/2021 | <0.0005    |             | <0.0005     |             |             |              |             |             |             |
| 3/17/2021 |            |             |             | <0.0005     | <0.0005     | <0.0005      |             |             |             |
| 3/29/2021 |            | <0.0005     |             |             |             |              |             |             |             |
| 8/4/2021  |            |             |             |             |             |              | 0.0005      | 8E-05 (J)   |             |
| 8/5/2021  |            |             |             |             |             |              |             |             |             |
| 8/6/2021  |            |             |             |             |             |              |             |             | <0.0005     |
| 8/9/2021  | <0.0005    | <0.0005     | <0.0005     | <0.0005     | <0.0005     | <0.0005      |             |             |             |
| 8/10/2021 |            |             |             |             |             |              |             |             |             |
| 1/31/2022 |            |             |             |             |             |              | 0.00039     | <0.0005     | <0.0005     |
| 2/1/2022  | <0.0005    |             | <0.0005     | <0.0005     | <0.0005     |              |             |             |             |
| 2/2/2022  |            | <0.0005     |             |             |             | <0.0005      |             |             |             |
| 2/3/2022  |            |             |             |             |             |              |             |             |             |
| 4/28/2022 |            |             |             |             |             |              | 0.0004      |             |             |

# Prediction Limit

Constituent: Mercury (mg/L) Analysis Run 9/15/2022 4:06 PM View: Appendix I Interwell - Resample  
Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

GWA-43R (bg) GWA-39Z (bg) GWA-41 (bg) GWA-41R (bg) GWA-40 (bg) GWA-39RZ (bg) GWA-4RZ (bg)

8/23/2007  
10/23/2007  
10/24/2007  
11/2/2007  
11/18/2007  
1/30/2008  
1/31/2008  
3/10/2008  
3/11/2008  
5/6/2008  
5/13/2008  
5/14/2008  
12/4/2008  
12/5/2008  
12/12/2008  
4/15/2009  
4/21/2009  
4/23/2009  
10/6/2009  
10/7/2009  
10/8/2009  
4/21/2010  
4/26/2010  
4/27/2010  
4/28/2010  
5/3/2010  
9/28/2010  
9/30/2010  
10/4/2010  
10/6/2010  
10/11/2010  
10/12/2010  
4/12/2011  
4/13/2011  
4/14/2011  
4/21/2011  
4/27/2011  
10/4/2011  
10/5/2011  
10/13/2011  
10/17/2011  
10/19/2011  
4/3/2012  
4/11/2012  
5/1/2012  
5/2/2012  
10/2/2012  
10/8/2012  
10/9/2012  
4/9/2013  
4/10/2013  
4/11/2013

# Prediction Limit

Constituent: Mercury (mg/L) Analysis Run 9/15/2022 4:06 PM View: Appendix I Interwell - Resample  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-43R (bg) | GWA-39Z (bg) | GWA-41 (bg) | GWA-41R (bg) | GWA-40 (bg) | GWA-39RZ (bg) | GWA-4RZ (bg) |
|------------|--------------|--------------|-------------|--------------|-------------|---------------|--------------|
| 4/12/2013  |              |              |             |              |             |               |              |
| 4/15/2013  |              |              |             |              |             |               |              |
| 10/15/2013 |              |              |             |              |             |               |              |
| 10/16/2013 |              |              |             |              |             |               |              |
| 4/10/2014  |              |              |             |              |             |               |              |
| 4/11/2014  |              |              |             |              |             |               |              |
| 4/22/2014  |              |              |             |              |             |               |              |
| 4/23/2014  |              |              |             |              |             |               |              |
| 9/30/2014  |              |              |             |              |             |               |              |
| 10/1/2014  |              |              |             |              |             |               |              |
| 10/4/2014  |              |              |             |              |             |               |              |
| 3/30/2015  |              |              |             |              |             |               |              |
| 3/31/2015  |              |              |             |              |             |               |              |
| 10/11/2015 |              |              |             |              |             |               |              |
| 10/12/2015 |              |              |             |              |             |               |              |
| 10/13/2015 |              |              |             |              |             |               |              |
| 3/10/2016  |              |              |             |              |             |               |              |
| 3/11/2016  | <0.0005      |              |             |              |             |               |              |
| 3/14/2016  |              | <0.0005      |             |              |             |               |              |
| 3/15/2016  |              |              | <0.0005     | <0.0005      | <0.0005     |               |              |
| 3/22/2016  |              |              |             |              |             |               |              |
| 3/23/2016  |              |              |             |              |             |               |              |
| 3/28/2016  |              |              |             |              |             |               |              |
| 5/11/2016  |              | <0.0005      |             |              | <0.0005     |               |              |
| 5/12/2016  |              |              | <0.0005     |              |             |               |              |
| 5/13/2016  | <0.0005      |              |             | <0.0005      |             |               |              |
| 5/16/2016  |              |              |             |              |             | <0.0005 (D)   |              |
| 5/17/2016  |              |              |             |              |             |               |              |
| 5/19/2016  |              |              |             |              |             |               |              |
| 5/20/2016  |              |              |             |              |             |               |              |
| 5/23/2016  |              |              |             |              |             |               |              |
| 5/25/2016  |              |              |             |              |             |               |              |
| 7/19/2016  | <0.0005      | <0.0005      |             |              |             |               |              |
| 7/20/2016  |              |              | <0.0005     |              |             |               |              |
| 7/21/2016  |              |              |             | <0.0005      | <0.0005     |               |              |
| 7/22/2016  |              |              |             |              |             |               |              |
| 7/27/2016  |              |              |             |              |             | <0.0005 (D)   |              |
| 7/29/2016  |              |              |             |              |             |               |              |
| 8/1/2016   |              |              |             |              |             |               |              |
| 9/15/2016  |              | <0.0005      | <0.0005     |              | <0.0005     |               |              |
| 9/16/2016  | <0.0005      |              |             |              |             |               |              |
| 9/19/2016  |              |              |             |              |             |               |              |
| 9/20/2016  |              |              |             |              |             |               |              |
| 9/21/2016  |              |              |             | <0.0005      |             |               |              |
| 9/22/2016  |              |              |             |              |             |               |              |
| 9/23/2016  |              |              |             |              |             |               |              |
| 9/26/2016  |              |              |             |              |             |               |              |
| 11/2/2016  | <0.0005      | <0.0005      |             |              |             |               |              |
| 11/3/2016  |              |              | <0.0005     | <0.0005      | <0.0005     |               |              |
| 11/4/2016  |              |              |             |              |             |               |              |
| 11/9/2016  |              |              |             |              |             |               |              |
| 11/10/2016 |              |              |             |              |             |               |              |

# Prediction Limit

Constituent: Mercury (mg/L) Analysis Run 9/15/2022 4:06 PM View: Appendix I Interwell - Resample  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-43R (bg) | GWA-39Z (bg) | GWA-41 (bg) | GWA-41R (bg) | GWA-40 (bg) | GWA-39RZ (bg) | GWA-4RZ (bg)  |
|------------|--------------|--------------|-------------|--------------|-------------|---------------|---------------|
| 11/11/2016 |              |              |             |              |             |               |               |
| 1/17/2017  |              |              |             | <0.0005      | <0.0005     |               |               |
| 1/18/2017  | <0.0005      | <0.0005      | <0.0005     |              |             |               |               |
| 1/23/2017  |              |              |             |              |             |               |               |
| 1/30/2017  |              |              |             |              |             |               |               |
| 1/31/2017  |              |              |             |              |             |               |               |
| 2/21/2017  |              |              |             |              |             | <0.0005       |               |
| 2/22/2017  |              |              |             |              |             |               | <0.0005       |
| 3/24/2017  |              |              | <0.0005     |              | <0.0005     |               |               |
| 3/27/2017  |              |              |             | <0.0005      |             | <0.0005 (D)   |               |
| 3/28/2017  | <0.0005      | <0.0005      |             |              |             |               |               |
| 3/30/2017  |              |              |             |              |             |               |               |
| 4/3/2017   |              |              |             |              |             |               |               |
| 4/7/2017   |              |              |             |              |             |               | <0.0005       |
| 5/24/2017  |              |              |             |              | <0.0005     |               |               |
| 6/6/2017   | <0.0005      |              | <0.0005     | <0.0005      |             |               |               |
| 6/7/2017   |              | <0.0005      |             |              |             |               |               |
| 6/8/2017   |              |              |             |              |             | <0.0005 (D)   |               |
| 6/9/2017   |              |              |             |              |             |               |               |
| 6/12/2017  |              |              |             |              |             |               |               |
| 6/14/2017  |              |              |             |              |             |               | 0.000286 (JD) |
| 7/12/2017  |              |              |             |              |             |               | <0.0005 (D)   |
| 7/17/2017  |              |              |             |              |             | <0.0005 (D)   |               |
| 7/20/2017  |              |              |             |              |             |               | <0.0005 (D)   |
| 7/27/2017  |              |              |             |              |             | <0.0005       |               |
| 7/28/2017  |              |              |             |              |             |               | <0.0005       |
| 8/9/2017   |              |              |             |              |             | <0.0005       | <0.0005       |
| 8/24/2017  |              |              |             |              |             |               | <0.0005       |
| 9/22/2017  | <0.0005      |              |             |              |             |               |               |
| 9/25/2017  |              |              | <0.0005     | <0.0005      |             |               |               |
| 9/26/2017  |              | <0.0005      |             |              | <0.0005     |               |               |
| 9/29/2017  |              |              |             |              |             | <0.0005 (D)   |               |
| 10/2/2017  |              |              |             |              |             |               |               |
| 10/3/2017  |              |              |             |              |             |               | <0.0005 (D)   |
| 10/4/2017  |              |              |             |              |             |               |               |
| 3/14/2018  |              | <0.0005      | <0.0005     | <0.0005      | <0.0005     |               |               |
| 3/15/2018  | <0.0005      |              |             |              |             |               |               |
| 3/16/2018  |              |              |             |              |             | <0.0005       |               |
| 3/19/2018  |              |              |             |              |             |               |               |
| 3/21/2018  |              |              |             |              |             |               | <0.0005       |
| 9/12/2018  | 3.9E-05 (J)  | <0.0005      | <0.0005     | <0.0005      | 3.8E-05 (J) |               |               |
| 9/13/2018  |              |              |             |              |             |               |               |
| 9/14/2018  |              |              |             |              |             | 4.1E-05 (J)   |               |
| 9/17/2018  |              |              |             |              |             |               |               |
| 9/18/2018  |              |              |             |              |             |               | <0.0005       |
| 3/13/2019  | <0.0005      |              |             |              | <0.0005     |               |               |
| 3/14/2019  |              |              | <0.0005     | <0.0005      |             | <0.0005       |               |
| 3/15/2019  |              | <0.0005      |             |              |             |               |               |
| 3/19/2019  |              |              |             |              |             |               |               |
| 3/20/2019  |              |              |             |              |             |               |               |
| 3/21/2019  |              |              |             |              |             |               | <0.0005 (D)   |
| 9/9/2019   |              | <0.0005      |             |              | <0.0005     |               |               |



# Prediction Limit

Constituent: Mercury (mg/L) Analysis Run 9/15/2022 4:06 PM View: Appendix I Interwell - Resample  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|           | GWA-43R (bg) | GWA-39Z (bg) | GWA-41 (bg) | GWA-41R (bg) | GWA-40 (bg) | GWA-39RZ (bg) | GWA-4RZ (bg) |
|-----------|--------------|--------------|-------------|--------------|-------------|---------------|--------------|
| 9/10/2019 |              |              | <0.0005 (D) | <0.0005      |             |               |              |
| 9/11/2019 | <0.0005      |              |             |              |             |               |              |
| 9/12/2019 |              |              |             |              |             |               | <0.0005 (D)  |
| 9/13/2019 |              |              |             |              |             |               |              |
| 3/6/2020  |              |              | <0.0005     |              |             |               |              |
| 3/9/2020  | <0.0005      | <0.0005      |             | <0.0005      | <0.0005     | <0.0005       |              |
| 3/11/2020 |              |              |             |              |             |               |              |
| 3/12/2020 |              |              |             |              |             |               | <0.0005      |
| 9/10/2020 |              | <0.0005      | <0.0005     | <0.0005      |             |               |              |
| 9/11/2020 |              |              |             |              | <0.0005     |               |              |
| 9/14/2020 | <0.0005      |              |             |              |             |               |              |
| 9/15/2020 |              |              |             |              |             |               |              |
| 9/16/2020 |              |              |             |              |             | <0.0005       |              |
| 9/17/2020 |              |              |             |              |             |               | <0.0005      |
| 3/10/2021 |              |              |             | <0.0005      | <0.0005     |               |              |
| 3/11/2021 | <0.0005      |              | <0.0005     |              |             |               |              |
| 3/12/2021 |              | <0.0005      |             |              |             |               |              |
| 3/16/2021 |              |              |             |              |             | <0.0005       | <0.0005      |
| 3/17/2021 |              |              |             |              |             |               |              |
| 3/29/2021 |              |              |             |              |             |               |              |
| 8/4/2021  |              | 0.00012 (J)  | 9E-05 (J)   | 9.4E-05 (J)  | 9.4E-05 (J) |               |              |
| 8/5/2021  | 9.6E-05 (J)  |              |             |              |             |               |              |
| 8/6/2021  |              |              |             |              |             | <0.0005       |              |
| 8/9/2021  |              |              |             |              |             |               |              |
| 8/10/2021 |              |              |             |              |             |               | <0.0005      |
| 1/31/2022 | <0.0005      | <0.0005      | <0.0005     | <0.0005      | <0.0005     |               |              |
| 2/1/2022  |              |              |             |              |             |               |              |
| 2/2/2022  |              |              |             |              |             | <0.0005       |              |
| 2/3/2022  |              |              |             |              |             |               | <0.0005      |
| 4/28/2022 |              |              |             |              |             |               |              |

FIGURE W.

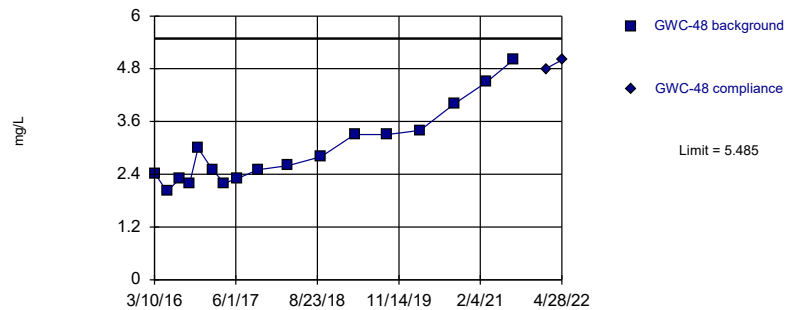
# Appendix III Intrawell Prediction Limits - Resample Results

Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10 Printed 9/15/2022, 4:08 PM

| Constituent            | Well   | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg.N | Bg Mean | Std. Dev. | %NDs | ND Adj. | Transform | Alpha     | Method             |
|------------------------|--------|------------|------------|-----------|---------|------|------|---------|-----------|------|---------|-----------|-----------|--------------------|
| Chloride, Total (mg/L) | GWC-48 | 5.485      | n/a        | 4/28/2022 | 5       | No   | 17   | 1.705   | 0.2373    | 0    | None    | sqrt(x)   | 0.0002894 | Param Intra 1 of 2 |

Within Limit

Prediction Limit  
Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=1.705, Std. Dev.=0.2373, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8997, critical = 0.892. Kappa = 2.683 (c=7, w=26, 1 of 2, event alpha = 0.05132). Report alpha = 0.0002894.

Constituent: Chloride, Total Analysis Run 9/15/2022 4:07 PM View: Appendix III Intrawell - Resample  
Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

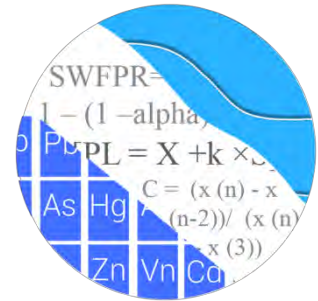
# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 9/15/2022 4:08 PM View: Appendix III Intrawell - Resample  
Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

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|           | GWC-48 | GWC-48 |
|-----------|--------|--------|
| 3/10/2016 | 2.4266 |        |
| 5/17/2016 | 2.01   |        |
| 7/27/2016 | 2.3    |        |
| 9/20/2016 | 2.2    |        |
| 11/4/2016 | 3      |        |
| 1/23/2017 | 2.5    |        |
| 3/28/2017 | 2.2    |        |
| 6/8/2017  | 2.3    |        |
| 9/29/2017 | 2.5    |        |
| 3/15/2018 | 2.6    |        |
| 9/13/2018 | 2.8    |        |
| 3/15/2019 | 3.3    |        |
| 9/11/2019 | 3.3    |        |
| 3/9/2020  | 3.4    |        |
| 9/14/2020 | 4      |        |
| 3/11/2021 | 4.5    |        |
| 8/4/2021  | 5      |        |
| 1/31/2022 |        | 4.8    |
| 4/28/2022 |        | 5      |

# GROUNDWATER STATS CONSULTING



October 24, 2022

Southern Company Services  
Attn: Mr. Joju Abraham  
241 Ralph McGill Blvd. NE, Bin 10160  
Atlanta, Georgia 30308-3374

Re: Plant Bowen Landfill Cells 1, 2, 9, and 10  
Addendum – February 2022 Sample Event

Dear Mr. Abraham,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the addendum report for the February 2022 sample event for Georgia Power Company's Plant Bowen Landfill Cells 1, 2, 9, and 10. The analysis complies with the United States Environmental Protection Agency (USEPA) Coal Combustion Residuals (CCR) Rule 40 Code of Federal Regulations (CFR) 257 Subpart D, the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the USEPA Unified Guidance (2009).

Semi-annual sampling is conducted for USEPA's CCR Appendix III parameters, in addition to 16 parameters in accordance with the Georgia EPD's Solid Waste Permit. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** GWA-1, GWA-2, GWA-2R, GWA-3A GWA-4RZ, GWA-39RZ, GWA-39Z, GWA-40, GWA-41, GWA-41R, GWA-42, GWA-43, GWA-43R, GWA-50R, and GWA-50
- **Downgradient wells:** GWC-5, GWC-6, GWC-6RZ, GWC-7Z, GWC-8RR, GWC-8Z, GWC-9, GWC-10, GWC-10R, GWC-11, GWC-11R, GWC-12, GWC-13, GWC-13RZ, GWC-14Z, GWC-15R, GWC-15Z, GWC-44, GWC-45, GWC-45R, GWC-46R, GWC-47, GWC-47R, GWC-48, GWC-49R, and GWC-49Z

Note that well GWA-3 was replaced with GWA-3A, which was first sampled in March 2021. As requested, data from well GWA-3 have been combined with data from replacement well GWA-3A.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by and Kristina Rayner, Founder and Senior Statistician to Groundwater Stats Consulting. The analysis was prepared according to the recommended statistical methodology provided in the Fall 2017 by Dr. Kirk Cameron, PhD Statistician with MacStat Consulting and primary author of the USEPA Unified Guidance.

The following constituents are evaluated:

- **CCR Appendix III:** chloride and pH

Note that the terms “parameters” and “constituents” are interchangeable throughout this report.

In earlier analyses, data at all wells for constituents detected in downgradient wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves are provided to demonstrate that the selected statistical methods for the parameters listed above comply with the USEPA Unified Guidance and the Georgia Environmental Protection Division Rules for Solid Waste Management Chapter 391-3-4-.10. A few well/constituent pairs have a limited background data set with a minimum of 11 observations due either to sampling or truncation of background date ranges. As more samples are collected, these well/constituent pairs will meet the minimum power requirements. The EPA suggests the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations. Power curves were based on the following statistical methods:

### **CCR Appendix III Constituents:**

- Semi-Annual Sampling
- Interwell Prediction Limits with 1-of-2 resample plan – (chloride and pH)
- # Constituents: 7
- # Downgradient wells: 26

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of

data are non-detects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits. Non-detects are handled as follows:

- No statistical analyses are required on wells and analytes containing 100% non-detects.
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the interwell case, prediction limits are updated with upgradient well data during each event after careful screening for any new outliers. In the intrawell case, data for all wells and constituents may be re-evaluated when a minimum of 4 new data points are available to determine whether earlier concentrations are representative of present-day groundwater quality. In some cases, the earlier portion of data are deselected prior to construction of limits to provide sensitive limits that will rapidly detect changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs. impact to groundwater quality downgradient of the facility.



## Evaluation of CCR Appendix III Parameters – January/February 2022

### Interwell Prediction Limits

For chloride and pH, interwell prediction limits, combined with a 1-of-2 resample plan, were constructed using all historical upgradient well data through January/February 2022. Nonparametric prediction limits were constructed as the background data for chloride and pH did not follow a normal or transformed-normal distributed when tested using the Chi-Squared normality test. Results and a summary table follow this report. The January/February 2022 sample from each downgradient well was compared to the background limit to determine whether exceedances over background are present. Exceedances were identified for the following downgradient well/constituent pairs:

- Chloride: GWC-13RZ
- pH (upper limit): GWC-8RR and GWC-8Z
- pH (lower limit): GWC-9, GWC-44, GWC-45, GWC-48, and GWC-49Z

### **Summary**

Based on the results of the Appendix III constituents requiring interwell prediction limits, the following apparent exceedances were identified:

#### Appendix III Interwell

- Chloride: GWC-13RZ
- pH (upper limit): GWC-8RR and GWC-8Z
- pH (lower limit): GWC-9, GWC-44, GWC-45, GWC-48, and GWC-49Z

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Plant Bowen Landfill Cells 1, 2, 9 and 10. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Andrew T. Collins  
Project Manager



Kristina L. Rayner  
Senior Statistician

# Appendix III Interwell Prediction Limit - Significant Results

Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10 Printed 10/20/2022, 12:07 PM

| Constituent            | Well     | Upper Lim. | Lower Lim. | Date      | Observ. | Sig. | Bg.N | Bg Mean | Std. Dev. | %NDs | ND Adj. | Transform | Alpha      | Method                      |
|------------------------|----------|------------|------------|-----------|---------|------|------|---------|-----------|------|---------|-----------|------------|-----------------------------|
| Chloride, Total (mg/L) | GWC-13RZ | 4.9        | n/a        | 2/4/2022  | 6.1     | Yes  | 269  | n/a     | n/a       | 2.23 | n/a     | n/a       | 0.00004896 | NP Inter (normality) 1 of 2 |
| pH (pH_units)          | GWC-44   | 8.04       | 5.07       | 1/31/2022 | 4.78    | Yes  | 280  | n/a     | n/a       | 0    | n/a     | n/a       | 0.00009793 | NP Inter (normality) 1 of 2 |
| pH (pH_units)          | GWC-45   | 8.04       | 5.07       | 2/1/2022  | 4.88    | Yes  | 280  | n/a     | n/a       | 0    | n/a     | n/a       | 0.00009793 | NP Inter (normality) 1 of 2 |
| pH (pH_units)          | GWC-48   | 8.04       | 5.07       | 1/31/2022 | 4.86    | Yes  | 280  | n/a     | n/a       | 0    | n/a     | n/a       | 0.00009793 | NP Inter (normality) 1 of 2 |
| pH (pH_units)          | GWC-49Z  | 8.04       | 5.07       | 2/1/2022  | 5       | Yes  | 280  | n/a     | n/a       | 0    | n/a     | n/a       | 0.00009793 | NP Inter (normality) 1 of 2 |
| pH (pH_units)          | GWC-8RR  | 8.04       | 5.07       | 2/2/2022  | 8.13    | Yes  | 280  | n/a     | n/a       | 0    | n/a     | n/a       | 0.00009793 | NP Inter (normality) 1 of 2 |
| pH (pH_units)          | GWC-8Z   | 8.04       | 5.07       | 2/2/2022  | 8.92    | Yes  | 280  | n/a     | n/a       | 0    | n/a     | n/a       | 0.00009793 | NP Inter (normality) 1 of 2 |
| pH (pH_units)          | GWC-9    | 8.04       | 5.07       | 2/2/2022  | 4.81    | Yes  | 280  | n/a     | n/a       | 0    | n/a     | n/a       | 0.00009793 | NP Inter (normality) 1 of 2 |

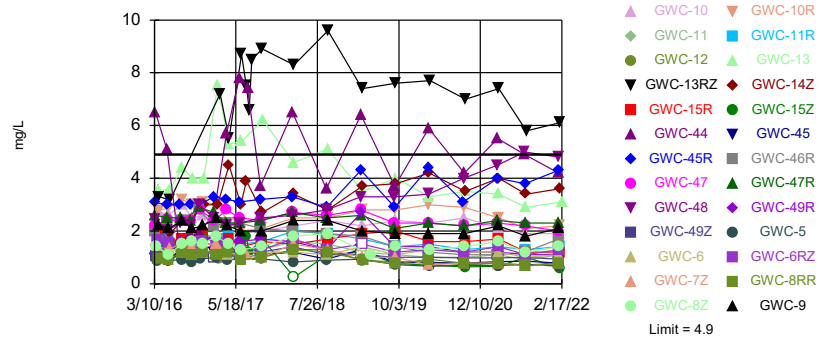
# Appendix III Interwell Prediction Limit - All Results

Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10 Printed 10/20/2022, 12:07 PM

| Constituent                   | Well            | Upper Lim.  | Lower Lim.  | Date             | Observ.     | Sig.       | Bg.N       | Bg Mean    | Std. Dev.  | %NDs        | ND Adj.    | Transform  | Alpha             | Method                             |
|-------------------------------|-----------------|-------------|-------------|------------------|-------------|------------|------------|------------|------------|-------------|------------|------------|-------------------|------------------------------------|
| Chloride, Total (mg/L)        | GWC-10          | 4.9         | n/a         | 2/4/2022         | 1.9         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-10R         | 4.9         | n/a         | 2/4/2022         | 2.2         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-11          | 4.9         | n/a         | 2/4/2022         | 1.1         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-11R         | 4.9         | n/a         | 2/4/2022         | 1.4         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-12          | 4.9         | n/a         | 2/2/2022         | 0.79J       | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-13          | 4.9         | n/a         | 2/17/2022        | 3.1         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| <b>Chloride, Total (mg/L)</b> | <b>GWC-13RZ</b> | <b>4.9</b>  | <b>n/a</b>  | <b>2/4/2022</b>  | <b>6.1</b>  | <b>Yes</b> | <b>269</b> | <b>n/a</b> | <b>n/a</b> | <b>2.23</b> | <b>n/a</b> | <b>n/a</b> | <b>0.00004896</b> | <b>NP Inter (normality) 1 of 2</b> |
| Chloride, Total (mg/L)        | GWC-14Z         | 4.9         | n/a         | 2/4/2022         | 3.6         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-15R         | 4.9         | n/a         | 2/4/2022         | 1.2         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-15Z         | 4.9         | n/a         | 2/7/2022         | 0.6J        | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-44          | 4.9         | n/a         | 1/31/2022        | 4.2         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-45          | 4.9         | n/a         | 2/1/2022         | 0.79J       | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-45R         | 4.9         | n/a         | 2/1/2022         | 4.3         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-46R         | 4.9         | n/a         | 1/31/2022        | 1.7         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-47          | 4.9         | n/a         | 2/1/2022         | 2           | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-47R         | 4.9         | n/a         | 2/1/2022         | 2.3         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-48          | 4.9         | n/a         | 1/31/2022        | 4.8         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-49R         | 4.9         | n/a         | 2/1/2022         | 1.1         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-49Z         | 4.9         | n/a         | 2/1/2022         | 0.93J       | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-5           | 4.9         | n/a         | 2/2/2022         | 0.66J       | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-6           | 4.9         | n/a         | 2/2/2022         | 1.1         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-6RZ         | 4.9         | n/a         | 2/2/2022         | 1.3         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-7Z          | 4.9         | n/a         | 2/2/2022         | 0.76J       | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-8RR         | 4.9         | n/a         | 2/2/2022         | 0.77J       | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-8Z          | 4.9         | n/a         | 2/2/2022         | 1.4         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| Chloride, Total (mg/L)        | GWC-9           | 4.9         | n/a         | 2/2/2022         | 2.1         | No         | 269        | n/a        | n/a        | 2.23        | n/a        | n/a        | 0.00004896        | NP Inter (normality) 1 of 2        |
| pH (pH_units)                 | GWC-10          | 8.04        | 5.07        | 2/4/2022         | 6.53        | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| pH (pH_units)                 | GWC-10R         | 8.04        | 5.07        | 2/4/2022         | 7.69        | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| pH (pH_units)                 | GWC-11          | 8.04        | 5.07        | 2/4/2022         | 7.2         | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| pH (pH_units)                 | GWC-11R         | 8.04        | 5.07        | 2/4/2022         | 7.58        | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| pH (pH_units)                 | GWC-12          | 8.04        | 5.07        | 2/2/2022         | 6.35        | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| pH (pH_units)                 | GWC-13          | 8.04        | 5.07        | 2/17/2022        | 7.24        | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| pH (pH_units)                 | GWC-13RZ        | 8.04        | 5.07        | 2/4/2022         | 7.46        | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| pH (pH_units)                 | GWC-14Z         | 8.04        | 5.07        | 2/4/2022         | 6.06        | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| pH (pH_units)                 | GWC-15R         | 8.04        | 5.07        | 2/4/2022         | 7.61        | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| pH (pH_units)                 | GWC-15Z         | 8.04        | 5.07        | 2/7/2022         | 7.83        | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| <b>pH (pH_units)</b>          | <b>GWC-44</b>   | <b>8.04</b> | <b>5.07</b> | <b>1/31/2022</b> | <b>4.78</b> | <b>Yes</b> | <b>280</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>    | <b>n/a</b> | <b>n/a</b> | <b>0.00009793</b> | <b>NP Inter (normality) 1 of 2</b> |
| <b>pH (pH_units)</b>          | <b>GWC-45</b>   | <b>8.04</b> | <b>5.07</b> | <b>2/1/2022</b>  | <b>4.88</b> | <b>Yes</b> | <b>280</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>    | <b>n/a</b> | <b>n/a</b> | <b>0.00009793</b> | <b>NP Inter (normality) 1 of 2</b> |
| pH (pH_units)                 | GWC-45R         | 8.04        | 5.07        | 2/1/2022         | 7.15        | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| pH (pH_units)                 | GWC-46R         | 8.04        | 5.07        | 1/31/2022        | 7.48        | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| pH (pH_units)                 | GWC-47          | 8.04        | 5.07        | 2/1/2022         | 7.55        | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| pH (pH_units)                 | GWC-47R         | 8.04        | 5.07        | 2/1/2022         | 7.54        | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| <b>pH (pH_units)</b>          | <b>GWC-48</b>   | <b>8.04</b> | <b>5.07</b> | <b>1/31/2022</b> | <b>4.86</b> | <b>Yes</b> | <b>280</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>    | <b>n/a</b> | <b>n/a</b> | <b>0.00009793</b> | <b>NP Inter (normality) 1 of 2</b> |
| pH (pH_units)                 | GWC-49R         | 8.04        | 5.07        | 2/1/2022         | 7.63        | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| <b>pH (pH_units)</b>          | <b>GWC-49Z</b>  | <b>8.04</b> | <b>5.07</b> | <b>2/1/2022</b>  | <b>5</b>    | <b>Yes</b> | <b>280</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>    | <b>n/a</b> | <b>n/a</b> | <b>0.00009793</b> | <b>NP Inter (normality) 1 of 2</b> |
| pH (pH_units)                 | GWC-5           | 8.04        | 5.07        | 2/2/2022         | 5.9         | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| pH (pH_units)                 | GWC-6           | 8.04        | 5.07        | 2/2/2022         | 7.4         | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| pH (pH_units)                 | GWC-6RZ         | 8.04        | 5.07        | 2/2/2022         | 6.8         | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| pH (pH_units)                 | GWC-7Z          | 8.04        | 5.07        | 2/2/2022         | 7.54        | No         | 280        | n/a        | n/a        | 0           | n/a        | n/a        | 0.00009793        | NP Inter (normality) 1 of 2        |
| <b>pH (pH_units)</b>          | <b>GWC-8RR</b>  | <b>8.04</b> | <b>5.07</b> | <b>2/2/2022</b>  | <b>8.13</b> | <b>Yes</b> | <b>280</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>    | <b>n/a</b> | <b>n/a</b> | <b>0.00009793</b> | <b>NP Inter (normality) 1 of 2</b> |
| <b>pH (pH_units)</b>          | <b>GWC-8Z</b>   | <b>8.04</b> | <b>5.07</b> | <b>2/2/2022</b>  | <b>8.92</b> | <b>Yes</b> | <b>280</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>    | <b>n/a</b> | <b>n/a</b> | <b>0.00009793</b> | <b>NP Inter (normality) 1 of 2</b> |
| <b>pH (pH_units)</b>          | <b>GWC-9</b>    | <b>8.04</b> | <b>5.07</b> | <b>2/2/2022</b>  | <b>4.81</b> | <b>Yes</b> | <b>280</b> | <b>n/a</b> | <b>n/a</b> | <b>0</b>    | <b>n/a</b> | <b>n/a</b> | <b>0.00009793</b> | <b>NP Inter (normality) 1 of 2</b> |

Exceeds Limit: GWC-13RZ

Prediction Limit  
 Interwell Non-parametric

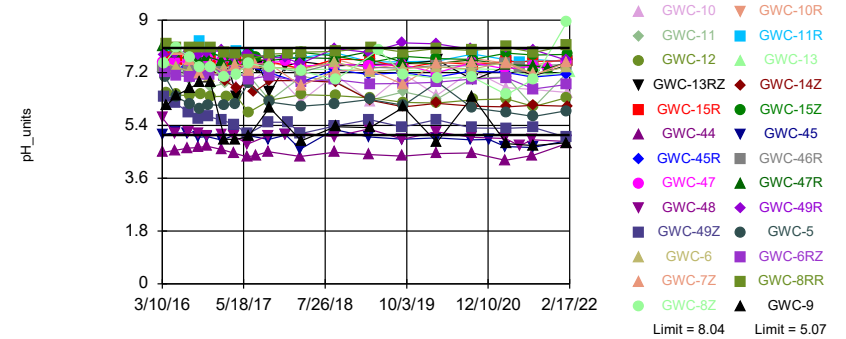


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 269 background values. 2.23% NDs. Annual per-constituent alpha = 0.002543. Individual comparison alpha = 0.00004896 (1 of 2). Comparing 26 points to limit.

Constituent: Chloride, Total Analysis Run 10/20/2022 12:05 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

Exceeds Limits: GWC-44, GWC-45, GWC-48, GWC-49Z, GWC-8RR, GWC-8Z, GWC-9

Prediction Limit  
 Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 280 background values. Annual per-constituent alpha = 0.005086. Individual comparison alpha = 0.00009793 (1 of 2). Comparing 26 points to limit.

Constituent: pH Analysis Run 10/20/2022 12:05 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10











# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|           | GWA-40 (bg) | GWC-45     | GWC-45R    | GWC-44 | GWC-49R | GWC-49Z | GWC-8Z | GWA-1 (bg) | GWA-2 (bg) |
|-----------|-------------|------------|------------|--------|---------|---------|--------|------------|------------|
| 3/10/2016 |             |            |            |        |         |         |        |            |            |
| 3/11/2016 |             |            |            |        |         |         |        |            |            |
| 3/14/2016 |             |            |            |        |         |         |        |            |            |
| 3/15/2016 | 1.1671      |            |            |        |         |         |        |            |            |
| 3/16/2016 |             | 0.9445 (D) | 3.0774 (D) | 6.505  |         |         |        |            |            |
| 3/17/2016 |             |            |            |        | 1.4476  | 1.0624  |        |            |            |
| 3/22/2016 |             |            |            |        |         |         | 1.4231 | 1.5101     |            |
| 3/23/2016 |             |            |            |        |         |         |        |            | 2.4904     |
| 3/28/2016 |             |            |            |        |         |         |        |            |            |
| 3/29/2016 |             |            |            |        |         |         |        |            |            |
| 3/30/2016 |             |            |            |        |         |         |        |            |            |
| 3/31/2016 |             |            |            |        |         |         |        |            |            |
| 4/4/2016  |             |            |            |        |         |         |        |            |            |
| 4/5/2016  |             |            |            |        |         |         |        |            |            |
| 5/11/2016 | 0.8763      |            |            |        |         |         |        |            |            |
| 5/12/2016 |             |            |            |        |         |         |        |            |            |
| 5/13/2016 |             |            |            |        |         |         |        |            |            |
| 5/16/2016 |             | 0.9104 (D) | 3 (D)      | 5.08   |         |         |        |            |            |
| 5/17/2016 |             |            |            |        |         |         |        |            |            |
| 5/18/2016 |             |            |            |        | 1.43    | 1.41    |        |            |            |
| 5/19/2016 |             |            |            |        |         |         |        | 1.5        |            |
| 5/20/2016 |             |            |            |        |         |         |        |            | 1.71       |
| 5/23/2016 |             |            |            |        |         |         |        |            |            |
| 5/24/2016 |             |            |            |        |         |         |        |            |            |
| 5/25/2016 |             |            |            |        |         |         | 1.11   |            |            |
| 5/26/2016 |             |            |            |        |         |         |        |            |            |
| 5/27/2016 |             |            |            |        |         |         |        |            |            |
| 5/31/2016 |             |            |            |        |         |         |        |            |            |
| 6/1/2016  |             |            |            |        |         |         |        |            |            |
| 7/19/2016 |             |            |            |        |         |         |        |            |            |
| 7/20/2016 |             |            |            |        |         |         |        |            |            |
| 7/21/2016 | 1.4         |            |            |        |         |         |        |            |            |
| 7/22/2016 |             |            |            |        |         |         |        |            |            |
| 7/25/2016 |             | 1.2 (D)    | 3 (D)      | 1.2    |         |         |        |            |            |
| 7/26/2016 |             |            |            |        |         |         |        |            |            |
| 7/27/2016 |             |            |            |        | 1.6     |         |        |            |            |
| 7/28/2016 |             |            |            |        |         | 1.4     |        |            |            |
| 7/29/2016 |             |            |            |        |         |         |        | 1.7        | 2          |
| 8/1/2016  |             |            |            |        |         |         |        |            |            |
| 8/2/2016  |             |            |            |        |         |         | 1.5    |            |            |
| 8/3/2016  |             |            |            |        |         |         |        |            |            |
| 8/4/2016  |             |            |            |        |         |         |        |            |            |
| 8/5/2016  |             |            |            |        |         |         |        |            |            |
| 8/9/2016  |             |            |            |        |         |         |        |            |            |
| 9/15/2016 |             |            |            |        |         |         |        |            |            |
| 9/16/2016 |             |            |            |        |         |         |        |            |            |
| 9/19/2016 | 1.1         | 1.1 (D)    | 3 (D)      | 1.9    |         |         |        |            |            |
| 9/20/2016 |             |            |            |        |         |         |        |            |            |
| 9/21/2016 |             |            |            |        | 1.6     | 1.2     |        |            |            |
| 9/22/2016 |             |            |            |        |         |         |        |            |            |
| 9/23/2016 |             |            |            |        |         |         |        | 1.8        | 1.8        |
| 9/26/2016 |             |            |            |        |         |         | 1.6    |            |            |

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-40 (bg) | GWC-45  | GWC-45R | GWC-44 | GWC-49R | GWC-49Z   | GWC-8Z | GWA-1 (bg) | GWA-2 (bg) |
|------------|-------------|---------|---------|--------|---------|-----------|--------|------------|------------|
| 9/27/2016  |             |         |         |        |         |           |        |            |            |
| 9/28/2016  |             |         |         |        |         |           |        |            |            |
| 9/29/2016  |             |         |         |        |         |           |        |            |            |
| 9/30/2016  |             |         |         |        |         |           |        |            |            |
| 11/2/2016  |             |         |         |        |         |           |        |            |            |
| 11/3/2016  | 1.2         |         | 3 (D)   | 2      |         |           |        |            |            |
| 11/4/2016  |             | 1 (D)   |         |        | 1.6     |           |        |            |            |
| 11/7/2016  |             |         |         |        |         | 1.4       |        |            |            |
| 11/9/2016  |             |         |         |        |         |           |        | 2          | 1.6        |
| 11/10/2016 |             |         |         |        |         |           |        |            |            |
| 11/11/2016 |             |         |         |        |         |           |        |            |            |
| 11/14/2016 |             |         |         |        |         |           |        |            |            |
| 11/18/2016 |             |         |         |        |         |           |        |            |            |
| 11/21/2016 |             |         |         |        |         |           | 1.5    |            |            |
| 11/22/2016 |             |         |         |        |         |           |        |            |            |
| 11/23/2016 |             |         |         |        |         |           |        |            |            |
| 11/28/2016 |             |         |         |        |         |           |        |            |            |
| 1/17/2017  | 1           |         |         |        |         |           |        |            |            |
| 1/18/2017  |             |         |         |        |         |           |        |            |            |
| 1/19/2017  |             |         |         | 2.6    |         |           |        |            |            |
| 1/20/2017  |             |         | 3.3 (D) |        |         |           |        |            |            |
| 1/23/2017  |             | 1.2 (D) |         |        |         |           |        |            |            |
| 1/24/2017  |             |         |         |        | 1.7     | <0.99 (*) |        |            |            |
| 1/30/2017  |             |         |         |        |         |           |        | 1.5        |            |
| 1/31/2017  |             |         |         |        |         |           |        |            | 1.3        |
| 2/1/2017   |             |         |         |        |         |           |        |            |            |
| 2/3/2017   |             |         |         |        |         |           | 1.8    |            |            |
| 2/6/2017   |             |         |         |        |         |           |        |            |            |
| 2/7/2017   |             |         |         |        |         |           |        |            |            |
| 2/8/2017   |             |         |         |        |         |           |        |            |            |
| 2/9/2017   |             |         |         |        |         |           |        |            |            |
| 2/10/2017  |             |         |         |        |         |           |        |            |            |
| 2/13/2017  |             |         |         |        |         |           |        |            |            |
| 2/21/2017  |             |         |         |        |         |           |        |            |            |
| 2/22/2017  |             |         |         |        |         |           |        |            |            |
| 3/24/2017  | 1.2         |         |         |        |         |           |        |            |            |
| 3/27/2017  |             |         |         |        |         |           |        |            |            |
| 3/28/2017  |             |         |         | 5.7    |         |           |        |            |            |
| 3/29/2017  |             | 1.1 (D) | 3.2 (D) |        | 1.6     |           |        |            |            |
| 3/30/2017  |             |         |         |        |         | 1.2       |        | 1.8        | 1.6        |
| 4/3/2017   |             |         |         |        |         |           |        |            |            |
| 4/6/2017   |             |         |         |        |         |           |        |            |            |
| 4/7/2017   |             |         |         |        |         |           | 1.5    |            |            |
| 4/10/2017  |             |         |         |        |         |           |        |            |            |
| 4/11/2017  |             |         |         |        |         |           |        |            |            |
| 4/12/2017  |             |         |         |        |         |           |        |            |            |
| 5/24/2017  | 1.5         |         |         |        |         |           |        |            |            |
| 6/5/2017   |             |         |         | 7.8    |         |           |        |            |            |
| 6/6/2017   |             |         |         |        |         |           |        |            |            |
| 6/7/2017   |             | 1       | 3.1     |        |         |           |        |            |            |
| 6/8/2017   |             |         |         |        | 1.6     |           |        |            |            |
| 6/9/2017   |             |         |         |        |         | 1.1       |        | 1.6        |            |





# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|           | GWA-3A (bg) | GWA-2R (bg) | GWA-50 (bg) | GWC-5  | GWA-50R (bg) | GWC-6RZ | GWC-6  | GWC-9 | GWC-8RR |
|-----------|-------------|-------------|-------------|--------|--------------|---------|--------|-------|---------|
| 3/10/2016 |             |             |             |        |              |         |        |       |         |
| 3/11/2016 |             |             |             |        |              |         |        |       |         |
| 3/14/2016 |             |             |             |        |              |         |        |       |         |
| 3/15/2016 |             |             |             |        |              |         |        |       |         |
| 3/16/2016 |             |             |             |        |              |         |        |       |         |
| 3/17/2016 |             |             |             |        |              |         |        |       |         |
| 3/22/2016 |             |             |             |        |              |         |        |       |         |
| 3/23/2016 | 1.6092      | 0.9079      |             |        |              |         |        |       |         |
| 3/28/2016 |             |             | 1.14        | 0.8659 | 0.9204       |         |        |       |         |
| 3/29/2016 |             |             |             |        |              | 1.6645  | 1.3977 |       |         |
| 3/30/2016 |             |             |             |        |              |         |        | 2.21  | 0.9409  |
| 3/31/2016 |             |             |             |        |              |         |        |       |         |
| 4/4/2016  |             |             |             |        |              |         |        |       |         |
| 4/5/2016  |             |             |             |        |              |         |        |       |         |
| 5/11/2016 |             |             |             |        |              |         |        |       |         |
| 5/12/2016 |             |             |             |        |              |         |        |       |         |
| 5/13/2016 |             |             |             |        |              |         |        |       |         |
| 5/16/2016 |             |             |             |        |              |         |        |       |         |
| 5/17/2016 |             |             |             |        |              |         |        |       |         |
| 5/18/2016 |             |             |             |        |              |         |        |       |         |
| 5/19/2016 |             | 0.9136      |             |        |              |         |        |       |         |
| 5/20/2016 |             |             |             |        |              |         |        |       |         |
| 5/23/2016 | 1.52        |             | 1.19        |        |              |         |        |       |         |
| 5/24/2016 |             |             |             |        |              | 1.58    | 1.33   |       | 0.92    |
| 5/25/2016 |             |             |             | 0.8639 | 1.04         |         |        |       |         |
| 5/26/2016 |             |             |             |        |              |         |        | 2.1   |         |
| 5/27/2016 |             |             |             |        |              |         |        |       |         |
| 5/31/2016 |             |             |             |        |              |         |        |       |         |
| 6/1/2016  |             |             |             |        |              |         |        |       |         |
| 7/19/2016 |             |             |             |        |              |         |        |       |         |
| 7/20/2016 |             |             |             |        |              |         |        |       |         |
| 7/21/2016 |             |             |             |        |              |         |        |       |         |
| 7/22/2016 |             |             |             |        |              |         |        |       |         |
| 7/25/2016 |             |             |             |        |              |         |        |       |         |
| 7/26/2016 |             |             |             |        |              |         |        |       |         |
| 7/27/2016 |             |             |             |        |              |         |        |       |         |
| 7/28/2016 |             |             |             |        |              |         |        |       |         |
| 7/29/2016 | 1.5         | 1.1         |             |        |              |         |        |       |         |
| 8/1/2016  |             |             | 1.2         | 0.93   | 0.85         | 1.4     | 1.2    |       |         |
| 8/2/2016  |             |             |             |        |              |         |        |       | 1.2     |
| 8/3/2016  |             |             |             |        |              |         |        |       |         |
| 8/4/2016  |             |             |             |        |              |         |        |       |         |
| 8/5/2016  |             |             |             |        |              |         |        | 2.4   |         |
| 8/9/2016  |             |             |             |        |              |         |        |       |         |
| 9/15/2016 |             |             |             |        |              |         |        |       |         |
| 9/16/2016 |             |             |             |        |              |         |        |       |         |
| 9/19/2016 |             |             |             |        |              |         |        |       |         |
| 9/20/2016 |             |             |             |        |              |         |        |       |         |
| 9/21/2016 |             |             |             |        |              |         |        |       |         |
| 9/22/2016 | 1.4         | 1           |             |        |              |         |        |       |         |
| 9/23/2016 |             |             |             |        |              |         |        |       |         |
| 9/26/2016 |             |             | 1.1         |        | 0.87         | 1.4     | 1.1    |       |         |

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-3A (bg) | GWA-2R (bg) | GWA-50 (bg) | GWC-5 | GWA-50R (bg) | GWC-6RZ | GWC-6 | GWC-9 | GWC-8RR |
|------------|-------------|-------------|-------------|-------|--------------|---------|-------|-------|---------|
| 9/27/2016  |             |             |             | 0.8   |              |         |       |       | 1.1     |
| 9/28/2016  |             |             |             |       |              |         |       | 2.1   |         |
| 9/29/2016  |             |             |             |       |              |         |       |       |         |
| 9/30/2016  |             |             |             |       |              |         |       |       |         |
| 11/2/2016  |             |             |             |       |              |         |       |       |         |
| 11/3/2016  |             |             |             |       |              |         |       |       |         |
| 11/4/2016  |             |             |             |       |              |         |       |       |         |
| 11/7/2016  |             |             |             |       |              |         |       |       |         |
| 11/9/2016  |             |             |             |       |              |         |       |       |         |
| 11/10/2016 | 1.6         | 1.2         | 1.3         |       |              |         |       |       |         |
| 11/11/2016 |             |             |             | 0.95  | 0.99         |         |       |       |         |
| 11/14/2016 |             |             |             |       |              | 1.6     |       |       |         |
| 11/18/2016 |             |             |             |       |              |         | 1.2   |       |         |
| 11/21/2016 |             |             |             |       |              |         |       | 2.2   |         |
| 11/22/2016 |             |             |             |       |              |         |       |       | 1.2     |
| 11/23/2016 |             |             |             |       |              |         |       |       |         |
| 11/28/2016 |             |             |             |       |              |         |       |       |         |
| 1/17/2017  |             |             |             |       |              |         |       |       |         |
| 1/18/2017  |             |             |             |       |              |         |       |       |         |
| 1/19/2017  |             |             |             |       |              |         |       |       |         |
| 1/20/2017  |             |             |             |       |              |         |       |       |         |
| 1/23/2017  |             |             |             |       |              |         |       |       |         |
| 1/24/2017  |             |             |             |       |              |         |       |       |         |
| 1/30/2017  |             |             | 1.2         |       | 0.95         |         |       |       |         |
| 1/31/2017  | 1.6         | 1.2         |             | 0.99  |              |         |       |       |         |
| 2/1/2017   |             |             |             |       |              | 1.4     | 1.3   |       |         |
| 2/3/2017   |             |             |             |       |              |         |       |       |         |
| 2/6/2017   |             |             |             |       |              |         |       | 2.5   | 1.1     |
| 2/7/2017   |             |             |             |       |              |         |       |       |         |
| 2/8/2017   |             |             |             |       |              |         |       |       |         |
| 2/9/2017   |             |             |             |       |              |         |       |       |         |
| 2/10/2017  |             |             |             |       |              |         |       |       |         |
| 2/13/2017  |             |             |             |       |              |         |       |       |         |
| 2/21/2017  |             |             |             |       |              |         |       |       |         |
| 2/22/2017  |             |             |             |       |              |         |       |       |         |
| 3/24/2017  |             |             |             |       |              |         |       |       |         |
| 3/27/2017  |             |             |             |       |              |         |       |       |         |
| 3/28/2017  |             |             |             |       |              |         |       |       |         |
| 3/29/2017  |             |             |             |       |              |         |       |       |         |
| 3/30/2017  | 1.4         |             |             |       |              |         |       |       |         |
| 4/3/2017   |             | 0.99        |             | 0.93  | 0.88         |         |       |       |         |
| 4/6/2017   |             |             |             |       |              | 1.5     | 1.1   | 2.2   | 1.2     |
| 4/7/2017   |             |             | 1.2         |       |              |         |       |       |         |
| 4/10/2017  |             |             |             |       |              |         |       |       |         |
| 4/11/2017  |             |             |             |       |              |         |       |       |         |
| 4/12/2017  |             |             |             |       |              |         |       |       |         |
| 5/24/2017  |             |             |             |       |              |         |       |       |         |
| 6/5/2017   |             |             |             |       |              |         |       |       |         |
| 6/6/2017   |             |             |             |       |              |         |       |       |         |
| 6/7/2017   |             |             |             |       |              |         |       |       |         |
| 6/8/2017   |             |             |             |       |              |         |       |       |         |
| 6/9/2017   |             | 0.87        |             |       |              |         |       |       |         |













# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|           | GWC-10R | GWC-10 | GWC-13 | GWC-11R | GWC-11  | GWC-12     | GWC-13RZ | GWC-14Z | GWC-15Z  |
|-----------|---------|--------|--------|---------|---------|------------|----------|---------|----------|
| 3/27/2019 |         |        |        |         |         |            |          |         |          |
| 5/6/2019  |         |        |        |         |         |            |          |         |          |
| 9/9/2019  |         |        |        |         |         |            |          |         |          |
| 9/10/2019 |         |        |        |         |         |            |          |         |          |
| 9/11/2019 |         |        |        |         |         |            |          |         |          |
| 9/12/2019 |         |        |        |         |         |            |          |         |          |
| 9/13/2019 |         |        |        |         |         |            |          |         |          |
| 9/16/2019 |         |        |        |         |         |            |          |         |          |
| 9/17/2019 | 2.8     | 2.4    |        | 1.4     | 1.1     | 0.835 (JD) |          | 3.8     | 0.78 (X) |
| 9/18/2019 |         |        | 4      |         |         |            | 7.6      |         |          |
| 3/6/2020  |         |        |        |         |         |            |          |         |          |
| 3/9/2020  |         |        |        |         |         |            |          |         |          |
| 3/10/2020 |         |        |        |         |         |            |          |         |          |
| 3/11/2020 |         |        |        |         |         |            |          |         |          |
| 3/12/2020 | 3       | 2.3    |        | 1.5     | 1       | 0.84 (J)   |          |         |          |
| 3/13/2020 |         |        | 3.3    |         |         |            |          | 4.2     | 0.7 (J)  |
| 3/16/2020 |         |        |        |         |         |            |          |         |          |
| 3/17/2020 |         |        |        |         |         |            | 7.7      |         |          |
| 9/10/2020 |         |        |        |         |         |            |          |         |          |
| 9/11/2020 |         |        |        |         |         |            |          |         |          |
| 9/14/2020 |         |        |        |         |         |            |          |         |          |
| 9/15/2020 |         |        |        |         |         |            |          |         |          |
| 9/16/2020 |         |        |        |         |         |            |          |         |          |
| 9/17/2020 | 2.9     | 2.5    |        |         |         |            |          |         |          |
| 9/21/2020 |         |        |        | 1.3     | 1       | 0.71 (J)   |          | 3.5     | 0.64 (J) |
| 9/22/2020 |         |        | 3.5    |         |         |            | 7        |         |          |
| 3/10/2021 |         |        |        |         |         |            |          |         |          |
| 3/11/2021 |         |        |        |         |         |            |          |         |          |
| 3/12/2021 |         |        |        |         |         |            |          |         |          |
| 3/15/2021 |         |        |        |         |         |            |          |         |          |
| 3/16/2021 |         |        |        |         |         |            |          |         |          |
| 3/17/2021 |         |        |        |         |         |            |          |         |          |
| 3/18/2021 | 2.5     | 2.1    | 3.4    |         |         |            |          | 4       | 0.67 (J) |
| 3/19/2021 |         |        |        | 1.4     | 1.1     | 0.79 (J)   | 7.4      |         |          |
| 3/29/2021 |         |        |        |         |         |            |          |         |          |
| 8/4/2021  |         |        |        |         |         |            |          |         |          |
| 8/5/2021  |         |        |        |         |         |            |          |         |          |
| 8/6/2021  |         |        |        |         |         |            |          |         |          |
| 8/9/2021  |         |        |        |         |         |            |          |         |          |
| 8/10/2021 |         | 1.9    |        |         |         |            |          |         |          |
| 8/11/2021 | 2.1     |        | 2.9    | 1.3     | 0.9 (J) | 0.72 (J)   |          | 3.4     | <1       |
| 8/12/2021 |         |        |        |         |         |            | 5.8      |         |          |
| 1/31/2022 |         |        |        |         |         |            |          |         |          |
| 2/1/2022  |         |        |        |         |         |            |          |         |          |
| 2/2/2022  |         |        |        |         |         | 0.79 (J)   |          |         |          |
| 2/3/2022  |         |        |        |         |         |            |          |         |          |
| 2/4/2022  | 2.2     | 1.9    |        | 1.4     | 1.1     |            | 6.1      | 3.6     |          |
| 2/7/2022  |         |        |        |         |         |            |          |         | 0.6 (J)  |
| 2/17/2022 |         |        | 3.1    |         |         |            |          |         |          |

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|           | GWC-15R | GWA-41R (bg) | GWA-39RZ (bg) | GWC-7Z | GWA-4RZ (bg) |
|-----------|---------|--------------|---------------|--------|--------------|
| 3/10/2016 |         |              |               |        |              |
| 3/11/2016 |         |              |               |        |              |
| 3/14/2016 |         |              |               |        |              |
| 3/15/2016 |         | 6.1465 (o)   |               |        |              |
| 3/16/2016 |         |              |               |        |              |
| 3/17/2016 |         |              |               |        |              |
| 3/22/2016 |         |              |               |        |              |
| 3/23/2016 |         |              |               |        |              |
| 3/28/2016 |         |              |               |        |              |
| 3/29/2016 |         |              |               |        |              |
| 3/30/2016 |         |              |               |        |              |
| 3/31/2016 |         |              |               |        |              |
| 4/4/2016  |         |              |               |        |              |
| 4/5/2016  | 2.08    |              |               |        |              |
| 5/11/2016 |         |              |               |        |              |
| 5/12/2016 |         |              |               |        |              |
| 5/13/2016 |         | 3.08         |               |        |              |
| 5/16/2016 |         |              | 1.74 (D)      |        |              |
| 5/17/2016 |         |              |               |        |              |
| 5/18/2016 |         |              |               |        |              |
| 5/19/2016 |         |              |               |        |              |
| 5/20/2016 |         |              |               |        |              |
| 5/23/2016 |         |              |               |        |              |
| 5/24/2016 |         |              |               |        |              |
| 5/25/2016 |         |              |               |        |              |
| 5/26/2016 |         |              |               |        |              |
| 5/27/2016 |         |              |               |        |              |
| 5/31/2016 | 1.51    |              |               | 1.33   |              |
| 6/1/2016  |         |              |               |        |              |
| 7/19/2016 |         |              |               |        |              |
| 7/20/2016 |         |              |               |        |              |
| 7/21/2016 |         | 3.7          |               |        |              |
| 7/22/2016 |         |              |               |        |              |
| 7/25/2016 |         |              |               |        |              |
| 7/26/2016 |         |              |               |        |              |
| 7/27/2016 |         |              | 2.1 (D)       |        |              |
| 7/28/2016 |         |              |               |        |              |
| 7/29/2016 |         |              |               |        |              |
| 8/1/2016  |         |              |               |        |              |
| 8/2/2016  |         |              |               | 1.5    |              |
| 8/3/2016  |         |              |               |        |              |
| 8/4/2016  | 1.7     |              |               |        |              |
| 8/5/2016  |         |              |               |        |              |
| 8/9/2016  |         |              |               |        |              |
| 9/15/2016 |         |              |               |        |              |
| 9/16/2016 |         |              |               |        |              |
| 9/19/2016 |         |              |               |        |              |
| 9/20/2016 |         |              |               |        |              |
| 9/21/2016 |         | 2.4          |               |        |              |
| 9/22/2016 |         |              |               |        |              |
| 9/23/2016 |         |              |               |        |              |
| 9/26/2016 |         |              |               |        |              |

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWC-15R | GWA-41R (bg) | GWA-39RZ (bg) | GWC-7Z | GWA-4RZ (bg) |
|------------|---------|--------------|---------------|--------|--------------|
| 9/27/2016  |         |              |               | 1.4    |              |
| 9/28/2016  |         |              |               |        |              |
| 9/29/2016  | 1.5     |              |               |        |              |
| 9/30/2016  |         |              |               |        |              |
| 11/2/2016  |         |              |               |        |              |
| 11/3/2016  |         | 3.4          |               |        |              |
| 11/4/2016  |         |              |               |        |              |
| 11/7/2016  |         |              |               |        |              |
| 11/9/2016  |         |              |               |        |              |
| 11/10/2016 |         |              |               |        |              |
| 11/11/2016 |         |              |               |        |              |
| 11/14/2016 |         |              |               |        |              |
| 11/18/2016 |         |              |               |        |              |
| 11/21/2016 |         |              |               | 1.5    |              |
| 11/22/2016 |         |              |               |        |              |
| 11/23/2016 | 1.9     |              |               |        |              |
| 11/28/2016 |         |              |               |        |              |
| 1/17/2017  |         | 1.9          |               |        |              |
| 1/18/2017  |         |              |               |        |              |
| 1/19/2017  |         |              |               |        |              |
| 1/20/2017  |         |              |               |        |              |
| 1/23/2017  |         |              |               |        |              |
| 1/24/2017  |         |              |               |        |              |
| 1/30/2017  |         |              |               |        |              |
| 1/31/2017  |         |              |               |        |              |
| 2/1/2017   |         |              |               | 1.5    |              |
| 2/3/2017   |         |              |               |        |              |
| 2/6/2017   |         |              |               |        |              |
| 2/7/2017   |         |              |               |        |              |
| 2/8/2017   |         |              |               |        |              |
| 2/9/2017   |         |              |               |        |              |
| 2/10/2017  | 1.5     |              |               |        |              |
| 2/13/2017  |         |              |               |        |              |
| 2/21/2017  |         |              | 4 (D)         |        |              |
| 2/22/2017  |         |              |               |        | 3.7 (D)      |
| 3/24/2017  |         |              |               |        |              |
| 3/27/2017  |         | 2.4          | 2.6 (D)       |        |              |
| 3/28/2017  |         |              |               |        |              |
| 3/29/2017  |         |              |               |        |              |
| 3/30/2017  |         |              |               |        |              |
| 4/3/2017   |         |              |               |        |              |
| 4/6/2017   |         |              |               | 1.2    |              |
| 4/7/2017   |         |              |               |        | 2.5 (D)      |
| 4/10/2017  |         |              |               |        |              |
| 4/11/2017  |         |              |               |        |              |
| 4/12/2017  | 1.7     |              |               |        |              |
| 5/24/2017  |         |              |               |        |              |
| 6/5/2017   |         |              |               |        |              |
| 6/6/2017   |         | 4.5          |               |        |              |
| 6/7/2017   |         |              |               |        |              |
| 6/8/2017   |         |              | 2.1 (D)       |        |              |
| 6/9/2017   |         |              |               |        |              |

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWC-15R | GWA-41R (bg) | GWA-39RZ (bg) | GWC-7Z | GWA-4RZ (bg) |
|------------|---------|--------------|---------------|--------|--------------|
| 6/12/2017  |         |              |               |        |              |
| 6/13/2017  |         |              |               | 0.98   |              |
| 6/14/2017  |         |              |               |        | 2.6 (D)      |
| 6/15/2017  | 1.4     |              |               |        |              |
| 6/16/2017  |         |              |               |        |              |
| 7/12/2017  |         |              |               |        | 2.8 (D)      |
| 7/14/2017  |         |              |               | 1.1    |              |
| 7/17/2017  |         |              | 1.9 (D)       |        |              |
| 7/20/2017  |         |              |               |        | 2.3 (D)      |
| 7/26/2017  |         |              |               |        |              |
| 7/27/2017  |         |              | 3 (D)         |        |              |
| 7/28/2017  |         |              |               |        | 2 (D)        |
| 8/9/2017   |         |              | 2.5 (D)       |        | 1.8 (D)      |
| 8/10/2017  |         |              |               |        |              |
| 8/24/2017  |         |              |               |        | 2.9 (D)      |
| 9/22/2017  |         |              |               |        |              |
| 9/25/2017  |         | 2.5          |               |        |              |
| 9/26/2017  |         |              |               |        |              |
| 9/27/2017  |         |              |               |        |              |
| 9/29/2017  |         |              | 2.7 (D)       |        |              |
| 10/2/2017  |         |              |               |        |              |
| 10/3/2017  |         |              |               | 1      | 2.8 (D)      |
| 10/4/2017  |         |              |               |        |              |
| 10/5/2017  |         |              |               |        |              |
| 10/6/2017  | 1.6     |              |               |        |              |
| 10/9/2017  |         |              |               |        |              |
| 12/28/2017 |         |              |               |        |              |
| 3/14/2018  |         | 4 (J)        |               |        |              |
| 3/15/2018  |         |              |               |        |              |
| 3/16/2018  |         |              | 2.6           |        |              |
| 3/19/2018  |         |              |               |        |              |
| 3/20/2018  |         |              |               | 1.5    |              |
| 3/21/2018  |         |              |               |        | 2.9          |
| 3/22/2018  |         |              |               |        |              |
| 3/23/2018  | 1.5     |              |               |        |              |
| 9/12/2018  |         | 2.1          |               |        |              |
| 9/13/2018  |         |              |               |        |              |
| 9/14/2018  |         |              | 1.9           |        |              |
| 9/17/2018  |         |              |               |        |              |
| 9/18/2018  |         |              |               | 1.3    | 3.1          |
| 9/19/2018  | 1.7     |              |               |        |              |
| 9/20/2018  |         |              |               |        |              |
| 3/13/2019  |         |              |               |        |              |
| 3/14/2019  |         | 2.9          | 2.8           |        |              |
| 3/15/2019  |         |              |               |        |              |
| 3/18/2019  |         |              |               |        |              |
| 3/19/2019  |         |              |               |        |              |
| 3/20/2019  |         |              |               |        |              |
| 3/21/2019  |         |              |               | <1     | 3.6 (D)      |
| 3/22/2019  |         |              |               |        |              |
| 3/23/2019  |         |              |               |        |              |
| 3/25/2019  | 1.9     |              |               |        |              |

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|           | GWC-15R | GWA-41R (bg) | GWA-39RZ (bg) | GWC-7Z   | GWA-4RZ (bg) |
|-----------|---------|--------------|---------------|----------|--------------|
| 3/27/2019 |         |              |               |          |              |
| 5/6/2019  |         |              |               |          |              |
| 9/9/2019  |         |              |               |          |              |
| 9/10/2019 |         | 1.7          | 2.3           |          |              |
| 9/11/2019 |         |              |               |          |              |
| 9/12/2019 |         |              |               |          | 2.1 (D)      |
| 9/13/2019 |         |              |               | 1        |              |
| 9/16/2019 |         |              |               |          |              |
| 9/17/2019 | 2       |              |               |          |              |
| 9/18/2019 |         |              |               |          |              |
| 3/6/2020  |         |              |               |          |              |
| 3/9/2020  |         | 1.3          | 1.5           |          |              |
| 3/10/2020 |         |              |               |          |              |
| 3/11/2020 |         |              |               |          |              |
| 3/12/2020 |         |              |               | 0.72 (J) | 2.3          |
| 3/13/2020 | 1.6     |              |               |          |              |
| 3/16/2020 |         |              |               |          |              |
| 3/17/2020 |         |              |               |          |              |
| 9/10/2020 |         | 1.4          |               |          |              |
| 9/11/2020 |         |              |               |          |              |
| 9/14/2020 |         |              |               |          |              |
| 9/15/2020 |         |              |               |          |              |
| 9/16/2020 |         |              | 1.7           | 0.79 (J) |              |
| 9/17/2020 |         |              |               |          | 2.4          |
| 9/21/2020 | 1.6     |              |               |          |              |
| 9/22/2020 |         |              |               |          |              |
| 3/10/2021 |         | 1.6          |               |          |              |
| 3/11/2021 |         |              |               |          |              |
| 3/12/2021 |         |              |               |          |              |
| 3/15/2021 |         |              |               |          |              |
| 3/16/2021 |         |              | 1.3           |          | 2.7          |
| 3/17/2021 |         |              |               | 0.79 (J) |              |
| 3/18/2021 | 1.7     |              |               |          |              |
| 3/19/2021 |         |              |               |          |              |
| 3/29/2021 |         |              |               |          |              |
| 8/4/2021  |         | 1.3          |               |          |              |
| 8/5/2021  |         |              |               |          |              |
| 8/6/2021  |         |              | 1.3           |          |              |
| 8/9/2021  |         |              |               |          |              |
| 8/10/2021 |         |              |               | 0.68 (J) | 2.8          |
| 8/11/2021 | 1.2     |              |               |          |              |
| 8/12/2021 |         |              |               |          |              |
| 1/31/2022 |         | 1            |               |          |              |
| 2/1/2022  |         |              |               |          |              |
| 2/2/2022  |         |              | 1.5           | 0.76 (J) |              |
| 2/3/2022  |         |              |               |          | 2.6          |
| 2/4/2022  | 1.2     |              |               |          |              |
| 2/7/2022  |         |              |               |          |              |
| 2/17/2022 |         |              |               |          |              |







# Prediction Limit

Constituent: pH (pH\_units) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWC-48   | GWC-46R | GWC-47   | GWC-47R | GWA-43R (bg) | GWA-43 (bg) | GWA-42 (bg) | GWA-39Z (bg) | GWA-41R (bg) |
|------------|----------|---------|----------|---------|--------------|-------------|-------------|--------------|--------------|
| 6/12/2017  |          |         |          |         |              |             |             |              |              |
| 6/13/2017  |          |         |          |         |              |             |             |              |              |
| 6/14/2017  |          |         |          |         |              |             |             |              |              |
| 6/15/2017  |          |         |          |         |              |             |             |              |              |
| 6/16/2017  |          |         |          |         |              |             |             |              |              |
| 7/11/2017  |          |         |          |         |              |             |             |              |              |
| 7/12/2017  |          |         |          |         |              |             |             |              |              |
| 7/14/2017  |          |         |          |         |              |             |             |              |              |
| 7/17/2017  |          |         |          |         |              |             |             |              |              |
| 7/19/2017  |          |         |          |         |              |             |             |              |              |
| 7/20/2017  |          |         |          |         |              |             |             |              |              |
| 7/26/2017  |          |         |          |         |              |             |             |              |              |
| 7/27/2017  |          |         |          |         |              |             |             |              |              |
| 7/28/2017  |          |         |          |         |              |             |             |              |              |
| 8/8/2017   |          |         |          |         |              |             |             |              |              |
| 8/9/2017   |          |         |          |         |              |             |             |              |              |
| 8/10/2017  |          |         |          |         |              |             |             |              |              |
| 8/23/2017  |          |         |          |         |              |             |             |              |              |
| 8/24/2017  |          |         |          |         |              |             |             |              |              |
| 9/22/2017  |          |         |          |         | 7.8          | 5.77        |             |              |              |
| 9/25/2017  |          |         |          |         |              |             |             |              | 6.88         |
| 9/26/2017  |          |         |          |         |              |             | 7.59        | 7.05         |              |
| 9/27/2017  |          |         | 7.55     | 7.62    |              |             |             |              |              |
| 9/29/2017  | 5.06     | 7.42    |          |         |              |             |             |              |              |
| 10/2/2017  |          |         |          |         |              |             |             |              |              |
| 10/3/2017  |          |         |          |         |              |             |             |              |              |
| 10/4/2017  |          |         |          |         |              |             |             |              |              |
| 10/5/2017  |          |         |          |         |              |             |             |              |              |
| 10/6/2017  |          |         |          |         |              |             |             |              |              |
| 10/9/2017  |          |         |          |         |              |             |             |              |              |
| 12/28/2017 | 5.07 (Y) |         | 7.59 (Y) |         | 7.78 (Y)     |             |             | 6.79 (Y)     |              |
| 12/29/2017 |          |         |          |         |              |             |             |              |              |
| 1/9/2018   |          |         |          |         |              |             |             |              |              |
| 1/10/2018  |          |         |          |         |              |             |             |              |              |
| 3/14/2018  |          |         |          |         |              | 5.85        | 7.6         | 7.42         | 7.04         |
| 3/15/2018  | 5.14     | 7.22    | 7.42     |         | 7.66         |             |             |              |              |
| 3/16/2018  |          |         |          | 7.72    |              |             |             |              |              |
| 3/19/2018  |          |         |          |         |              |             |             |              |              |
| 3/20/2018  |          |         |          |         |              |             |             |              |              |
| 3/21/2018  |          |         |          |         |              |             |             |              |              |
| 3/22/2018  |          |         |          |         |              |             |             |              |              |
| 3/23/2018  |          |         |          |         |              |             |             |              |              |
| 9/12/2018  |          |         |          |         | 7.75         | 5.65        |             | 6.86         | 7.02         |
| 9/13/2018  | 5.02     | 7.52    | 7.49     | 7.68    |              |             |             |              |              |
| 9/14/2018  |          |         |          |         |              |             | 7.37        |              |              |
| 9/17/2018  |          |         |          |         |              |             |             |              |              |
| 9/18/2018  |          |         |          |         |              |             |             |              |              |
| 9/19/2018  |          |         |          |         |              |             |             |              |              |
| 9/20/2018  |          |         |          |         |              |             |             |              |              |
| 3/13/2019  |          |         |          |         | 7.84         | 5.63        |             |              |              |
| 3/14/2019  |          |         |          |         |              |             | 7.57        |              | 6.93         |
| 3/15/2019  | 5.28     |         | 7.45     |         |              |             |             | 6.78         |              |

# Prediction Limit

Constituent: pH (pH\_units) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWC-48 | GWC-46R | GWC-47 | GWC-47R | GWA-43R (bg) | GWA-43 (bg) | GWA-42 (bg) | GWA-39Z (bg) | GWA-41R (bg) |
|------------|--------|---------|--------|---------|--------------|-------------|-------------|--------------|--------------|
| 3/18/2019  |        | 7.39    |        |         |              |             |             |              |              |
| 3/19/2019  |        |         |        | 7.93    |              |             |             |              |              |
| 3/20/2019  |        |         |        |         |              |             |             |              |              |
| 3/21/2019  |        |         |        |         |              |             |             |              |              |
| 3/22/2019  |        |         |        |         |              |             |             |              |              |
| 3/23/2019  |        |         |        |         |              |             |             |              |              |
| 3/25/2019  |        |         |        |         |              |             |             |              |              |
| 3/27/2019  |        |         |        |         |              |             |             |              |              |
| 5/6/2019   |        |         |        |         |              |             |             |              |              |
| 9/9/2019   |        |         |        |         |              |             |             | 6.49         |              |
| 9/10/2019  |        |         |        |         |              |             | 7.53        |              | 6.72         |
| 9/11/2019  | 4.93   | 7.36    |        | 7.55    | 7.75         | 5.53        |             |              |              |
| 9/12/2019  |        |         | 7.48   |         |              |             |             |              |              |
| 9/13/2019  |        |         |        |         |              |             |             |              |              |
| 9/16/2019  |        |         |        |         |              |             |             |              |              |
| 9/17/2019  |        |         |        |         |              |             |             |              |              |
| 9/18/2019  |        |         |        |         |              |             |             |              |              |
| 3/6/2020   |        |         |        |         |              |             | 7.42        |              |              |
| 3/9/2020   | 5.18   |         | 7.19   | 7.51    | 7.73         | 5.5         |             | 5.9          | 6.7          |
| 3/10/2020  |        | 7.44    |        |         |              |             |             |              |              |
| 3/11/2020  |        |         |        |         |              |             |             |              |              |
| 3/12/2020  |        |         |        |         |              |             |             |              |              |
| 3/13/2020  |        |         |        |         |              |             |             |              |              |
| 3/16/2020  |        |         |        |         |              |             |             |              |              |
| 3/17/2020  |        |         |        |         |              |             |             |              |              |
| 9/10/2020  |        |         |        |         |              |             | 7.48        | 5.53         | 6.67         |
| 9/11/2020  |        |         |        |         |              | 6.25        |             |              |              |
| 9/14/2020  | 5      | 7.43    | 7.54   |         | 7.76         |             |             |              |              |
| 9/15/2020  |        |         |        | 7.64    |              |             |             |              |              |
| 9/16/2020  |        |         |        |         |              |             |             |              |              |
| 9/17/2020  |        |         |        |         |              |             |             |              |              |
| 9/21/2020  |        |         |        |         |              |             |             |              |              |
| 9/22/2020  |        |         |        |         |              |             |             |              |              |
| 12/15/2020 |        |         |        |         |              |             |             |              |              |
| 3/10/2021  |        |         |        |         |              |             |             |              | 7.3          |
| 3/11/2021  | 4.95   | 7.53    | 7.34   | 7.48    | 7.81         | 5.55        | 7.53        |              |              |
| 3/12/2021  |        |         |        |         |              |             |             | 6.39         |              |
| 3/15/2021  |        |         |        |         |              |             |             |              |              |
| 3/16/2021  |        |         |        |         |              |             |             |              |              |
| 3/17/2021  |        |         |        |         |              |             |             |              |              |
| 3/18/2021  |        |         |        |         |              |             |             |              |              |
| 3/19/2021  |        |         |        |         |              |             |             |              |              |
| 3/29/2021  |        |         |        |         |              |             |             |              |              |
| 5/26/2021  | 4.72   | 7.39    |        |         |              |             |             |              |              |
| 8/4/2021   | 4.91   |         |        |         |              |             | 7.35        | 6.21         | 7.15         |
| 8/5/2021   |        | 7.44    | 7.41   | 7.45    | 7.75         |             |             |              |              |
| 8/6/2021   |        |         |        |         |              | 5.52        |             |              |              |
| 8/9/2021   |        |         |        |         |              |             |             |              |              |
| 8/10/2021  |        |         |        |         |              |             |             |              |              |
| 8/11/2021  |        |         |        |         |              |             |             |              |              |
| 8/12/2021  |        |         |        |         |              |             |             |              |              |
| 10/28/2021 |        |         | 7.34   | 7.36    |              |             |             |              |              |





# Prediction Limit

Constituent: pH (pH\_units) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-41 (bg) | GWA-40 (bg) | GWC-45 | GWC-44 | GWC-45R | GWC-49R | GWC-49Z | GWC-8Z | GWA-1 (bg) |
|------------|-------------|-------------|--------|--------|---------|---------|---------|--------|------------|
| 9/27/2016  |             |             |        |        |         |         |         |        |            |
| 9/28/2016  |             |             |        |        |         |         |         |        |            |
| 9/29/2016  |             |             |        |        |         |         |         |        |            |
| 9/30/2016  |             |             |        |        |         |         |         |        |            |
| 11/2/2016  |             |             |        |        |         |         |         |        |            |
| 11/3/2016  | 6.45        | 7.13        |        | 4.69   | 7.52    |         |         |        |            |
| 11/4/2016  |             |             | 5.02   |        |         | 7.89    |         |        |            |
| 11/7/2016  |             |             |        |        |         |         | 5.71    |        |            |
| 11/9/2016  |             |             |        |        |         |         |         |        | 7.45       |
| 11/10/2016 |             |             |        |        |         |         |         |        |            |
| 11/11/2016 |             |             |        |        |         |         |         |        |            |
| 11/14/2016 |             |             |        |        |         |         |         |        |            |
| 11/18/2016 |             |             |        |        |         |         |         |        |            |
| 11/21/2016 |             |             |        |        |         |         |         | 7.4    |            |
| 11/22/2016 |             |             |        |        |         |         |         |        |            |
| 11/23/2016 |             |             |        |        |         |         |         |        |            |
| 11/28/2016 |             |             |        |        |         |         |         |        |            |
| 1/17/2017  |             | 7.51        |        |        |         |         |         |        |            |
| 1/18/2017  | 6.34        |             |        |        |         |         |         |        |            |
| 1/19/2017  |             |             |        | 4.58   |         |         |         |        |            |
| 1/20/2017  |             |             |        |        | 7.3     |         |         |        |            |
| 1/23/2017  |             |             | 4.9    |        |         |         |         |        |            |
| 1/24/2017  |             |             |        |        |         | 7.97    | 5.58    |        |            |
| 1/30/2017  |             |             |        |        |         |         |         |        | 7.64       |
| 1/31/2017  |             |             |        |        |         |         |         |        |            |
| 2/1/2017   |             |             |        |        |         |         |         |        |            |
| 2/3/2017   |             |             |        |        |         |         |         | 7.05   |            |
| 2/6/2017   |             |             |        |        |         |         |         |        |            |
| 2/7/2017   |             |             |        |        |         |         |         |        |            |
| 2/8/2017   |             |             |        |        |         |         |         |        |            |
| 2/9/2017   |             |             |        |        |         |         |         |        |            |
| 2/10/2017  |             |             |        |        |         |         |         |        |            |
| 2/13/2017  |             |             |        |        |         |         |         |        |            |
| 2/21/2017  |             |             |        |        |         |         |         |        |            |
| 2/22/2017  |             |             |        |        |         |         |         |        |            |
| 3/24/2017  | 6.42        | 7.55        |        |        |         |         |         |        |            |
| 3/27/2017  |             |             |        |        |         |         |         |        |            |
| 3/28/2017  |             |             |        | 4.45   |         |         |         |        |            |
| 3/29/2017  |             |             | 5.08   |        | 7.29    | 7.71    |         |        |            |
| 3/30/2017  |             |             |        |        |         |         | 5.44    |        | 7.51       |
| 4/3/2017   |             |             |        |        |         |         |         |        |            |
| 4/6/2017   |             |             |        |        |         |         |         |        |            |
| 4/7/2017   |             |             |        |        |         |         |         | 7.14   |            |
| 4/10/2017  |             |             |        |        |         |         |         |        |            |
| 4/11/2017  |             |             |        |        |         |         |         |        |            |
| 4/12/2017  |             |             |        |        |         |         |         |        |            |
| 5/24/2017  |             | 7.6         |        |        |         |         |         |        |            |
| 6/5/2017   |             |             |        | 4.33   |         |         |         |        |            |
| 6/6/2017   | 6.82        |             |        |        |         |         |         |        |            |
| 6/7/2017   |             |             | 5.06   |        | 7.43    |         |         |        |            |
| 6/8/2017   |             |             |        |        |         | 7.86    |         |        |            |
| 6/9/2017   |             |             |        |        |         |         | 5.11    |        | 7.6        |









# Prediction Limit

Constituent: pH (pH\_units) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|           | GWA-2 (bg) | GWA-3A (bg) | GWA-2R (bg) | GWA-50R (bg) | GWA-50 (bg) | GWC-5 | GWC-6 | GWC-6RZ | GWC-9 |
|-----------|------------|-------------|-------------|--------------|-------------|-------|-------|---------|-------|
| 3/10/2016 |            |             |             |              |             |       |       |         |       |
| 3/11/2016 |            |             |             |              |             |       |       |         |       |
| 3/14/2016 |            |             |             |              |             |       |       |         |       |
| 3/15/2016 |            |             |             |              |             |       |       |         |       |
| 3/16/2016 |            |             |             |              |             |       |       |         |       |
| 3/17/2016 |            |             |             |              |             |       |       |         |       |
| 3/22/2016 |            |             |             |              |             |       |       |         |       |
| 3/23/2016 | 6.7        | 5.96        | 7.45        |              |             |       |       |         |       |
| 3/28/2016 |            |             |             | 6.45 (D)     | 6.22        | 7.04  |       |         |       |
| 3/29/2016 |            |             |             |              |             |       | 7.54  | 7.24    |       |
| 3/30/2016 |            |             |             |              |             |       |       |         | 6.07  |
| 3/31/2016 |            |             |             |              |             |       |       |         |       |
| 4/4/2016  |            |             |             |              |             |       |       |         |       |
| 4/5/2016  |            |             |             |              |             |       |       |         |       |
| 5/11/2016 |            |             |             |              |             |       |       |         |       |
| 5/12/2016 |            |             |             |              |             |       |       |         |       |
| 5/13/2016 |            |             |             |              |             |       |       |         |       |
| 5/16/2016 |            |             |             |              |             |       |       |         |       |
| 5/17/2016 |            |             |             |              |             |       |       |         |       |
| 5/18/2016 |            |             |             |              |             |       |       |         |       |
| 5/19/2016 |            |             | 7.5         |              |             |       |       |         |       |
| 5/20/2016 | 6.36       |             |             |              |             |       |       |         |       |
| 5/23/2016 |            | 5.73        |             |              | 5.86        |       |       |         |       |
| 5/24/2016 |            |             |             |              |             |       | 7.39  | 7.1     |       |
| 5/25/2016 |            |             |             | 6.96         |             | 6.39  |       |         |       |
| 5/26/2016 |            |             |             |              |             |       |       |         | 6.44  |
| 5/27/2016 |            |             |             |              |             |       |       |         |       |
| 5/31/2016 |            |             |             |              |             |       |       |         |       |
| 6/1/2016  |            |             |             |              |             |       |       |         |       |
| 7/19/2016 |            |             |             |              |             |       |       |         |       |
| 7/20/2016 |            |             |             |              |             |       |       |         |       |
| 7/21/2016 |            |             |             |              |             |       |       |         |       |
| 7/22/2016 |            |             |             |              |             |       |       |         |       |
| 7/25/2016 |            |             |             |              |             |       |       |         |       |
| 7/26/2016 |            |             |             |              |             |       |       |         |       |
| 7/27/2016 |            |             |             |              |             |       |       |         |       |
| 7/28/2016 |            |             |             |              |             |       |       |         |       |
| 7/29/2016 | 6.75       | 5.51        | 7.59        |              |             |       |       |         |       |
| 8/1/2016  |            |             |             | 5.64         | 6.39        | 6.13  | 7.26  | 7.07    |       |
| 8/2/2016  |            |             |             |              |             |       |       |         |       |
| 8/3/2016  |            |             |             |              |             |       |       |         |       |
| 8/4/2016  |            |             |             |              |             |       |       |         |       |
| 8/5/2016  |            |             |             |              |             |       |       |         | 6.67  |
| 8/9/2016  |            |             |             |              |             |       |       |         |       |
| 9/15/2016 |            |             |             |              |             |       |       |         |       |
| 9/16/2016 |            |             |             |              |             |       |       |         |       |
| 9/19/2016 |            |             |             |              |             |       |       |         |       |
| 9/20/2016 |            |             |             |              |             |       |       |         |       |
| 9/21/2016 |            |             |             |              |             |       |       |         |       |
| 9/22/2016 |            | 5.45        | 7.44        |              |             |       |       |         |       |
| 9/23/2016 | 6.62       |             |             |              |             |       |       |         |       |
| 9/26/2016 |            |             |             | 6.26         | 5.74        |       | 7.19  | 7.15    |       |

# Prediction Limit

Constituent: pH (pH\_units) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWA-2 (bg) | GWA-3A (bg) | GWA-2R (bg) | GWA-50R (bg) | GWA-50 (bg) | GWC-5 | GWC-6 | GWC-6RZ | GWC-9 |
|------------|------------|-------------|-------------|--------------|-------------|-------|-------|---------|-------|
| 9/27/2016  |            |             |             |              |             | 5.98  |       |         |       |
| 9/28/2016  |            |             |             |              |             |       |       |         | 6.89  |
| 9/29/2016  |            |             |             |              |             |       |       |         |       |
| 9/30/2016  |            |             |             |              |             |       |       |         |       |
| 11/2/2016  |            |             |             |              |             |       |       |         |       |
| 11/3/2016  |            |             |             |              |             |       |       |         |       |
| 11/4/2016  |            |             |             |              |             |       |       |         |       |
| 11/7/2016  |            |             |             |              |             |       |       |         |       |
| 11/9/2016  | 6.42       |             |             |              |             |       |       |         |       |
| 11/10/2016 |            | 5.51        | 7.55        |              | 5.78        |       |       |         |       |
| 11/11/2016 |            |             |             | 5.62         |             | 6.11  |       |         |       |
| 11/14/2016 |            |             |             |              |             |       |       | 7.15    |       |
| 11/18/2016 |            |             |             |              |             |       | 7.04  |         |       |
| 11/21/2016 |            |             |             |              |             |       |       |         | 6.89  |
| 11/22/2016 |            |             |             |              |             |       |       |         |       |
| 11/23/2016 |            |             |             |              |             |       |       |         |       |
| 11/28/2016 |            |             |             |              |             |       |       |         |       |
| 1/17/2017  |            |             |             |              |             |       |       |         |       |
| 1/18/2017  |            |             |             |              |             |       |       |         |       |
| 1/19/2017  |            |             |             |              |             |       |       |         |       |
| 1/20/2017  |            |             |             |              |             |       |       |         |       |
| 1/23/2017  |            |             |             |              |             |       |       |         |       |
| 1/24/2017  |            |             |             |              |             |       |       |         |       |
| 1/30/2017  |            |             |             | 5.49         | 5.88        |       |       |         |       |
| 1/31/2017  | 5.66       | 5.42        | 7.56        |              |             | 6.08  |       |         |       |
| 2/1/2017   |            |             |             |              |             |       | 7.34  | 7.09    |       |
| 2/3/2017   |            |             |             |              |             |       |       |         |       |
| 2/6/2017   |            |             |             |              |             |       |       |         | 4.93  |
| 2/7/2017   |            |             |             |              |             |       |       |         |       |
| 2/8/2017   |            |             |             |              |             |       |       |         |       |
| 2/9/2017   |            |             |             |              |             |       |       |         |       |
| 2/10/2017  |            |             |             |              |             |       |       |         |       |
| 2/13/2017  |            |             |             |              |             |       |       |         |       |
| 2/21/2017  |            |             |             |              |             |       |       |         |       |
| 2/22/2017  |            |             |             |              |             |       |       |         |       |
| 3/24/2017  |            |             |             |              |             |       |       |         |       |
| 3/27/2017  |            |             |             |              |             |       |       |         |       |
| 3/28/2017  |            |             |             |              |             |       |       |         |       |
| 3/29/2017  |            |             |             |              |             |       |       |         |       |
| 3/30/2017  | 6.33       | 5.43        |             |              |             |       |       |         |       |
| 4/3/2017   |            |             | 7.46        | 6.32         |             | 6.13  |       |         |       |
| 4/6/2017   |            |             |             |              |             |       | 7.49  | 7.23    | 4.92  |
| 4/7/2017   |            |             |             |              | 5.94        |       |       |         |       |
| 4/10/2017  |            |             |             |              |             |       |       |         |       |
| 4/11/2017  |            |             |             |              |             |       |       |         |       |
| 4/12/2017  |            |             |             |              |             |       |       |         |       |
| 5/24/2017  |            |             |             |              |             |       |       |         |       |
| 6/5/2017   |            |             |             |              |             |       |       |         |       |
| 6/6/2017   |            |             |             |              |             |       |       |         |       |
| 6/7/2017   |            |             |             |              |             |       |       |         |       |
| 6/8/2017   |            |             |             |              |             |       |       |         |       |
| 6/9/2017   |            |             | 7.24        |              |             |       |       |         |       |

















# Prediction Limit

Constituent: pH (pH\_units) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

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|           | GWC-8RR | GWC-10R | GWC-10 | GWC-11R | GWC-11 | GWC-13 | GWC-12 | GWC-15R | GWA-39RZ (bg) |
|-----------|---------|---------|--------|---------|--------|--------|--------|---------|---------------|
| 1/31/2022 |         |         |        |         |        |        |        |         |               |
| 2/1/2022  |         |         |        |         |        |        |        |         |               |
| 2/2/2022  | 8.13    |         |        |         |        |        | 6.35   |         | 6.89          |
| 2/3/2022  |         |         |        |         |        |        |        |         |               |
| 2/4/2022  |         | 7.69    | 6.53   | 7.58    | 7.2    |        |        | 7.61    |               |
| 2/7/2022  |         |         |        |         |        |        |        |         |               |
| 2/17/2022 |         |         |        |         |        | 7.24   |        |         |               |

# Prediction Limit

Constituent: pH (pH\_units) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|           | GWC-7Z | GWC-15Z  | GWC-14Z   | GWC-13RZ | GWA-4RZ (bg) |
|-----------|--------|----------|-----------|----------|--------------|
| 3/10/2016 |        |          |           |          |              |
| 3/11/2016 |        |          |           |          |              |
| 3/14/2016 |        |          |           |          |              |
| 3/15/2016 |        |          |           |          |              |
| 3/16/2016 |        |          |           |          |              |
| 3/17/2016 |        |          |           |          |              |
| 3/22/2016 |        |          |           |          |              |
| 3/23/2016 |        |          |           |          |              |
| 3/28/2016 |        |          |           |          |              |
| 3/29/2016 |        |          |           |          |              |
| 3/30/2016 |        |          |           |          |              |
| 3/31/2016 |        |          |           |          |              |
| 4/4/2016  |        |          |           | 8.56 (o) |              |
| 4/5/2016  |        | 9.23 (o) | 10.61 (o) |          |              |
| 5/11/2016 |        |          |           |          |              |
| 5/12/2016 |        |          |           |          |              |
| 5/13/2016 |        |          |           |          |              |
| 5/16/2016 |        |          |           |          |              |
| 5/17/2016 |        |          |           |          |              |
| 5/18/2016 |        |          |           |          |              |
| 5/19/2016 |        |          |           |          |              |
| 5/20/2016 |        |          |           |          |              |
| 5/23/2016 |        |          |           |          |              |
| 5/24/2016 |        |          |           |          |              |
| 5/25/2016 |        |          |           |          |              |
| 5/26/2016 |        |          |           |          |              |
| 5/27/2016 |        |          |           |          |              |
| 5/31/2016 | 7.98   | 9.52 (o) |           |          |              |
| 6/1/2016  |        |          | 10.32 (o) | 9.83 (o) |              |
| 7/19/2016 |        |          |           |          |              |
| 7/20/2016 |        |          |           |          |              |
| 7/21/2016 |        |          |           |          |              |
| 7/22/2016 |        |          |           |          |              |
| 7/25/2016 |        |          |           |          |              |
| 7/26/2016 |        |          |           |          |              |
| 7/27/2016 |        |          |           |          |              |
| 7/28/2016 |        |          |           |          |              |
| 7/29/2016 |        |          |           |          |              |
| 8/1/2016  |        |          |           |          |              |
| 8/2/2016  | 7.64   |          |           |          |              |
| 8/3/2016  |        |          |           |          |              |
| 8/4/2016  |        |          |           |          |              |
| 8/5/2016  |        |          |           |          |              |
| 8/9/2016  |        |          | 8.23 (o)  |          |              |
| 9/15/2016 |        |          |           |          |              |
| 9/16/2016 |        |          |           |          |              |
| 9/19/2016 |        |          |           |          |              |
| 9/20/2016 |        |          |           |          |              |
| 9/21/2016 |        |          |           |          |              |
| 9/22/2016 |        |          |           |          |              |
| 9/23/2016 |        |          |           |          |              |
| 9/26/2016 |        |          |           |          |              |

# Prediction Limit

Constituent: pH (pH\_units) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWC-7Z | GWC-15Z | GWC-14Z | GWC-13RZ | GWA-4RZ (bg) |
|------------|--------|---------|---------|----------|--------------|
| 9/27/2016  | 7.18   |         |         |          |              |
| 9/28/2016  |        |         |         |          |              |
| 9/29/2016  |        |         |         |          |              |
| 9/30/2016  |        |         |         |          |              |
| 11/2/2016  |        |         |         |          |              |
| 11/3/2016  |        |         |         |          |              |
| 11/4/2016  |        |         |         |          |              |
| 11/7/2016  |        |         |         |          |              |
| 11/9/2016  |        |         |         |          |              |
| 11/10/2016 |        |         |         |          |              |
| 11/11/2016 |        |         |         |          |              |
| 11/14/2016 |        |         |         |          |              |
| 11/18/2016 |        |         |         |          |              |
| 11/21/2016 | 7.49   |         |         |          |              |
| 11/22/2016 |        |         |         |          |              |
| 11/23/2016 |        | 7.88    |         |          |              |
| 11/28/2016 |        |         | 7.29    |          |              |
| 1/17/2017  |        |         |         |          |              |
| 1/18/2017  |        |         |         |          |              |
| 1/19/2017  |        |         |         |          |              |
| 1/20/2017  |        |         |         |          |              |
| 1/23/2017  |        |         |         |          |              |
| 1/24/2017  |        |         |         |          |              |
| 1/30/2017  |        |         |         |          |              |
| 1/31/2017  |        |         |         |          |              |
| 2/1/2017   | 7.2    |         |         |          |              |
| 2/3/2017   |        |         |         |          |              |
| 2/6/2017   |        |         |         |          |              |
| 2/7/2017   |        |         |         |          |              |
| 2/8/2017   |        |         |         |          |              |
| 2/9/2017   |        |         | 6.91    |          |              |
| 2/10/2017  |        | 7.72    |         |          |              |
| 2/13/2017  |        |         |         |          |              |
| 2/21/2017  |        |         |         |          |              |
| 2/22/2017  |        |         |         | 7.45     | 7.38 (D)     |
| 3/24/2017  |        |         |         |          |              |
| 3/27/2017  |        |         |         |          |              |
| 3/28/2017  |        |         |         |          |              |
| 3/29/2017  |        |         |         |          |              |
| 3/30/2017  |        |         |         |          |              |
| 4/3/2017   |        |         |         |          |              |
| 4/6/2017   | 7.42   |         |         |          |              |
| 4/7/2017   |        |         |         |          | 7.35 (D)     |
| 4/10/2017  |        |         |         |          |              |
| 4/11/2017  |        | 7.83    | 6.68    | 6.37     |              |
| 4/12/2017  |        |         |         |          |              |
| 5/24/2017  |        |         |         |          |              |
| 6/5/2017   |        |         |         |          |              |
| 6/6/2017   |        |         |         |          |              |
| 6/7/2017   |        |         |         |          |              |
| 6/8/2017   |        |         |         |          |              |
| 6/9/2017   |        |         |         |          |              |

# Prediction Limit

Constituent: pH (pH\_units) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWC-7Z | GWC-15Z | GWC-14Z | GWC-13RZ | GWA-4RZ (bg) |
|------------|--------|---------|---------|----------|--------------|
| 6/12/2017  |        |         |         |          |              |
| 6/13/2017  | 7.25   |         |         |          |              |
| 6/14/2017  |        |         | 6.84    |          | 7.3 (D)      |
| 6/15/2017  |        | 7.86    |         |          |              |
| 6/16/2017  |        |         |         | 7.33     |              |
| 7/11/2017  |        |         |         |          | 7.39         |
| 7/12/2017  |        | 7.73    | 6.54    | 7.46     | 7.39 (D)     |
| 7/14/2017  | 7.5    |         |         |          |              |
| 7/17/2017  |        |         |         |          |              |
| 7/19/2017  |        |         |         |          | 7.44         |
| 7/20/2017  |        |         |         |          | 7.44 (D)     |
| 7/26/2017  |        | 7.71    |         |          |              |
| 7/27/2017  |        |         |         | 7.37     | 7.5          |
| 7/28/2017  |        |         |         | 7.37     | 7.5          |
| 8/8/2017   |        |         |         |          | 7.52         |
| 8/9/2017   |        |         |         | 7.38     | 7.52         |
| 8/10/2017  |        |         |         | 7.38     |              |
| 8/23/2017  |        |         |         |          | 7.5          |
| 8/24/2017  |        |         |         |          | 7.5          |
| 9/22/2017  |        |         |         |          |              |
| 9/25/2017  |        |         |         |          |              |
| 9/26/2017  |        |         |         |          |              |
| 9/27/2017  |        |         |         |          |              |
| 9/29/2017  |        |         |         |          |              |
| 10/2/2017  |        |         |         |          |              |
| 10/3/2017  | 7.5    |         |         |          | 7.51 (D)     |
| 10/4/2017  |        |         |         |          |              |
| 10/5/2017  |        |         | 6.93    |          |              |
| 10/6/2017  |        | 7.74    |         | 6.55     |              |
| 10/9/2017  |        |         |         |          |              |
| 12/28/2017 |        |         |         | 7.43 (Y) | 7.32 (Y)     |
| 12/29/2017 |        |         |         |          |              |
| 1/9/2018   |        |         |         |          |              |
| 1/10/2018  |        |         |         |          |              |
| 3/14/2018  |        |         |         |          |              |
| 3/15/2018  |        |         |         |          |              |
| 3/16/2018  |        |         |         |          |              |
| 3/19/2018  |        |         |         |          |              |
| 3/20/2018  | 6.76   |         |         |          |              |
| 3/21/2018  |        |         |         |          | 7.3          |
| 3/22/2018  |        |         | 6.93    |          |              |
| 3/23/2018  |        | 7.89    |         | 7.58     |              |
| 9/12/2018  |        |         |         |          |              |
| 9/13/2018  |        |         |         |          |              |
| 9/14/2018  |        |         |         |          |              |
| 9/17/2018  |        |         |         |          |              |
| 9/18/2018  | 7.26   |         |         |          | 7.26         |
| 9/19/2018  |        | 7.77    | 6.88    |          |              |
| 9/20/2018  |        |         |         | 7.43     |              |
| 3/13/2019  |        |         |         |          |              |
| 3/14/2019  |        |         |         |          |              |
| 3/15/2019  |        |         |         |          |              |

# Prediction Limit

Constituent: pH (pH\_units) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
 Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

|            | GWC-7Z | GWC-15Z | GWC-14Z | GWC-13RZ | GWA-4RZ (bg) |
|------------|--------|---------|---------|----------|--------------|
| 3/18/2019  |        |         |         |          |              |
| 3/19/2019  |        |         |         |          |              |
| 3/20/2019  |        |         |         |          |              |
| 3/21/2019  | 7.3    |         |         |          | 7.28 (D)     |
| 3/22/2019  |        | 7.55    | 6.27    | 7.49     |              |
| 3/23/2019  |        |         |         |          |              |
| 3/25/2019  |        |         |         |          |              |
| 3/27/2019  |        |         |         |          |              |
| 5/6/2019   |        |         |         |          |              |
| 9/9/2019   |        |         |         |          |              |
| 9/10/2019  |        |         |         |          |              |
| 9/11/2019  |        |         |         |          |              |
| 9/12/2019  |        |         |         |          | 7.2 (D)      |
| 9/13/2019  | 6.8    |         |         |          |              |
| 9/16/2019  |        |         |         |          |              |
| 9/17/2019  |        | 7.76    | 6.04    |          |              |
| 9/18/2019  |        |         |         | 7.5      |              |
| 3/6/2020   |        |         |         |          |              |
| 3/9/2020   |        |         |         |          |              |
| 3/10/2020  |        |         |         |          |              |
| 3/11/2020  |        |         |         |          |              |
| 3/12/2020  | 7.53   |         |         |          | 7.55         |
| 3/13/2020  |        | 7.68    | 6.16    |          |              |
| 3/16/2020  |        |         |         |          |              |
| 3/17/2020  |        |         |         | 7.62     |              |
| 9/10/2020  |        |         |         |          |              |
| 9/11/2020  |        |         |         |          |              |
| 9/14/2020  |        |         |         |          |              |
| 9/15/2020  |        |         |         |          |              |
| 9/16/2020  | 7.56   |         |         |          |              |
| 9/17/2020  |        |         |         |          | 7.42         |
| 9/21/2020  |        | 7.65    | 6.06    |          |              |
| 9/22/2020  |        |         |         | 6.95     |              |
| 12/15/2020 |        |         |         |          |              |
| 3/10/2021  |        |         |         |          |              |
| 3/11/2021  |        |         |         |          |              |
| 3/12/2021  |        |         |         |          |              |
| 3/15/2021  |        |         |         |          |              |
| 3/16/2021  |        |         |         |          | 7.4          |
| 3/17/2021  | 7.52   |         |         |          |              |
| 3/18/2021  |        | 7.87    | 6.04    |          |              |
| 3/19/2021  |        |         |         | 7.42     |              |
| 3/29/2021  |        |         |         |          |              |
| 5/26/2021  |        |         |         |          |              |
| 8/4/2021   |        |         |         |          |              |
| 8/5/2021   |        |         |         |          |              |
| 8/6/2021   |        |         |         |          |              |
| 8/9/2021   |        |         |         |          |              |
| 8/10/2021  | 7.13   |         |         |          | 7.2          |
| 8/11/2021  |        | 7.81    | 6.09    |          |              |
| 8/12/2021  |        |         |         | 7.11     |              |
| 10/28/2021 |        |         |         |          |              |



# Prediction Limit

Constituent: pH (pH\_units) Analysis Run 10/20/2022 12:07 PM View: Appendix III Interwell  
Plant Bowen Client: Southern Company Data: Bowen 1, 2, 9, and 10

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|           | GWC-7Z | GWC-15Z | GWC-14Z | GWC-13RZ | GWA-4RZ (bg) |
|-----------|--------|---------|---------|----------|--------------|
| 1/31/2022 |        |         |         |          |              |
| 2/1/2022  |        |         |         |          |              |
| 2/2/2022  | 7.54   |         |         |          |              |
| 2/3/2022  |        |         |         |          | 7.2          |
| 2/4/2022  |        |         | 6.06    | 7.46     |              |
| 2/7/2022  |        | 7.83    |         |          |              |
| 2/17/2022 |        |         |         |          |              |

**Alternate Source Demonstration for Beryllium, Chloride, and Mercury, January- February 2022  
Semi-Annual Event  
Plant Bowen Landfill Cells 1 & 2, 3 & 4, and 9 & 10**

# **APPENDIX B LABORATORY ANALYTICAL REPORTS**



March 10, 2022

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between January 28, 2022 and February 01, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Minneapolis

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

Sincerely,



Nicole D'Oleo  
nicole.d'oleo@pacelabs.com  
(704)875-9092  
Project Manager

Enclosures

cc: Michelle Barker, WOOD E&I  
Anna Bottum, ERM  
Andrea Brazell, ERM  
Kristen Jurinko  
Ms. Lauren Petty, Southern Company  
Rhonda Quinn, WOOD E&I  
Lacy Smith, ERM  
Caitlin Tillema, ERM  
Christine Weaver, ERM

Greg Wrenn, WOOD E&I



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

### Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414  
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab  
A2LA Certification #: 2926.01\*  
Alabama Certification #: 40770  
Alaska Contaminated Sites Certification #: 17-009\*  
Alaska DW Certification #: MN00064  
Arizona Certification #: AZ0014\*  
Arkansas DW Certification #: MN00064  
Arkansas WW Certification #: 88-0680  
California Certification #: 2929  
Colorado Certification #: MN00064  
Connecticut Certification #: PH-0256  
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137  
Florida Certification #: E87605\*  
Georgia Certification #: 959  
Hawaii Certification #: MN00064  
Idaho Certification #: MN00064  
Illinois Certification #: 200011  
Indiana Certification #: C-MN-01  
Iowa Certification #: 368  
Kansas Certification #: E-10167  
Kentucky DW Certification #: 90062  
Kentucky WW Certification #: 90062  
Louisiana DEQ Certification #: AI-03086\*  
Louisiana DW Certification #: MN00064  
Maine Certification #: MN00064\*  
Maryland Certification #: 322  
Michigan Certification #: 9909  
Minnesota Certification #: 027-053-137\*  
Minnesota Dept of Ag Approval: via MN 027-053-137  
Minnesota Petrofund Registration #: 1240\*  
Mississippi Certification #: MN00064

Missouri Certification #: 10100  
Montana Certification #: CERT0092  
Nebraska Certification #: NE-OS-18-06  
Nevada Certification #: MN00064  
New Hampshire Certification #: 2081\*  
New Jersey Certification #: MN002  
New York Certification #: 11647\*  
North Carolina DW Certification #: 27700  
North Carolina WW Certification #: 530  
North Dakota Certification #: R-036  
Ohio DW Certification #: 41244  
Ohio VAP Certification (1700) #: CL101  
Ohio VAP Certification (1800) #: CL110\*  
Oklahoma Certification #: 9507\*  
Oregon Primary Certification #: MN300001  
Oregon Secondary Certification #: MN200001\*  
Pennsylvania Certification #: 68-00563\*  
Puerto Rico Certification #: MN00064  
South Carolina Certification #:74003001  
Tennessee Certification #: TN02818  
Texas Certification #: T104704192\*  
Utah Certification #: MN00064\*  
Vermont Certification #: VT-027053137  
Virginia Certification #: 460163\*  
Washington Certification #: C486\*  
West Virginia DEP Certification #: 382  
West Virginia DW Certification #: 9952 C  
Wisconsin Certification #: 999407970  
Wyoming UST Certification #: via A2LA 2926.01  
USDA Permit #: P330-19-00208  
\*Please Note: Applicable air certifications are denoted with an asterisk (\*).

### Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006  
9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001  
South Carolina Drinking Water Cert. #: 99006003  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Louisiana DoH Drinking Water #: LA029  
Virginia/VELAP Certification #: 460221

### Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712  
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

### Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812  
North Carolina Certification #: 381

## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

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**Pace Analytical Services Peachtree Corners**  
South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Lab ID      | Sample ID | Matrix | Date Collected | Date Received  |
|-------------|-----------|--------|----------------|----------------|
| 92585058001 | GWA-38    | Water  | 01/25/22 13:54 | 01/28/22 09:30 |
| 92585058002 | GWA-52    | Water  | 01/25/22 16:52 | 01/28/22 09:30 |
| 92585058003 | GWA-54    | Water  | 01/25/22 15:28 | 01/28/22 09:30 |
| 92585058004 | FB-1      | Water  | 01/25/22 16:18 | 01/28/22 09:30 |
| 92585058005 | GWA-36RA  | Water  | 01/26/22 10:35 | 01/28/22 09:30 |
| 92585058006 | GWA-37    | Water  | 01/26/22 13:10 | 01/28/22 09:30 |
| 92585058007 | GWA-51RZ  | Water  | 01/26/22 12:45 | 01/28/22 09:30 |
| 92585058008 | GWA-53    | Water  | 01/26/22 11:45 | 01/28/22 09:30 |
| 92585058009 | GWA-53R   | Water  | 01/26/22 14:20 | 01/28/22 09:30 |
| 92585058010 | GWA-55    | Water  | 01/26/22 15:30 | 01/28/22 09:30 |
| 92585058011 | GWA-56    | Water  | 01/26/22 16:01 | 01/28/22 09:30 |
| 92585058012 | DUP-1     | Water  | 01/26/22 00:00 | 01/28/22 09:30 |
| 92585058013 | FB-2      | Water  | 01/26/22 16:15 | 01/28/22 09:30 |
| 92585058014 | EB-1      | Water  | 01/26/22 16:10 | 01/28/22 09:30 |
| 92585058015 | GWC-18R   | Water  | 01/27/22 13:06 | 01/28/22 09:30 |
| 92585058016 | GWC-19R   | Water  | 01/27/22 14:20 | 01/28/22 09:30 |
| 92585058017 | GWC-20R   | Water  | 01/27/22 15:52 | 01/28/22 09:30 |
| 92585058018 | GWC-22R   | Water  | 01/27/22 16:00 | 01/28/22 09:30 |
| 92585058019 | GWC-25R   | Water  | 01/27/22 13:53 | 01/28/22 09:30 |
| 92585058020 | GWA-55R   | Water  | 01/27/22 12:30 | 01/28/22 09:30 |
| 92585058021 | DUP-2     | Water  | 01/27/22 00:00 | 01/28/22 09:30 |
| 92585058022 | FB-3      | Water  | 01/27/22 16:30 | 01/28/22 09:30 |
| 92585058023 | GWC-16R   | Water  | 01/28/22 09:38 | 02/01/22 11:22 |
| 92585058024 | GWC-17R   | Water  | 01/28/22 10:20 | 02/01/22 11:22 |
| 92585058025 | GWC-18    | Water  | 01/28/22 12:04 | 02/01/22 11:22 |
| 92585058026 | GWC-21R   | Water  | 01/28/22 12:17 | 02/01/22 11:22 |
| 92585058027 | GWC-23R   | Water  | 01/28/22 11:07 | 02/01/22 11:22 |
| 92585058028 | GWC-24R   | Water  | 01/28/22 10:35 | 02/01/22 11:22 |
| 92585058029 | DUP-3     | Water  | 01/28/22 00:00 | 02/01/22 11:22 |
| 92585058030 | FB-4      | Water  | 01/28/22 11:55 | 02/01/22 11:22 |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|------------------------|----------|-------------------|------------|
| 92585058001 | GWA-38    | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
| 92585058002 | GWA-52    | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92585058003 | GWA-54    | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
| 92585058004 | FB-1      | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
| 92585058005 | GWA-36RA  | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
| 92585058006 | GWA-37    | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
| 92585058007 | GWA-51RZ  | EPA 6010D              | KH       | 5                 | PASI-GA    |

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### SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|------------------------|----------|-------------------|------------|
| 92585058008 | GWA-53    | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
| 92585058009 | GWA-53R   | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
| 92585058010 | GWA-55    | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
| 92585058011 | GWA-56    | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
| 92585058012 | DUP-1     | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
| 92585058013 | FB-2      | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|------------------------|----------|-------------------|------------|
| 92585058014 | EB-1      | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92585058015 | GWC-18R   | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
| 92585058016 | GWC-19R   | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
| 92585058017 | GWC-20R   | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92585058018 | GWC-22R   | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
| 92585058019 | GWC-25R   | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |

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### SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|------------------------|----------|-------------------|------------|
| 92585058020 | GWA-55R   | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92585058021 | DUP-2     | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
| 92585058022 | FB-3      | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
| 92585058023 | GWC-16R   | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
| 92585058024 | GWC-17R   | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
| 92585058025 | GWC-18    | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |

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### SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|------------------------|----------|-------------------|------------|
| 92585058026 | GWC-21R   | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92585058027 | GWC-23R   | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92585058028 | GWC-24R   | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92585058029 | DUP-3     | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92585058030 | FB-4      | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |

PASI-A = Pace Analytical Services - Asheville  
PASI-C = Pace Analytical Services - Charlotte  
PASI-GA = Pace Analytical Services - Peachtree Corners, GA  
PASI-M = Pace Analytical Services - Minneapolis

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Lab Sample ID          | Client Sample ID               | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |          |            |              |                |            |
| <b>92585058001</b>     | <b>GWA-38</b>                  |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 01/28/22 14:43 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 5.14     | Std. Units |              | 01/28/22 14:43 |            |
| EPA 6010D              | Calcium                        | 1.1      | mg/L       | 1.0          | 02/07/22 20:35 |            |
| EPA 6010D              | Potassium                      | 0.46     | mg/L       | 0.20         | 02/07/22 20:35 | BC         |
| EPA 6010D              | Sodium                         | 3.5      | mg/L       | 1.0          | 02/07/22 20:35 |            |
| EPA 6010D              | Magnesium                      | 0.44     | mg/L       | 0.050        | 02/07/22 20:35 |            |
| EPA 6020B              | Barium                         | 0.012    | mg/L       | 0.0050       | 02/11/22 18:36 |            |
| EPA 6020B              | Chromium                       | 0.0014J  | mg/L       | 0.0050       | 02/11/22 18:36 |            |
| EPA 6020B              | Cobalt                         | 0.0011J  | mg/L       | 0.0050       | 02/11/22 18:36 |            |
| EPA 6020B              | Nickel                         | 0.00093J | mg/L       | 0.0050       | 02/11/22 18:36 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 27.0     | mg/L       | 10.0         | 02/01/22 14:07 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 4.9J     | mg/L       | 5.0          | 02/03/22 18:02 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 4.9J     | mg/L       | 5.0          | 02/03/22 18:02 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 3.2      | mg/L       | 1.0          | 02/02/22 01:13 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 0.58J    | mg/L       | 1.0          | 02/02/22 01:13 |            |
| <b>92585058002</b>     | <b>GWA-52</b>                  |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 01/28/22 14:43 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 7.44     | Std. Units |              | 01/28/22 14:43 |            |
| EPA 6010D              | Calcium                        | 28.6     | mg/L       | 1.0          | 02/07/22 20:54 |            |
| EPA 6010D              | Potassium                      | 1.2      | mg/L       | 0.20         | 02/07/22 20:54 | BC         |
| EPA 6010D              | Sodium                         | 5.1      | mg/L       | 1.0          | 02/07/22 20:54 |            |
| EPA 6010D              | Magnesium                      | 14.6     | mg/L       | 0.050        | 02/07/22 20:54 |            |
| EPA 6020B              | Arsenic                        | 0.0030J  | mg/L       | 0.0050       | 02/11/22 18:42 |            |
| EPA 6020B              | Barium                         | 0.023    | mg/L       | 0.0050       | 02/11/22 18:42 |            |
| EPA 6020B              | Chromium                       | 0.0012J  | mg/L       | 0.0050       | 02/11/22 18:42 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 136      | mg/L       | 10.0         | 02/01/22 14:07 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 132      | mg/L       | 5.0          | 02/03/22 17:20 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 132      | mg/L       | 5.0          | 02/03/22 17:20 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.5      | mg/L       | 1.0          | 02/02/22 01:27 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 8.6      | mg/L       | 1.0          | 02/02/22 01:27 |            |
| <b>92585058003</b>     | <b>GWA-54</b>                  |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 01/28/22 14:44 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 7.38     | Std. Units |              | 01/28/22 14:44 |            |
| EPA 6010D              | Calcium                        | 24.3     | mg/L       | 1.0          | 02/07/22 21:09 |            |
| EPA 6010D              | Potassium                      | 0.87     | mg/L       | 0.20         | 02/07/22 21:09 |            |
| EPA 6010D              | Sodium                         | 2.5      | mg/L       | 1.0          | 02/07/22 21:09 |            |
| EPA 6010D              | Magnesium                      | 13.9     | mg/L       | 0.050        | 02/07/22 21:09 |            |
| EPA 6020B              | Barium                         | 0.031    | mg/L       | 0.0050       | 02/11/22 19:06 |            |
| EPA 6020B              | Chromium                       | 0.0013J  | mg/L       | 0.0050       | 02/11/22 19:06 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 113      | mg/L       | 10.0         | 02/01/22 14:07 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 116      | mg/L       | 5.0          | 02/03/22 17:36 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 116      | mg/L       | 5.0          | 02/03/22 17:36 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 0.81J    | mg/L       | 1.0          | 02/02/22 01:41 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.4      | mg/L       | 1.0          | 02/02/22 01:41 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Lab Sample ID          | Client Sample ID               | Result  | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|---------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |         |            |              |                |            |
| <b>92585058004</b>     | <b>FB-1</b>                    |         |            |              |                |            |
| EPA 6020B              | Arsenic                        | 0.0013J | mg/L       | 0.0050       | 02/11/22 19:12 |            |
| <b>92585058005</b>     | <b>GWA-36RA</b>                |         |            |              |                |            |
|                        | Performed by                   | CUSTOME |            |              | 01/28/22 14:44 |            |
|                        |                                | R       |            |              |                |            |
|                        | pH                             | 7.01    | Std. Units |              | 01/28/22 14:44 |            |
| EPA 6010D              | Calcium                        | 41.0    | mg/L       | 1.0          | 02/07/22 21:18 |            |
| EPA 6010D              | Potassium                      | 1.1     | mg/L       | 0.20         | 02/07/22 21:18 |            |
| EPA 6010D              | Sodium                         | 2.0     | mg/L       | 1.0          | 02/07/22 21:18 |            |
| EPA 6010D              | Magnesium                      | 21.4    | mg/L       | 0.050        | 02/07/22 21:18 |            |
| EPA 6020B              | Barium                         | 0.035   | mg/L       | 0.0050       | 02/11/22 19:18 |            |
| EPA 6020B              | Boron                          | 0.012J  | mg/L       | 0.040        | 02/11/22 19:18 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 184     | mg/L       | 10.0         | 02/02/22 17:22 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 182     | mg/L       | 5.0          | 02/03/22 22:13 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 182     | mg/L       | 5.0          | 02/03/22 22:13 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.4     | mg/L       | 1.0          | 02/02/22 02:09 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 7.5     | mg/L       | 1.0          | 02/02/22 02:09 |            |
| <b>92585058006</b>     | <b>GWA-37</b>                  |         |            |              |                |            |
|                        | Performed by                   | CUSTOME |            |              | 01/28/22 14:44 |            |
|                        |                                | R       |            |              |                |            |
|                        | pH                             | 4.69    | Std. Units |              | 01/28/22 14:44 |            |
| EPA 6010D              | Calcium                        | 0.70J   | mg/L       | 1.0          | 02/07/22 21:23 |            |
| EPA 6010D              | Potassium                      | 0.38    | mg/L       | 0.20         | 02/07/22 21:23 |            |
| EPA 6010D              | Sodium                         | 3.1     | mg/L       | 1.0          | 02/07/22 21:23 |            |
| EPA 6010D              | Magnesium                      | 0.29    | mg/L       | 0.050        | 02/07/22 21:23 |            |
| EPA 6020B              | Arsenic                        | 0.0019J | mg/L       | 0.0050       | 02/11/22 19:36 |            |
| EPA 6020B              | Barium                         | 0.0046J | mg/L       | 0.0050       | 02/11/22 19:36 |            |
| EPA 6020B              | Copper                         | 0.013   | mg/L       | 0.0050       | 02/11/22 19:36 |            |
| EPA 6020B              | Nickel                         | 0.016   | mg/L       | 0.0050       | 02/11/22 19:36 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 26.0    | mg/L       | 10.0         | 02/02/22 17:22 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 6.8     | mg/L       | 5.0          | 02/03/22 23:14 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 6.8     | mg/L       | 5.0          | 02/03/22 23:14 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 0.88J   | mg/L       | 1.0          | 02/02/22 02:23 |            |
| <b>92585058007</b>     | <b>GWA-51RZ</b>                |         |            |              |                |            |
|                        | Performed by                   | CUSTOME |            |              | 01/28/22 14:44 |            |
|                        |                                | R       |            |              |                |            |
|                        | pH                             | 7.78    | Std. Units |              | 01/28/22 14:44 |            |
| EPA 6010D              | Calcium                        | 50.5    | mg/L       | 1.0          | 02/07/22 21:28 |            |
| EPA 6010D              | Potassium                      | 1.0     | mg/L       | 0.20         | 02/07/22 21:28 |            |
| EPA 6010D              | Sodium                         | 3.6     | mg/L       | 1.0          | 02/07/22 21:28 |            |
| EPA 6010D              | Magnesium                      | 23.5    | mg/L       | 0.050        | 02/07/22 21:28 |            |
| EPA 6020B              | Arsenic                        | 0.0047J | mg/L       | 0.0050       | 02/11/22 19:42 |            |
| EPA 6020B              | Barium                         | 0.034   | mg/L       | 0.0050       | 02/11/22 19:42 |            |
| EPA 6020B              | Boron                          | 0.0088J | mg/L       | 0.040        | 02/11/22 19:42 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 190     | mg/L       | 10.0         | 02/02/22 17:22 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 184     | mg/L       | 5.0          | 02/03/22 22:21 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 184     | mg/L       | 5.0          | 02/03/22 22:21 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Lab Sample ID          | Client Sample ID               | Result    | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|-----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |           |            |              |                |            |
| <b>92585058007</b>     | <b>GWA-51RZ</b>                |           |            |              |                |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.9       | mg/L       | 1.0          | 02/02/22 02:37 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 22.2      | mg/L       | 1.0          | 02/02/22 02:37 |            |
| <b>92585058008</b>     | <b>GWA-53</b>                  |           |            |              |                |            |
|                        | Performed by                   | CUSTOME   |            |              | 01/28/22 14:45 |            |
|                        |                                | R         |            |              |                |            |
|                        | pH                             | 7.72      | Std. Units |              | 01/28/22 14:45 |            |
| EPA 6010D              | Calcium                        | 29.6      | mg/L       | 1.0          | 02/07/22 21:33 |            |
| EPA 6010D              | Potassium                      | 0.68      | mg/L       | 0.20         | 02/07/22 21:33 |            |
| EPA 6010D              | Sodium                         | 1.7       | mg/L       | 1.0          | 02/07/22 21:33 |            |
| EPA 6010D              | Magnesium                      | 16.3      | mg/L       | 0.050        | 02/07/22 21:33 |            |
| EPA 6020B              | Barium                         | 0.013     | mg/L       | 0.0050       | 02/11/22 19:48 |            |
| EPA 6020B              | Beryllium                      | 0.000070J | mg/L       | 0.00050      | 02/11/22 19:48 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 131       | mg/L       | 10.0         | 02/02/22 17:22 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 132       | mg/L       | 5.0          | 02/03/22 22:26 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 132       | mg/L       | 5.0          | 02/03/22 22:26 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.2       | mg/L       | 1.0          | 02/02/22 03:18 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.4       | mg/L       | 1.0          | 02/02/22 03:18 |            |
| <b>92585058009</b>     | <b>GWA-53R</b>                 |           |            |              |                |            |
|                        | Performed by                   | CUSTOME   |            |              | 01/28/22 14:45 |            |
|                        |                                | R         |            |              |                |            |
|                        | pH                             | 7.78      | Std. Units |              | 01/28/22 14:45 |            |
| EPA 6010D              | Calcium                        | 30.4      | mg/L       | 1.0          | 02/07/22 21:37 |            |
| EPA 6010D              | Potassium                      | 0.67      | mg/L       | 0.20         | 02/07/22 21:37 |            |
| EPA 6010D              | Sodium                         | 1.5       | mg/L       | 1.0          | 02/07/22 21:37 |            |
| EPA 6010D              | Magnesium                      | 16.5      | mg/L       | 0.050        | 02/07/22 21:37 |            |
| EPA 6020B              | Barium                         | 0.014     | mg/L       | 0.0050       | 02/11/22 19:53 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 144       | mg/L       | 10.0         | 02/02/22 17:23 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 139       | mg/L       | 5.0          | 02/03/22 22:39 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 139       | mg/L       | 5.0          | 02/03/22 22:39 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.4       | mg/L       | 1.0          | 02/02/22 04:00 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.6       | mg/L       | 1.0          | 02/02/22 04:00 |            |
| <b>92585058010</b>     | <b>GWA-55</b>                  |           |            |              |                |            |
|                        | Performed by                   | CUSTOME   |            |              | 01/28/22 14:45 |            |
|                        |                                | R         |            |              |                |            |
|                        | pH                             | 7.21      | Std. Units |              | 01/28/22 14:45 |            |
| EPA 6010D              | Calcium                        | 53.2      | mg/L       | 1.0          | 02/07/22 21:42 |            |
| EPA 6010D              | Potassium                      | 1.4       | mg/L       | 0.20         | 02/07/22 21:42 |            |
| EPA 6010D              | Sodium                         | 0.97J     | mg/L       | 1.0          | 02/07/22 21:42 |            |
| EPA 6010D              | Magnesium                      | 27.9      | mg/L       | 0.050        | 02/07/22 21:42 |            |
| EPA 6020B              | Barium                         | 0.026     | mg/L       | 0.0050       | 02/11/22 19:59 |            |
| EPA 6020B              | Cobalt                         | 0.0035J   | mg/L       | 0.0050       | 02/11/22 19:59 |            |
| EPA 6020B              | Selenium                       | 0.0025J   | mg/L       | 0.0050       | 02/11/22 19:59 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 244       | mg/L       | 10.0         | 02/02/22 17:23 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 190       | mg/L       | 5.0          | 02/03/22 22:44 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 190       | mg/L       | 5.0          | 02/03/22 22:44 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 5.8       | mg/L       | 1.0          | 02/02/22 04:42 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Lab Sample ID          | Client Sample ID               | Result    | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|-----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |           |            |              |                |            |
| <b>92585058010</b>     | <b>GWA-55</b>                  |           |            |              |                |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 32.5      | mg/L       | 1.0          | 02/02/22 04:42 |            |
| <b>92585058011</b>     | <b>GWA-56</b>                  |           |            |              |                |            |
|                        | Performed by                   | CUSTOMER  |            |              | 01/28/22 14:45 |            |
|                        | pH                             | 7.45      | Std. Units |              | 01/28/22 14:45 |            |
| EPA 6010D              | Calcium                        | 37.6      | mg/L       | 1.0          | 02/07/22 21:47 |            |
| EPA 6010D              | Potassium                      | 3.6       | mg/L       | 0.20         | 02/07/22 21:47 |            |
| EPA 6010D              | Sodium                         | 39.4      | mg/L       | 1.0          | 02/07/22 21:47 |            |
| EPA 6010D              | Magnesium                      | 22.4      | mg/L       | 0.050        | 02/07/22 21:47 |            |
| EPA 6020B              | Arsenic                        | 0.0015J   | mg/L       | 0.0050       | 02/11/22 20:05 |            |
| EPA 6020B              | Barium                         | 0.032     | mg/L       | 0.0050       | 02/11/22 20:05 |            |
| EPA 6020B              | Boron                          | 0.014J    | mg/L       | 0.040        | 02/11/22 20:05 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 278       | mg/L       | 10.0         | 02/02/22 17:23 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 216       | mg/L       | 5.0          | 02/03/22 22:50 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 216       | mg/L       | 5.0          | 02/03/22 22:50 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 5.2       | mg/L       | 1.0          | 02/02/22 04:56 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.076J    | mg/L       | 0.10         | 02/02/22 04:56 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 47.1      | mg/L       | 1.0          | 02/02/22 04:56 |            |
| <b>92585058012</b>     | <b>DUP-1</b>                   |           |            |              |                |            |
| EPA 6010D              | Calcium                        | 53.7      | mg/L       | 1.0          | 02/07/22 21:52 |            |
| EPA 6010D              | Potassium                      | 1.5       | mg/L       | 0.20         | 02/07/22 21:52 |            |
| EPA 6010D              | Sodium                         | 1.0       | mg/L       | 1.0          | 02/07/22 21:52 |            |
| EPA 6010D              | Magnesium                      | 28.3      | mg/L       | 0.050        | 02/07/22 21:52 |            |
| EPA 6020B              | Arsenic                        | 0.0020J   | mg/L       | 0.0050       | 02/11/22 20:11 |            |
| EPA 6020B              | Barium                         | 0.029     | mg/L       | 0.0050       | 02/11/22 20:11 |            |
| EPA 6020B              | Cobalt                         | 0.0039J   | mg/L       | 0.0050       | 02/11/22 20:11 |            |
| EPA 6020B              | Selenium                       | 0.0025J   | mg/L       | 0.0050       | 02/11/22 20:11 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 226       | mg/L       | 10.0         | 02/02/22 17:23 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 193       | mg/L       | 5.0          | 02/03/22 22:57 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 193       | mg/L       | 5.0          | 02/03/22 22:57 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 5.8       | mg/L       | 1.0          | 02/02/22 05:10 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 32.7      | mg/L       | 1.0          | 02/02/22 05:10 |            |
| <b>92585058013</b>     | <b>FB-2</b>                    |           |            |              |                |            |
| EPA 6020B              | Arsenic                        | 0.0013J   | mg/L       | 0.0050       | 02/11/22 20:17 |            |
| <b>92585058015</b>     | <b>GWC-18R</b>                 |           |            |              |                |            |
|                        | Performed by                   | CUSTOMER  |            |              | 01/28/22 14:46 |            |
|                        | pH                             | 7.76      | Std. Units |              | 01/28/22 14:46 |            |
| EPA 6010D              | Potassium                      | 0.63      | mg/L       | 0.20         | 02/10/22 17:15 |            |
| EPA 6010D              | Sodium                         | 1.4       | mg/L       | 1.0          | 02/10/22 17:15 |            |
| EPA 6010D              | Calcium                        | 29.3      | mg/L       | 1.0          | 02/10/22 17:15 | M1         |
| EPA 6010D              | Magnesium                      | 16.4      | mg/L       | 0.050        | 02/10/22 17:15 | M1         |
| EPA 6020B              | Barium                         | 0.014     | mg/L       | 0.0050       | 02/11/22 20:29 |            |
| EPA 6020B              | Beryllium                      | 0.000055J | mg/L       | 0.00050      | 02/11/22 20:29 |            |
| EPA 6020B              | Chromium                       | 0.0015J   | mg/L       | 0.0050       | 02/11/22 20:29 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Lab Sample ID          | Client Sample ID               | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |          |            |              |                |            |
| <b>92585058015</b>     | <b>GWC-18R</b>                 |          |            |              |                |            |
| SM 2540C-2015          | Total Dissolved Solids         | 146      | mg/L       | 10.0         | 02/02/22 17:43 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 141      | mg/L       | 5.0          | 02/04/22 15:23 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 141      | mg/L       | 5.0          | 02/04/22 15:23 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.3      | mg/L       | 1.0          | 02/02/22 06:20 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 2.1      | mg/L       | 1.0          | 02/02/22 06:20 |            |
| <b>92585058016</b>     | <b>GWC-19R</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOMER |            |              | 01/28/22 14:46 |            |
|                        | pH                             | 7.74     | Std. Units |              | 01/28/22 14:46 |            |
| EPA 6010D              | Potassium                      | 0.76     | mg/L       | 0.20         | 02/10/22 17:35 |            |
| EPA 6010D              | Sodium                         | 1.3      | mg/L       | 1.0          | 02/10/22 17:35 |            |
| EPA 6010D              | Calcium                        | 33.2     | mg/L       | 1.0          | 02/10/22 17:35 |            |
| EPA 6010D              | Magnesium                      | 18.3     | mg/L       | 0.050        | 02/10/22 17:35 |            |
| EPA 6020B              | Barium                         | 0.016    | mg/L       | 0.0050       | 02/11/22 20:47 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 149      | mg/L       | 10.0         | 02/02/22 17:43 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 149      | mg/L       | 5.0          | 02/04/22 15:29 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 149      | mg/L       | 5.0          | 02/04/22 15:29 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.5      | mg/L       | 1.0          | 02/02/22 06:34 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 3.9      | mg/L       | 1.0          | 02/02/22 06:34 |            |
| <b>92585058017</b>     | <b>GWC-20R</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOMER |            |              | 01/28/22 14:46 |            |
|                        | pH                             | 7.73     | Std. Units |              | 01/28/22 14:46 |            |
| EPA 6010D              | Potassium                      | 0.72     | mg/L       | 0.20         | 02/10/22 17:39 |            |
| EPA 6010D              | Sodium                         | 2.1      | mg/L       | 1.0          | 02/10/22 17:39 |            |
| EPA 6010D              | Calcium                        | 36.2     | mg/L       | 1.0          | 02/10/22 17:39 |            |
| EPA 6010D              | Magnesium                      | 20.0     | mg/L       | 0.050        | 02/10/22 17:39 |            |
| EPA 6020B              | Barium                         | 0.028    | mg/L       | 0.0050       | 02/11/22 20:53 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 176      | mg/L       | 10.0         | 02/02/22 17:43 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 171      | mg/L       | 5.0          | 02/04/22 15:34 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 171      | mg/L       | 5.0          | 02/04/22 15:34 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.9      | mg/L       | 1.0          | 02/02/22 06:47 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.7      | mg/L       | 1.0          | 02/02/22 06:47 |            |
| <b>92585058018</b>     | <b>GWC-22R</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOMER |            |              | 01/28/22 14:46 |            |
|                        | pH                             | 7.28     | Std. Units |              | 01/28/22 14:46 |            |
| EPA 6010D              | Potassium                      | 1.5      | mg/L       | 0.20         | 02/10/22 17:44 |            |
| EPA 6010D              | Sodium                         | 1.8      | mg/L       | 1.0          | 02/10/22 17:44 |            |
| EPA 6010D              | Calcium                        | 36.9     | mg/L       | 1.0          | 02/10/22 17:44 |            |
| EPA 6010D              | Magnesium                      | 20.0     | mg/L       | 0.050        | 02/10/22 17:44 |            |
| EPA 6020B              | Arsenic                        | 0.0045J  | mg/L       | 0.0050       | 02/11/22 20:59 |            |
| EPA 6020B              | Barium                         | 0.060    | mg/L       | 0.0050       | 02/11/22 20:59 |            |
| EPA 6020B              | Cobalt                         | 0.0011J  | mg/L       | 0.0050       | 02/11/22 20:59 |            |
| EPA 6020B              | Nickel                         | 0.00076J | mg/L       | 0.0050       | 02/11/22 20:59 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 167      | mg/L       | 10.0         | 02/02/22 17:44 |            |

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Lab Sample ID          | Client Sample ID                            | Result    | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|---|-----------|------------|--------------|----------------|------------|
| Method                 | Parameters                                  |           |            |              |                |            |
| <b>92585058018</b>     | <b>GWC-22R</b>                              |           |            |              |                |            |
| SM 2320B               | Alkalinity, Total as CaCO <sub>3</sub>      | 176       | mg/L       | 5.0          | 02/04/22 15:40 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO <sub>3</sub> ) | 176       | mg/L       | 5.0          | 02/04/22 15:40 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                                    | 2.5       | mg/L       | 1.0          | 02/02/22 07:01 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                                     | 1.3       | mg/L       | 1.0          | 02/02/22 07:01 |            |
| <b>92585058019</b>     | <b>GWC-25R</b>                              |           |            |              |                |            |
|                        | Performed by                                | CUSTOMER  |            |              | 01/28/22 14:46 |            |
|                        | pH  | 7.46      | Std. Units |              | 01/28/22 14:46 |            |
| EPA 6010D              | Potassium                                   | 0.66      | mg/L       | 0.20         | 02/10/22 17:49 |            |
| EPA 6010D              | Sodium                                      | 1.3       | mg/L       | 1.0          | 02/10/22 17:49 |            |
| EPA 6010D              | Calcium                                     | 34.4      | mg/L       | 1.0          | 02/10/22 17:49 |            |
| EPA 6010D              | Magnesium                                   | 19.7      | mg/L       | 0.050        | 02/10/22 17:49 |            |
| EPA 6020B              | Barium                                      | 0.017     | mg/L       | 0.0050       | 02/11/22 21:05 |            |
| SM 2540C-2015          | Total Dissolved Solids                      | 168       | mg/L       | 10.0         | 02/02/22 17:44 |            |
| SM 2320B               | Alkalinity, Total as CaCO <sub>3</sub>      | 164       | mg/L       | 5.0          | 02/04/22 15:45 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO <sub>3</sub> ) | 164       | mg/L       | 5.0          | 02/04/22 15:45 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                                    | 2.4       | mg/L       | 1.0          | 02/04/22 13:50 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                                     | 2.0       | mg/L       | 1.0          | 02/04/22 13:50 |            |
| <b>92585058020</b>     | <b>GWA-55R</b>                              |           |            |              |                |            |
|                        | Performed by                                | CUSTOMER  |            |              | 01/28/22 14:47 |            |
|                        | pH  | 7.27      | Std. Units |              | 01/28/22 14:47 |            |
| EPA 6010D              | Potassium                                   | 1.0       | mg/L       | 0.20         | 02/10/22 17:54 |            |
| EPA 6010D              | Sodium                                      | 1.2       | mg/L       | 1.0          | 02/10/22 17:54 |            |
| EPA 6010D              | Calcium                                     | 44.4      | mg/L       | 1.0          | 02/10/22 17:54 |            |
| EPA 6010D              | Magnesium                                   | 24.8      | mg/L       | 0.050        | 02/10/22 17:54 |            |
| EPA 6020B              | Arsenic                                     | 0.0019J   | mg/L       | 0.0050       | 02/11/22 21:11 |            |
| EPA 6020B              | Barium                                      | 0.032     | mg/L       | 0.0050       | 02/11/22 21:11 |            |
| EPA 6020B              | Selenium                                    | 0.0016J   | mg/L       | 0.0050       | 02/11/22 21:11 |            |
| SM 2540C-2015          | Total Dissolved Solids                      | 207       | mg/L       | 10.0         | 02/02/22 17:44 |            |
| SM 2320B               | Alkalinity, Total as CaCO <sub>3</sub>      | 181       | mg/L       | 5.0          | 02/04/22 16:15 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO <sub>3</sub> ) | 181       | mg/L       | 5.0          | 02/04/22 16:15 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                                    | 4.5       | mg/L       | 1.0          | 02/04/22 14:04 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                                     | 20.7      | mg/L       | 1.0          | 02/04/22 14:04 |            |
| <b>92585058021</b>     | <b>DUP-2</b>                                |           |            |              |                |            |
| EPA 6010D              | Potassium                                   | 0.72      | mg/L       | 0.20         | 02/10/22 17:58 |            |
| EPA 6010D              | Sodium                                      | 1.4       | mg/L       | 1.0          | 02/10/22 17:58 |            |
| EPA 6010D              | Calcium                                     | 30.8      | mg/L       | 1.0          | 02/10/22 17:58 |            |
| EPA 6010D              | Magnesium                                   | 16.8      | mg/L       | 0.050        | 02/10/22 17:58 |            |
| EPA 6020B              | Antimony                                    | 0.00090J  | mg/L       | 0.0030       | 02/14/22 14:55 | B          |
| EPA 6020B              | Barium                                      | 0.015     | mg/L       | 0.0050       | 02/14/22 14:55 |            |
| EPA 6020B              | Beryllium                                   | 0.000056J | mg/L       | 0.00050      | 02/14/22 14:55 |            |
| SM 2540C-2015          | Total Dissolved Solids                      | 147       | mg/L       | 10.0         | 02/02/22 17:45 |            |
| SM 2320B               | Alkalinity, Total as CaCO <sub>3</sub>      | 141       | mg/L       | 5.0          | 02/04/22 16:20 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO <sub>3</sub> ) | 141       | mg/L       | 5.0          | 02/04/22 16:20 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                                    | 2.3       | mg/L       | 1.0          | 02/04/22 14:18 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Lab Sample ID          | Client Sample ID               | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |          |            |              |                |            |
| <b>92585058021</b>     | <b>DUP-2</b>                   |          |            |              |                |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 2.1      | mg/L       | 1.0          | 02/04/22 14:18 |            |
| <b>92585058023</b>     | <b>GWC-16R</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOMER |            |              | 02/01/22 17:21 |            |
|                        | pH                             | 7.31     | Std. Units |              | 02/01/22 17:21 |            |
| EPA 6010D              | Zinc                           | 0.026    | mg/L       | 0.020        | 02/10/22 18:17 |            |
| EPA 6010D              | Potassium                      | 5.7      | mg/L       | 0.20         | 02/10/22 18:17 |            |
| EPA 6010D              | Sodium                         | 28.5     | mg/L       | 1.0          | 02/10/22 18:17 |            |
| EPA 6010D              | Calcium                        | 68.5     | mg/L       | 1.0          | 02/10/22 18:17 |            |
| EPA 6010D              | Magnesium                      | 23.9     | mg/L       | 0.050        | 02/10/22 18:17 |            |
| EPA 6020B              | Antimony                       | 0.027    | mg/L       | 0.0030       | 02/14/22 15:21 |            |
| EPA 6020B              | Barium                         | 0.049    | mg/L       | 0.0050       | 02/14/22 15:21 |            |
| EPA 6020B              | Boron                          | 0.021J   | mg/L       | 0.040        | 02/14/22 15:21 |            |
| EPA 6020B              | Chromium                       | 0.0011J  | mg/L       | 0.0050       | 02/14/22 15:21 |            |
| EPA 6020B              | Copper                         | 0.00088J | mg/L       | 0.0050       | 02/14/22 15:21 |            |
| EPA 6020B              | Nickel                         | 0.0063   | mg/L       | 0.0050       | 02/14/22 15:21 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 317      | mg/L       | 10.0         | 02/03/22 12:41 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 315      | mg/L       | 5.0          | 02/08/22 21:45 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 315      | mg/L       | 5.0          | 02/08/22 21:45 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.6      | mg/L       | 1.0          | 02/06/22 04:03 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.17     | mg/L       | 0.10         | 02/06/22 04:03 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 11.9     | mg/L       | 1.0          | 02/06/22 04:03 |            |
| <b>92585058024</b>     | <b>GWC-17R</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOMER |            |              | 02/01/22 17:21 |            |
|                        | pH                             | 7.34     | Std. Units |              | 02/01/22 17:21 |            |
| EPA 6010D              | Potassium                      | 0.73     | mg/L       | 0.20         | 02/10/22 18:22 |            |
| EPA 6010D              | Sodium                         | 2.5      | mg/L       | 1.0          | 02/10/22 18:22 |            |
| EPA 6010D              | Calcium                        | 64.7     | mg/L       | 1.0          | 02/10/22 18:22 |            |
| EPA 6010D              | Magnesium                      | 35.4     | mg/L       | 0.050        | 02/10/22 18:22 |            |
| EPA 6020B              | Barium                         | 0.018    | mg/L       | 0.0050       | 02/14/22 15:45 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 302      | mg/L       | 10.0         | 02/03/22 12:41 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 300      | mg/L       | 5.0          | 02/08/22 21:53 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 300      | mg/L       | 5.0          | 02/08/22 21:53 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 4.6      | mg/L       | 1.0          | 02/06/22 04:17 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 7.6      | mg/L       | 1.0          | 02/06/22 04:17 |            |
| <b>92585058025</b>     | <b>GWC-18</b>                  |          |            |              |                |            |
|                        | Performed by                   | CUSTOMER |            |              | 02/01/22 17:21 |            |
|                        | pH                             | 6.60     | Std. Units |              | 02/01/22 17:21 |            |
| EPA 6010D              | Potassium                      | 1.1      | mg/L       | 0.20         | 02/10/22 18:27 |            |
| EPA 6010D              | Sodium                         | 1.5      | mg/L       | 1.0          | 02/10/22 18:27 |            |
| EPA 6010D              | Calcium                        | 19.1     | mg/L       | 1.0          | 02/10/22 18:27 |            |
| EPA 6010D              | Magnesium                      | 10.7     | mg/L       | 0.050        | 02/10/22 18:27 |            |
| EPA 6020B              | Barium                         | 0.044    | mg/L       | 0.0050       | 02/14/22 15:51 |            |
| EPA 6020B              | Chromium                       | 0.0014J  | mg/L       | 0.0050       | 02/14/22 15:51 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Lab Sample ID          | Client Sample ID               | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |          |            |              |                |            |
| <b>92585058025</b>     | <b>GWC-18</b>                  |          |            |              |                |            |
| SM 2540C-2015          | Total Dissolved Solids         | 99.0     | mg/L       | 10.0         | 02/03/22 12:41 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 84.7     | mg/L       | 5.0          | 02/08/22 22:00 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 84.7     | mg/L       | 5.0          | 02/08/22 22:00 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.1      | mg/L       | 1.0          | 02/06/22 04:31 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.6      | mg/L       | 1.0          | 02/06/22 04:31 |            |
| <b>92585058026</b>     | <b>GWC-21R</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/01/22 17:21 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 6.69     | Std. Units |              | 02/01/22 17:21 |            |
| EPA 6010D              | Potassium                      | 1.5      | mg/L       | 0.20         | 02/10/22 18:32 |            |
| EPA 6010D              | Sodium                         | 15.1     | mg/L       | 1.0          | 02/10/22 18:32 |            |
| EPA 6010D              | Calcium                        | 60.0     | mg/L       | 1.0          | 02/10/22 18:32 |            |
| EPA 6010D              | Magnesium                      | 29.9     | mg/L       | 0.050        | 02/10/22 18:32 |            |
| EPA 6020B              | Antimony                       | 0.0061   | mg/L       | 0.0030       | 02/14/22 18:21 | B          |
| EPA 6020B              | Arsenic                        | 0.0031J  | mg/L       | 0.0050       | 02/14/22 18:21 |            |
| EPA 6020B              | Barium                         | 0.037    | mg/L       | 0.0050       | 02/14/22 18:21 |            |
| EPA 6020B              | Boron                          | 0.011J   | mg/L       | 0.040        | 02/14/22 18:21 |            |
| EPA 6020B              | Nickel                         | 0.0014J  | mg/L       | 0.0050       | 02/14/22 18:21 |            |
| EPA 6020B              | Thallium                       | 0.00021J | mg/L       | 0.0010       | 02/14/22 18:21 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 290      | mg/L       | 10.0         | 02/03/22 12:41 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 288      | mg/L       | 5.0          | 02/08/22 22:05 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 288      | mg/L       | 5.0          | 02/08/22 22:05 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 4.6      | mg/L       | 1.0          | 02/06/22 04:45 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 13.7     | mg/L       | 1.0          | 02/06/22 04:45 |            |
| <b>92585058027</b>     | <b>GWC-23R</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/01/22 17:22 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 7.38     | Std. Units |              | 02/01/22 17:22 |            |
| EPA 6010D              | Zinc                           | 0.0099J  | mg/L       | 0.020        | 02/10/22 18:36 |            |
| EPA 6010D              | Potassium                      | 1.4      | mg/L       | 0.20         | 02/10/22 18:36 |            |
| EPA 6010D              | Sodium                         | 74.7     | mg/L       | 1.0          | 02/10/22 18:36 |            |
| EPA 6010D              | Calcium                        | 64.9     | mg/L       | 1.0          | 02/10/22 18:36 |            |
| EPA 6010D              | Magnesium                      | 34.0     | mg/L       | 0.050        | 02/10/22 18:36 |            |
| EPA 6020B              | Arsenic                        | 0.0026J  | mg/L       | 0.0050       | 02/14/22 18:27 |            |
| EPA 6020B              | Barium                         | 0.036    | mg/L       | 0.0050       | 02/14/22 18:27 |            |
| EPA 6020B              | Copper                         | 0.00068J | mg/L       | 0.0050       | 02/14/22 18:27 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 454      | mg/L       | 20.0         | 02/03/22 12:41 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 345      | mg/L       | 5.0          | 02/08/22 22:12 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 345      | mg/L       | 5.0          | 02/08/22 22:12 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.7      | mg/L       | 1.0          | 02/06/22 04:59 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 98.4     | mg/L       | 2.0          | 02/06/22 07:35 |            |
| <b>92585058028</b>     | <b>GWC-24R</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/01/22 17:22 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 7.68     | Std. Units |              | 02/01/22 17:22 |            |
| EPA 6010D              | Potassium                      | 0.87     | mg/L       | 0.20         | 02/10/22 18:41 |            |

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Lab Sample ID<br>Method | Client Sample ID<br>Parameters | Result   | Units | Report Limit | Analyzed       | Qualifiers |
|-------------------------|--------------------------------|----------|-------|--------------|----------------|------------|
| <b>92585058028</b>      | <b>GWC-24R</b>                 |          |       |              |                |            |
| EPA 6010D               | Sodium                         | 1.5      | mg/L  | 1.0          | 02/10/22 18:41 |            |
| EPA 6010D               | Calcium                        | 34.4     | mg/L  | 1.0          | 02/10/22 18:41 |            |
| EPA 6010D               | Magnesium                      | 18.9     | mg/L  | 0.050        | 02/10/22 18:41 |            |
| EPA 6020B               | Arsenic                        | 0.0021J  | mg/L  | 0.0050       | 02/14/22 18:33 |            |
| EPA 6020B               | Barium                         | 0.025    | mg/L  | 0.0050       | 02/14/22 18:33 |            |
| SM 2540C-2015           | Total Dissolved Solids         | 159      | mg/L  | 10.0         | 02/03/22 12:41 |            |
| SM 2320B                | Alkalinity, Total as CaCO3     | 148      | mg/L  | 5.0          | 02/08/22 22:20 |            |
| SM 2320B                | Alkalinity,Bicarbonate (CaCO3) | 148      | mg/L  | 5.0          | 02/08/22 22:20 |            |
| EPA 300.0 Rev 2.1 1993  | Chloride                       | 2.2      | mg/L  | 1.0          | 02/06/22 05:41 |            |
| EPA 300.0 Rev 2.1 1993  | Sulfate                        | 2.3      | mg/L  | 1.0          | 02/06/22 05:41 |            |
| <b>92585058029</b>      | <b>DUP-3</b>                   |          |       |              |                |            |
| EPA 6010D               | Potassium                      | 0.83     | mg/L  | 0.20         | 02/10/22 18:46 |            |
| EPA 6010D               | Sodium                         | 1.6      | mg/L  | 1.0          | 02/10/22 18:46 |            |
| EPA 6010D               | Calcium                        | 33.5     | mg/L  | 1.0          | 02/10/22 18:46 |            |
| EPA 6010D               | Magnesium                      | 18.5     | mg/L  | 0.050        | 02/10/22 18:46 |            |
| EPA 6020B               | Arsenic                        | 0.0015J  | mg/L  | 0.0050       | 02/14/22 18:39 |            |
| EPA 6020B               | Barium                         | 0.023    | mg/L  | 0.0050       | 02/14/22 18:39 |            |
| EPA 6020B               | Copper                         | 0.00054J | mg/L  | 0.0050       | 02/14/22 18:39 |            |
| SM 2540C-2015           | Total Dissolved Solids         | 156      | mg/L  | 10.0         | 02/03/22 12:42 |            |
| SM 2320B                | Alkalinity, Total as CaCO3     | 148      | mg/L  | 5.0          | 02/08/22 22:25 |            |
| SM 2320B                | Alkalinity,Bicarbonate (CaCO3) | 148      | mg/L  | 5.0          | 02/08/22 22:25 |            |
| EPA 300.0 Rev 2.1 1993  | Chloride                       | 2.2      | mg/L  | 1.0          | 02/06/22 05:55 |            |
| EPA 300.0 Rev 2.1 1993  | Sulfate                        | 2.3      | mg/L  | 1.0          | 02/06/22 05:55 |            |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: GWA-38      Lab ID: 92585058001      Collected: 01/25/22 13:54      Received: 01/28/22 09:30      Matrix: Water |                 |            |              |          |    |                |                |           |      |
|---|-----------------|------------|--------------|----------|----|----------------|----------------|-----------|------|
| Parameters  | Results         | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte   |                 |            |              |          |    |                |                |           |      |
| Performed by  | <b>CUSTOMER</b> |            |              |          | 1  |                | 01/28/22 14:43 |           |      |
| pH  | <b>5.14</b>     | Std. Units |              |          | 1  |                | 01/28/22 14:43 |           |      |
| <b>6010D ATL ICP</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA     |                 |            |              |          |    |                |                |           |      |
| Zinc  | ND              | mg/L       | 0.020        | 0.0085   | 1  | 02/05/22 08:33 | 02/07/22 20:35 | 7440-66-6 |      |
| Calcium   | <b>1.1</b>      | mg/L       | 1.0          | 0.12     | 1  | 02/05/22 08:33 | 02/07/22 20:35 | 7440-70-2 |      |
| Potassium   | <b>0.46</b>     | mg/L       | 0.20         | 0.15     | 1  | 02/05/22 08:33 | 02/07/22 20:35 | 7440-09-7 | BC   |
| Sodium  | <b>3.5</b>      | mg/L       | 1.0          | 0.58     | 1  | 02/05/22 08:33 | 02/07/22 20:35 | 7440-23-5 |      |
| Magnesium   | <b>0.44</b>     | mg/L       | 0.050        | 0.012    | 1  | 02/05/22 08:33 | 02/07/22 20:35 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA     |                 |            |              |          |    |                |                |           |      |
| Antimony  | ND              | mg/L       | 0.0030       | 0.00078  | 1  | 02/10/22 08:25 | 02/11/22 18:36 | 7440-36-0 |      |
| Arsenic   | ND              | mg/L       | 0.0050       | 0.0011   | 1  | 02/10/22 08:25 | 02/11/22 18:36 | 7440-38-2 |      |
| Barium  | <b>0.012</b>    | mg/L       | 0.0050       | 0.00067  | 1  | 02/10/22 08:25 | 02/11/22 18:36 | 7440-39-3 |      |
| Beryllium   | ND              | mg/L       | 0.00050      | 0.000054 | 1  | 02/10/22 08:25 | 02/11/22 18:36 | 7440-41-7 |      |
| Boron   | ND              | mg/L       | 0.040        | 0.0086   | 1  | 02/10/22 08:25 | 02/11/22 18:36 | 7440-42-8 |      |
| Cadmium   | ND              | mg/L       | 0.00050      | 0.00011  | 1  | 02/10/22 08:25 | 02/11/22 18:36 | 7440-43-9 |      |
| Chromium  | <b>0.0014J</b>  | mg/L       | 0.0050       | 0.0011   | 1  | 02/10/22 08:25 | 02/11/22 18:36 | 7440-47-3 |      |
| Cobalt  | <b>0.0011J</b>  | mg/L       | 0.0050       | 0.00039  | 1  | 02/10/22 08:25 | 02/11/22 18:36 | 7440-48-4 |      |
| Copper  | ND              | mg/L       | 0.0050       | 0.00050  | 1  | 02/10/22 08:25 | 02/11/22 18:36 | 7440-50-8 |      |
| Lead  | ND              | mg/L       | 0.0010       | 0.00089  | 1  | 02/10/22 08:25 | 02/11/22 18:36 | 7439-92-1 |      |
| Nickel  | <b>0.00093J</b> | mg/L       | 0.0050       | 0.00071  | 1  | 02/10/22 08:25 | 02/11/22 18:36 | 7440-02-0 |      |
| Selenium  | ND              | mg/L       | 0.0050       | 0.0014   | 1  | 02/10/22 08:25 | 02/11/22 18:36 | 7782-49-2 |      |
| Silver  | ND              | mg/L       | 0.0050       | 0.00044  | 1  | 02/10/22 08:25 | 02/11/22 18:36 | 7440-22-4 |      |
| Thallium  | ND              | mg/L       | 0.0010       | 0.00018  | 1  | 02/10/22 08:25 | 02/11/22 18:36 | 7440-28-0 |      |
| Vanadium  | ND              | mg/L       | 0.010        | 0.0019   | 1  | 02/10/22 08:25 | 02/11/22 18:36 | 7440-62-2 |      |
| <b>7470 Mercury</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 7470A      Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA     |                 |            |              |          |    |                |                |           |      |
| Mercury   | ND              | mg/L       | 0.00020      | 0.00013  | 1  | 02/08/22 10:20 | 02/08/22 15:19 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                                    |                 |            |              |          |    |                |                |           |      |
| Total Dissolved Solids  | <b>27.0</b>     | mg/L       | 10.0         | 10.0     | 1  |                | 02/01/22 14:07 |           |      |
| <b>2320B Alkalinity</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis   |                 |            |              |          |    |                |                |           |      |
| Alkalinity, Total as CaCO3  | <b>4.9J</b>     | mg/L       | 5.0          | 1.8      | 1  |                | 02/03/22 18:02 |           |      |
| Alkalinity,Bicarbonate (CaCO3)  | <b>4.9J</b>     | mg/L       | 5.0          | 1.8      | 1  |                | 02/03/22 18:02 |           |      |
| Alkalinity,Carbonate (CaCO3)  | ND              | mg/L       | 5.0          | 1.8      | 1  |                | 02/03/22 18:02 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

**Sample: GWA-38**      **Lab ID: 92585058001**      Collected: 01/25/22 13:54      Received: 01/28/22 09:30      Matrix: Water

| Parameters                                | Results      | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|--------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |              |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |              |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |              |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |              |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>3.2</b>   | mg/L  | 1.0    | 0.60  | 1  |          | 02/02/22 01:13 | 16887-00-6 |      |
| Fluoride                                  | ND           | mg/L  | 0.10   | 0.050 | 1  |          | 02/02/22 01:13 | 16984-48-8 |      |
| Sulfate                                   | <b>0.58J</b> | mg/L  | 1.0    | 0.50  | 1  |          | 02/02/22 01:13 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: **GWA-52** Lab ID: **92585058002** Collected: 01/25/22 16:52 Received: 01/28/22 09:30 Matrix: Water

| Parameters   | Results         | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.   | Qual |
|--|-----------------|------------|--------------|----------|----|----------------|----------------|-----------|------|
| <b>Field Data</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |            |              |          |    |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |            |              |          | 1  |                | 01/28/22 14:43 |           |      |
| pH   | <b>7.44</b>     | Std. Units |              |          | 1  |                | 01/28/22 14:43 |           |      |
| <b>6010D ATL ICP</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |              |          |    |                |                |           |      |
| Zinc   | ND              | mg/L       | 0.020        | 0.0085   | 1  | 02/05/22 08:33 | 02/07/22 20:54 | 7440-66-6 |      |
| Calcium  | <b>28.6</b>     | mg/L       | 1.0          | 0.12     | 1  | 02/05/22 08:33 | 02/07/22 20:54 | 7440-70-2 |      |
| Potassium  | <b>1.2</b>      | mg/L       | 0.20         | 0.15     | 1  | 02/05/22 08:33 | 02/07/22 20:54 | 7440-09-7 | BC   |
| Sodium   | <b>5.1</b>      | mg/L       | 1.0          | 0.58     | 1  | 02/05/22 08:33 | 02/07/22 20:54 | 7440-23-5 |      |
| Magnesium  | <b>14.6</b>     | mg/L       | 0.050        | 0.012    | 1  | 02/05/22 08:33 | 02/07/22 20:54 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |              |          |    |                |                |           |      |
| Antimony   | ND              | mg/L       | 0.0030       | 0.00078  | 1  | 02/10/22 08:25 | 02/11/22 18:42 | 7440-36-0 |      |
| Arsenic  | <b>0.0030J</b>  | mg/L       | 0.0050       | 0.0011   | 1  | 02/10/22 08:25 | 02/11/22 18:42 | 7440-38-2 |      |
| Barium   | <b>0.023</b>    | mg/L       | 0.0050       | 0.00067  | 1  | 02/10/22 08:25 | 02/11/22 18:42 | 7440-39-3 |      |
| Beryllium  | ND              | mg/L       | 0.00050      | 0.000054 | 1  | 02/10/22 08:25 | 02/11/22 18:42 | 7440-41-7 |      |
| Boron  | ND              | mg/L       | 0.040        | 0.0086   | 1  | 02/10/22 08:25 | 02/11/22 18:42 | 7440-42-8 |      |
| Cadmium  | ND              | mg/L       | 0.00050      | 0.00011  | 1  | 02/10/22 08:25 | 02/11/22 18:42 | 7440-43-9 |      |
| Chromium   | <b>0.0012J</b>  | mg/L       | 0.0050       | 0.0011   | 1  | 02/10/22 08:25 | 02/11/22 18:42 | 7440-47-3 |      |
| Cobalt   | ND              | mg/L       | 0.0050       | 0.00039  | 1  | 02/10/22 08:25 | 02/11/22 18:42 | 7440-48-4 |      |
| Copper   | ND              | mg/L       | 0.0050       | 0.00050  | 1  | 02/10/22 08:25 | 02/11/22 18:42 | 7440-50-8 |      |
| Lead   | ND              | mg/L       | 0.0010       | 0.00089  | 1  | 02/10/22 08:25 | 02/11/22 18:42 | 7439-92-1 |      |
| Nickel   | ND              | mg/L       | 0.0050       | 0.00071  | 1  | 02/10/22 08:25 | 02/11/22 18:42 | 7440-02-0 |      |
| Selenium   | ND              | mg/L       | 0.0050       | 0.0014   | 1  | 02/10/22 08:25 | 02/11/22 18:42 | 7782-49-2 |      |
| Silver   | ND              | mg/L       | 0.0050       | 0.00044  | 1  | 02/10/22 08:25 | 02/11/22 18:42 | 7440-22-4 |      |
| Thallium   | ND              | mg/L       | 0.0010       | 0.00018  | 1  | 02/10/22 08:25 | 02/11/22 18:42 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L       | 0.010        | 0.0019   | 1  | 02/10/22 08:25 | 02/11/22 18:42 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |              |          |    |                |                |           |      |
| Mercury  | ND              | mg/L       | 0.00020      | 0.00013  | 1  | 02/08/22 10:20 | 02/08/22 15:22 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |            |              |          |    |                |                |           |      |
| Total Dissolved Solids   | <b>136</b>      | mg/L       | 10.0         | 10.0     | 1  |                | 02/01/22 14:07 |           |      |
| <b>2320B Alkalinity</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                 |            |              |          |    |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>132</b>      | mg/L       | 5.0          | 1.8      | 1  |                | 02/03/22 17:20 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>132</b>      | mg/L       | 5.0          | 1.8      | 1  |                | 02/03/22 17:20 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND              | mg/L       | 5.0          | 1.8      | 1  |                | 02/03/22 17:20 |           |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

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**Sample: GWA-52**      **Lab ID: 92585058002**      Collected: 01/25/22 16:52      Received: 01/28/22 09:30      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 1.5     | mg/L  | 1.0    | 0.60  | 1  |          | 02/02/22 01:27 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/02/22 01:27 | 16984-48-8 |      |
| Sulfate                                   | 8.6     | mg/L  | 1.0    | 0.50  | 1  |          | 02/02/22 01:27 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

**Sample: GWA-54**      **Lab ID: 92585058003**      Collected: 01/25/22 15:28      Received: 01/28/22 09:30      Matrix: Water

| Parameters  | Results         | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.   | Qual |
|---|-----------------|------------|--------------|----------|----|----------------|----------------|-----------|------|
| <b>Field Data</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte   |                 |            |              |          |    |                |                |           |      |
| Performed by  | <b>CUSTOMER</b> |            |              |          | 1  |                | 01/28/22 14:44 |           |      |
| pH  | <b>7.38</b>     | Std. Units |              |          | 1  |                | 01/28/22 14:44 |           |      |
| <b>6010D ATL ICP</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |              |          |    |                |                |           |      |
| Zinc  | ND              | mg/L       | 0.020        | 0.0085   | 1  | 02/05/22 08:33 | 02/07/22 21:09 | 7440-66-6 |      |
| Calcium   | <b>24.3</b>     | mg/L       | 1.0          | 0.12     | 1  | 02/05/22 08:33 | 02/07/22 21:09 | 7440-70-2 |      |
| Potassium   | <b>0.87</b>     | mg/L       | 0.20         | 0.15     | 1  | 02/05/22 08:33 | 02/07/22 21:09 | 7440-09-7 |      |
| Sodium  | <b>2.5</b>      | mg/L       | 1.0          | 0.58     | 1  | 02/05/22 08:33 | 02/07/22 21:09 | 7440-23-5 |      |
| Magnesium   | <b>13.9</b>     | mg/L       | 0.050        | 0.012    | 1  | 02/05/22 08:33 | 02/07/22 21:09 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |              |          |    |                |                |           |      |
| Antimony  | ND              | mg/L       | 0.0030       | 0.00078  | 1  | 02/10/22 08:25 | 02/11/22 19:06 | 7440-36-0 |      |
| Arsenic   | ND              | mg/L       | 0.0050       | 0.0011   | 1  | 02/10/22 08:25 | 02/11/22 19:06 | 7440-38-2 |      |
| Barium  | <b>0.031</b>    | mg/L       | 0.0050       | 0.00067  | 1  | 02/10/22 08:25 | 02/11/22 19:06 | 7440-39-3 |      |
| Beryllium   | ND              | mg/L       | 0.00050      | 0.000054 | 1  | 02/10/22 08:25 | 02/11/22 19:06 | 7440-41-7 |      |
| Boron   | ND              | mg/L       | 0.040        | 0.0086   | 1  | 02/10/22 08:25 | 02/11/22 19:06 | 7440-42-8 |      |
| Cadmium   | ND              | mg/L       | 0.00050      | 0.00011  | 1  | 02/10/22 08:25 | 02/11/22 19:06 | 7440-43-9 |      |
| Chromium  | <b>0.0013J</b>  | mg/L       | 0.0050       | 0.0011   | 1  | 02/10/22 08:25 | 02/11/22 19:06 | 7440-47-3 |      |
| Cobalt  | ND              | mg/L       | 0.0050       | 0.00039  | 1  | 02/10/22 08:25 | 02/11/22 19:06 | 7440-48-4 |      |
| Copper  | ND              | mg/L       | 0.0050       | 0.00050  | 1  | 02/10/22 08:25 | 02/11/22 19:06 | 7440-50-8 |      |
| Lead  | ND              | mg/L       | 0.0010       | 0.00089  | 1  | 02/10/22 08:25 | 02/11/22 19:06 | 7439-92-1 |      |
| Nickel  | ND              | mg/L       | 0.0050       | 0.00071  | 1  | 02/10/22 08:25 | 02/11/22 19:06 | 7440-02-0 |      |
| Selenium  | ND              | mg/L       | 0.0050       | 0.0014   | 1  | 02/10/22 08:25 | 02/11/22 19:06 | 7782-49-2 |      |
| Silver  | ND              | mg/L       | 0.0050       | 0.00044  | 1  | 02/10/22 08:25 | 02/11/22 19:06 | 7440-22-4 |      |
| Thallium  | ND              | mg/L       | 0.0010       | 0.00018  | 1  | 02/10/22 08:25 | 02/11/22 19:06 | 7440-28-0 |      |
| Vanadium  | ND              | mg/L       | 0.010        | 0.0019   | 1  | 02/10/22 08:25 | 02/11/22 19:06 | 7440-62-2 |      |
| <b>7470 Mercury</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 7470A      Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |              |          |    |                |                |           |      |
| Mercury   | ND              | mg/L       | 0.00020      | 0.00013  | 1  | 02/08/22 10:20 | 02/08/22 15:24 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                                |                 |            |              |          |    |                |                |           |      |
| Total Dissolved Solids  | <b>113</b>      | mg/L       | 10.0         | 10.0     | 1  |                | 02/01/22 14:07 |           |      |
| <b>2320B Alkalinity</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis   |                 |            |              |          |    |                |                |           |      |
| Alkalinity, Total as CaCO3  | <b>116</b>      | mg/L       | 5.0          | 1.8      | 1  |                | 02/03/22 17:36 |           |      |
| Alkalinity,Bicarbonate (CaCO3)  | <b>116</b>      | mg/L       | 5.0          | 1.8      | 1  |                | 02/03/22 17:36 |           |      |
| Alkalinity,Carbonate (CaCO3)  | ND              | mg/L       | 5.0          | 1.8      | 1  |                | 02/03/22 17:36 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

**Sample: GWA-54**      **Lab ID: 92585058003**      Collected: 01/25/22 15:28      Received: 01/28/22 09:30      Matrix: Water

| Parameters                                | Results      | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|--------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |              |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |              |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |              |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |              |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>0.81J</b> | mg/L  | 1.0    | 0.60  | 1  |          | 02/02/22 01:41 | 16887-00-6 |      |
| Fluoride                                  | ND           | mg/L  | 0.10   | 0.050 | 1  |          | 02/02/22 01:41 | 16984-48-8 |      |
| Sulfate                                   | <b>1.4</b>   | mg/L  | 1.0    | 0.50  | 1  |          | 02/02/22 01:41 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: FB-1                        |                | Lab ID: 92585058004  |              | Collected: 01/25/22 16:18 | Received: 01/28/22 09:30 | Matrix: Water  |                |            |      |  |
|-------------------------------------|----------------|--|--------------|---------------------------|--------------------------|----------------|----------------|------------|------|--|
| Parameters                          | Results        | Units  | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.    | Qual |  |
| <b>6010D ATL ICP</b>                |                | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |  |
| Zinc                                | ND             | mg/L   | 0.020        | 0.0085                    | 1                        | 02/05/22 08:33 | 02/07/22 21:13 | 7440-66-6  |      |  |
| Calcium                             | ND             | mg/L   | 1.0          | 0.12                      | 1                        | 02/05/22 08:33 | 02/07/22 21:13 | 7440-70-2  |      |  |
| Potassium                           | ND             | mg/L   | 0.20         | 0.15                      | 1                        | 02/05/22 08:33 | 02/07/22 21:13 | 7440-09-7  |      |  |
| Sodium                              | ND             | mg/L   | 1.0          | 0.58                      | 1                        | 02/05/22 08:33 | 02/07/22 21:13 | 7440-23-5  |      |  |
| Magnesium                           | ND             | mg/L   | 0.050        | 0.012                     | 1                        | 02/05/22 08:33 | 02/07/22 21:13 | 7439-95-4  |      |  |
| <b>6020 MET ICPMS</b>               |                | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |  |
| Antimony                            | ND             | mg/L   | 0.0030       | 0.00078                   | 1                        | 02/10/22 08:25 | 02/11/22 19:12 | 7440-36-0  |      |  |
| Arsenic                             | <b>0.0013J</b> | mg/L   | 0.0050       | 0.0011                    | 1                        | 02/10/22 08:25 | 02/11/22 19:12 | 7440-38-2  |      |  |
| Barium                              | ND             | mg/L   | 0.0050       | 0.00067                   | 1                        | 02/10/22 08:25 | 02/11/22 19:12 | 7440-39-3  |      |  |
| Beryllium                           | ND             | mg/L   | 0.00050      | 0.000054                  | 1                        | 02/10/22 08:25 | 02/11/22 19:12 | 7440-41-7  |      |  |
| Boron                               | ND             | mg/L   | 0.040        | 0.0086                    | 1                        | 02/10/22 08:25 | 02/11/22 19:12 | 7440-42-8  |      |  |
| Cadmium                             | ND             | mg/L   | 0.00050      | 0.00011                   | 1                        | 02/10/22 08:25 | 02/11/22 19:12 | 7440-43-9  |      |  |
| Chromium                            | ND             | mg/L   | 0.0050       | 0.0011                    | 1                        | 02/10/22 08:25 | 02/11/22 19:12 | 7440-47-3  |      |  |
| Cobalt                              | ND             | mg/L   | 0.0050       | 0.00039                   | 1                        | 02/10/22 08:25 | 02/11/22 19:12 | 7440-48-4  |      |  |
| Copper                              | ND             | mg/L   | 0.0050       | 0.00050                   | 1                        | 02/10/22 08:25 | 02/11/22 19:12 | 7440-50-8  |      |  |
| Lead                                | ND             | mg/L   | 0.0010       | 0.00089                   | 1                        | 02/10/22 08:25 | 02/11/22 19:12 | 7439-92-1  |      |  |
| Nickel                              | ND             | mg/L   | 0.0050       | 0.00071                   | 1                        | 02/10/22 08:25 | 02/11/22 19:12 | 7440-02-0  |      |  |
| Selenium                            | ND             | mg/L   | 0.0050       | 0.0014                    | 1                        | 02/10/22 08:25 | 02/11/22 19:12 | 7782-49-2  |      |  |
| Silver                              | ND             | mg/L   | 0.0050       | 0.00044                   | 1                        | 02/10/22 08:25 | 02/11/22 19:12 | 7440-22-4  |      |  |
| Thallium                            | ND             | mg/L   | 0.0010       | 0.00018                   | 1                        | 02/10/22 08:25 | 02/11/22 19:12 | 7440-28-0  |      |  |
| Vanadium                            | ND             | mg/L   | 0.010        | 0.0019                    | 1                        | 02/10/22 08:25 | 02/11/22 19:12 | 7440-62-2  |      |  |
| <b>7470 Mercury</b>                 |                | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |  |
| Mercury                             | ND             | mg/L   | 0.00020      | 0.00013                   | 1                        | 02/08/22 10:20 | 02/08/22 15:32 | 7439-97-6  |      |  |
| <b>2540C Total Dissolved Solids</b> |                | Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |              |                           |                          |                |                |            |      |  |
| Total Dissolved Solids              | ND             | mg/L   | 10.0         | 10.0                      | 1                        |                | 02/01/22 14:08 |            |      |  |
| <b>2320B Alkalinity</b>             |                | Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |              |                           |                          |                |                |            |      |  |
| Alkalinity, Total as CaCO3          | ND             | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/03/22 17:41 |            |      |  |
| Alkalinity,Bicarbonate (CaCO3)      | ND             | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/03/22 17:41 |            |      |  |
| Alkalinity,Carbonate (CaCO3)        | ND             | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/03/22 17:41 |            |      |  |
| <b>300.0 IC Anions 28 Days</b>      |                | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |              |                           |                          |                |                |            |      |  |
| Chloride                            | ND             | mg/L   | 1.0          | 0.60                      | 1                        |                | 02/02/22 01:55 | 16887-00-6 |      |  |
| Fluoride                            | ND             | mg/L   | 0.10         | 0.050                     | 1                        |                | 02/02/22 01:55 | 16984-48-8 |      |  |
| Sulfate                             | ND             | mg/L   | 1.0          | 0.50                      | 1                        |                | 02/02/22 01:55 | 14808-79-8 |      |  |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: GWA-36RA   |          | Lab ID: 92585058005 |              | Collected: 01/26/22 10:35 |    | Received: 01/28/22 09:30 |                | Matrix: Water |      |
|--|----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results  | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |          |                     |              |                           |    |                          |                |               |      |
| Performed by   | CUSTOMER |                     |              |                           | 1  |                          | 01/28/22 14:44 |               |      |
| pH   | 7.01     | Std. Units          |              |                           | 1  |                          | 01/28/22 14:44 |               |      |
| <b>6010D ATL ICP</b>   |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |          |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND       | mg/L                | 0.020        | 0.0085                    | 1  | 02/05/22 08:33           | 02/07/22 21:18 | 7440-66-6     |      |
| Calcium  | 41.0     | mg/L                | 1.0          | 0.12                      | 1  | 02/05/22 08:33           | 02/07/22 21:18 | 7440-70-2     |      |
| Potassium  | 1.1      | mg/L                | 0.20         | 0.15                      | 1  | 02/05/22 08:33           | 02/07/22 21:18 | 7440-09-7     |      |
| Sodium   | 2.0      | mg/L                | 1.0          | 0.58                      | 1  | 02/05/22 08:33           | 02/07/22 21:18 | 7440-23-5     |      |
| Magnesium  | 21.4     | mg/L                | 0.050        | 0.012                     | 1  | 02/05/22 08:33           | 02/07/22 21:18 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |          |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND       | mg/L                | 0.0030       | 0.00078                   | 1  | 02/10/22 08:25           | 02/11/22 19:18 | 7440-36-0     |      |
| Arsenic  | ND       | mg/L                | 0.0050       | 0.0011                    | 1  | 02/10/22 08:25           | 02/11/22 19:18 | 7440-38-2     |      |
| Barium   | 0.035    | mg/L                | 0.0050       | 0.00067                   | 1  | 02/10/22 08:25           | 02/11/22 19:18 | 7440-39-3     |      |
| Beryllium  | ND       | mg/L                | 0.00050      | 0.000054                  | 1  | 02/10/22 08:25           | 02/11/22 19:18 | 7440-41-7     |      |
| Boron  | 0.012J   | mg/L                | 0.040        | 0.0086                    | 1  | 02/10/22 08:25           | 02/11/22 19:18 | 7440-42-8     |      |
| Cadmium  | ND       | mg/L                | 0.00050      | 0.00011                   | 1  | 02/10/22 08:25           | 02/11/22 19:18 | 7440-43-9     |      |
| Chromium   | ND       | mg/L                | 0.0050       | 0.0011                    | 1  | 02/10/22 08:25           | 02/11/22 19:18 | 7440-47-3     |      |
| Cobalt   | ND       | mg/L                | 0.0050       | 0.00039                   | 1  | 02/10/22 08:25           | 02/11/22 19:18 | 7440-48-4     |      |
| Copper   | ND       | mg/L                | 0.0050       | 0.00050                   | 1  | 02/10/22 08:25           | 02/11/22 19:18 | 7440-50-8     |      |
| Lead   | ND       | mg/L                | 0.0010       | 0.00089                   | 1  | 02/10/22 08:25           | 02/11/22 19:18 | 7439-92-1     |      |
| Nickel   | ND       | mg/L                | 0.0050       | 0.00071                   | 1  | 02/10/22 08:25           | 02/11/22 19:18 | 7440-02-0     |      |
| Selenium   | ND       | mg/L                | 0.0050       | 0.0014                    | 1  | 02/10/22 08:25           | 02/11/22 19:18 | 7782-49-2     |      |
| Silver   | ND       | mg/L                | 0.0050       | 0.00044                   | 1  | 02/10/22 08:25           | 02/11/22 19:18 | 7440-22-4     |      |
| Thallium   | ND       | mg/L                | 0.0010       | 0.00018                   | 1  | 02/10/22 08:25           | 02/11/22 19:18 | 7440-28-0     |      |
| Vanadium   | ND       | mg/L                | 0.010        | 0.0019                    | 1  | 02/10/22 08:25           | 02/11/22 19:18 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |          |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND       | mg/L                | 0.00020      | 0.00013                   | 1  | 02/08/22 10:20           | 02/08/22 15:35 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |          |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | 184      | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/02/22 17:22 |               |      |
| <b>2320B Alkalinity</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |          |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3   | 182      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/03/22 22:13 |               |      |
| Alkalinity,Bicarbonate (CaCO3)   | 182      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/03/22 22:13 |               |      |
| Alkalinity,Carbonate (CaCO3)   | ND       | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/03/22 22:13 |               |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

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**Sample: GWA-36RA**      **Lab ID: 92585058005**      Collected: 01/26/22 10:35      Received: 01/28/22 09:30      Matrix: Water

| Parameters | Results | Units | Report<br>Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|------------|---------|-------|-----------------|-----|----|----------|----------|---------|------|
|------------|---------|-------|-----------------|-----|----|----------|----------|---------|------|

**300.0 IC Anions 28 Days**

Analytical Method: EPA 300.0 Rev 2.1 1993  
Pace Analytical Services - Asheville

|          |     |      |      |       |   |  |                |            |  |
|----------|-----|------|------|-------|---|--|----------------|------------|--|
| Chloride | 2.4 | mg/L | 1.0  | 0.60  | 1 |  | 02/02/22 02:09 | 16887-00-6 |  |
| Fluoride | ND  | mg/L | 0.10 | 0.050 | 1 |  | 02/02/22 02:09 | 16984-48-8 |  |
| Sulfate  | 7.5 | mg/L | 1.0  | 0.50  | 1 |  | 02/02/22 02:09 | 14808-79-8 |  |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

**Sample: GWA-37**      **Lab ID: 92585058006**      Collected: 01/26/22 13:10      Received: 01/28/22 09:30      Matrix: Water

| Parameters  | Results         | Units      | Report  |          |    | Prepared       | Analyzed       | CAS No.   | Qual |
|---|-----------------|------------|---------|----------|----|----------------|----------------|-----------|------|
|   |                 |            | Limit   | MDL      | DF |                |                |           |      |
| <b>Field Data</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte   |                 |            |         |          |    |                |                |           |      |
| Performed by  | <b>CUSTOMER</b> |            |         |          | 1  |                | 01/28/22 14:44 |           |      |
| pH  | <b>4.69</b>     | Std. Units |         |          | 1  |                | 01/28/22 14:44 |           |      |
| <b>6010D ATL ICP</b>  |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |         |          |    |                |                |           |      |
| Zinc  | ND              | mg/L       | 0.020   | 0.0085   | 1  | 02/05/22 08:33 | 02/07/22 21:23 | 7440-66-6 |      |
| Calcium   | <b>0.70J</b>    | mg/L       | 1.0     | 0.12     | 1  | 02/05/22 08:33 | 02/07/22 21:23 | 7440-70-2 |      |
| Potassium   | <b>0.38</b>     | mg/L       | 0.20    | 0.15     | 1  | 02/05/22 08:33 | 02/07/22 21:23 | 7440-09-7 |      |
| Sodium  | <b>3.1</b>      | mg/L       | 1.0     | 0.58     | 1  | 02/05/22 08:33 | 02/07/22 21:23 | 7440-23-5 |      |
| Magnesium   | <b>0.29</b>     | mg/L       | 0.050   | 0.012    | 1  | 02/05/22 08:33 | 02/07/22 21:23 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |         |          |    |                |                |           |      |
| Antimony  | ND              | mg/L       | 0.0030  | 0.00078  | 1  | 02/10/22 08:25 | 02/11/22 19:36 | 7440-36-0 |      |
| Arsenic   | <b>0.0019J</b>  | mg/L       | 0.0050  | 0.0011   | 1  | 02/10/22 08:25 | 02/11/22 19:36 | 7440-38-2 |      |
| Barium  | <b>0.0046J</b>  | mg/L       | 0.0050  | 0.00067  | 1  | 02/10/22 08:25 | 02/11/22 19:36 | 7440-39-3 |      |
| Beryllium   | ND              | mg/L       | 0.00050 | 0.000054 | 1  | 02/10/22 08:25 | 02/11/22 19:36 | 7440-41-7 |      |
| Boron   | ND              | mg/L       | 0.040   | 0.0086   | 1  | 02/10/22 08:25 | 02/11/22 19:36 | 7440-42-8 |      |
| Cadmium   | ND              | mg/L       | 0.00050 | 0.00011  | 1  | 02/10/22 08:25 | 02/11/22 19:36 | 7440-43-9 |      |
| Chromium  | ND              | mg/L       | 0.0050  | 0.0011   | 1  | 02/10/22 08:25 | 02/11/22 19:36 | 7440-47-3 |      |
| Cobalt  | ND              | mg/L       | 0.0050  | 0.00039  | 1  | 02/10/22 08:25 | 02/11/22 19:36 | 7440-48-4 |      |
| Copper  | <b>0.013</b>    | mg/L       | 0.0050  | 0.00050  | 1  | 02/10/22 08:25 | 02/11/22 19:36 | 7440-50-8 |      |
| Lead  | ND              | mg/L       | 0.0010  | 0.00089  | 1  | 02/10/22 08:25 | 02/11/22 19:36 | 7439-92-1 |      |
| Nickel  | <b>0.016</b>    | mg/L       | 0.0050  | 0.00071  | 1  | 02/10/22 08:25 | 02/11/22 19:36 | 7440-02-0 |      |
| Selenium  | ND              | mg/L       | 0.0050  | 0.0014   | 1  | 02/10/22 08:25 | 02/11/22 19:36 | 7782-49-2 |      |
| Silver  | ND              | mg/L       | 0.0050  | 0.00044  | 1  | 02/10/22 08:25 | 02/11/22 19:36 | 7440-22-4 |      |
| Thallium  | ND              | mg/L       | 0.0010  | 0.00018  | 1  | 02/10/22 08:25 | 02/11/22 19:36 | 7440-28-0 |      |
| Vanadium  | ND              | mg/L       | 0.010   | 0.0019   | 1  | 02/10/22 08:25 | 02/11/22 19:36 | 7440-62-2 |      |
| <b>7470 Mercury</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 7470A      Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |         |          |    |                |                |           |      |
| Mercury   | ND              | mg/L       | 0.00020 | 0.00013  | 1  | 02/08/22 10:20 | 02/08/22 15:37 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                                |                 |            |         |          |    |                |                |           |      |
| Total Dissolved Solids  | <b>26.0</b>     | mg/L       | 10.0    | 10.0     | 1  |                | 02/02/22 17:22 |           |      |
| <b>2320B Alkalinity</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis   |                 |            |         |          |    |                |                |           |      |
| Alkalinity, Total as CaCO3  | <b>6.8</b>      | mg/L       | 5.0     | 1.8      | 1  |                | 02/03/22 23:14 |           |      |
| Alkalinity,Bicarbonate (CaCO3)  | <b>6.8</b>      | mg/L       | 5.0     | 1.8      | 1  |                | 02/03/22 23:14 |           |      |
| Alkalinity,Carbonate (CaCO3)  | ND              | mg/L       | 5.0     | 1.8      | 1  |                | 02/03/22 23:14 |           |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

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**Sample: GWA-37**      **Lab ID: 92585058006**      Collected: 01/26/22 13:10      Received: 01/28/22 09:30      Matrix: Water

| Parameters                                | Results      | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|--------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |              |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |              |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |              |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |              |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>0.88J</b> | mg/L  | 1.0    | 0.60  | 1  |          | 02/02/22 02:23 | 16887-00-6 |      |
| Fluoride                                  | ND           | mg/L  | 0.10   | 0.050 | 1  |          | 02/02/22 02:23 | 16984-48-8 |      |
| Sulfate                                   | ND           | mg/L  | 1.0    | 0.50  | 1  |          | 02/02/22 02:23 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: <b>GWA-51RZ</b> Lab ID: <b>92585058007</b> Collected: 01/26/22 12:45      Received: 01/28/22 09:30      Matrix: Water |                 |            |              |          |    |                |                |           |      |
|---|-----------------|------------|--------------|----------|----|----------------|----------------|-----------|------|
| Parameters  | Results         | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte   |                 |            |              |          |    |                |                |           |      |
| Performed by  | <b>CUSTOMER</b> |            |              |          | 1  |                | 01/28/22 14:44 |           |      |
| pH  | <b>7.78</b>     | Std. Units |              |          | 1  |                | 01/28/22 14:44 |           |      |
| <b>6010D ATL ICP</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA           |                 |            |              |          |    |                |                |           |      |
| Zinc  | ND              | mg/L       | 0.020        | 0.0085   | 1  | 02/05/22 08:33 | 02/07/22 21:28 | 7440-66-6 |      |
| Calcium   | <b>50.5</b>     | mg/L       | 1.0          | 0.12     | 1  | 02/05/22 08:33 | 02/07/22 21:28 | 7440-70-2 |      |
| Potassium   | <b>1.0</b>      | mg/L       | 0.20         | 0.15     | 1  | 02/05/22 08:33 | 02/07/22 21:28 | 7440-09-7 |      |
| Sodium  | <b>3.6</b>      | mg/L       | 1.0          | 0.58     | 1  | 02/05/22 08:33 | 02/07/22 21:28 | 7440-23-5 |      |
| Magnesium   | <b>23.5</b>     | mg/L       | 0.050        | 0.012    | 1  | 02/05/22 08:33 | 02/07/22 21:28 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA           |                 |            |              |          |    |                |                |           |      |
| Antimony  | ND              | mg/L       | 0.0030       | 0.00078  | 1  | 02/10/22 08:25 | 02/11/22 19:42 | 7440-36-0 |      |
| Arsenic   | <b>0.0047J</b>  | mg/L       | 0.0050       | 0.0011   | 1  | 02/10/22 08:25 | 02/11/22 19:42 | 7440-38-2 |      |
| Barium  | <b>0.034</b>    | mg/L       | 0.0050       | 0.00067  | 1  | 02/10/22 08:25 | 02/11/22 19:42 | 7440-39-3 |      |
| Beryllium   | ND              | mg/L       | 0.00050      | 0.000054 | 1  | 02/10/22 08:25 | 02/11/22 19:42 | 7440-41-7 |      |
| Boron   | <b>0.0088J</b>  | mg/L       | 0.040        | 0.0086   | 1  | 02/10/22 08:25 | 02/11/22 19:42 | 7440-42-8 |      |
| Cadmium   | ND              | mg/L       | 0.00050      | 0.00011  | 1  | 02/10/22 08:25 | 02/11/22 19:42 | 7440-43-9 |      |
| Chromium  | ND              | mg/L       | 0.0050       | 0.0011   | 1  | 02/10/22 08:25 | 02/11/22 19:42 | 7440-47-3 |      |
| Cobalt  | ND              | mg/L       | 0.0050       | 0.00039  | 1  | 02/10/22 08:25 | 02/11/22 19:42 | 7440-48-4 |      |
| Copper  | ND              | mg/L       | 0.0050       | 0.00050  | 1  | 02/10/22 08:25 | 02/11/22 19:42 | 7440-50-8 |      |
| Lead  | ND              | mg/L       | 0.0010       | 0.00089  | 1  | 02/10/22 08:25 | 02/11/22 19:42 | 7439-92-1 |      |
| Nickel  | ND              | mg/L       | 0.0050       | 0.00071  | 1  | 02/10/22 08:25 | 02/11/22 19:42 | 7440-02-0 |      |
| Selenium  | ND              | mg/L       | 0.0050       | 0.0014   | 1  | 02/10/22 08:25 | 02/11/22 19:42 | 7782-49-2 |      |
| Silver  | ND              | mg/L       | 0.0050       | 0.00044  | 1  | 02/10/22 08:25 | 02/11/22 19:42 | 7440-22-4 |      |
| Thallium  | ND              | mg/L       | 0.0010       | 0.00018  | 1  | 02/10/22 08:25 | 02/11/22 19:42 | 7440-28-0 |      |
| Vanadium  | ND              | mg/L       | 0.010        | 0.0019   | 1  | 02/10/22 08:25 | 02/11/22 19:42 | 7440-62-2 |      |
| <b>7470 Mercury</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 7470A      Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA           |                 |            |              |          |    |                |                |           |      |
| Mercury   | ND              | mg/L       | 0.00020      | 0.00013  | 1  | 02/08/22 10:20 | 02/08/22 15:40 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA  |                 |            |              |          |    |                |                |           |      |
| Total Dissolved Solids  | <b>190</b>      | mg/L       | 10.0         | 10.0     | 1  |                | 02/02/22 17:22 |           |      |
| <b>2320B Alkalinity</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis   |                 |            |              |          |    |                |                |           |      |
| Alkalinity, Total as CaCO3  | <b>184</b>      | mg/L       | 5.0          | 1.8      | 1  |                | 02/03/22 22:21 |           |      |
| Alkalinity,Bicarbonate (CaCO3)  | <b>184</b>      | mg/L       | 5.0          | 1.8      | 1  |                | 02/03/22 22:21 |           |      |
| Alkalinity,Carbonate (CaCO3)  | ND              | mg/L       | 5.0          | 1.8      | 1  |                | 02/03/22 22:21 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

**Sample: GWA-51RZ**      **Lab ID: 92585058007**      Collected: 01/26/22 12:45      Received: 01/28/22 09:30      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 2.9     | mg/L  | 1.0    | 0.60  | 1  |          | 02/02/22 02:37 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/02/22 02:37 | 16984-48-8 |      |
| Sulfate                                   | 22.2    | mg/L  | 1.0    | 0.50  | 1  |          | 02/02/22 02:37 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Sample: <b>GWA-53</b>                                      | Lab ID: <b>92585058008</b> | Collected: 01/26/22 11:45 | Received: 01/28/22 09:30 | Matrix: Water |    |                |                |           |      |
|--|----------------------------|---------------------------|--------------------------|---------------|----|----------------|----------------|-----------|------|
| Parameters   | Results                    | Units                     | Report Limit             | MDL           | DF | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                            |                           |                          |               |    |                |                |           |      |
| Performed by   | <b>CUSTOMER</b>            |                           |                          |               | 1  |                | 01/28/22 14:45 |           |      |
| pH   | <b>7.72</b>                | Std. Units                |                          |               | 1  |                | 01/28/22 14:45 |           |      |
| <b>6010D ATL ICP</b>                                       |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                            |                           |                          |               |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                            |                           |                          |               |    |                |                |           |      |
| Zinc   | ND                         | mg/L                      | 0.020                    | 0.0085        | 1  | 02/05/22 08:33 | 02/07/22 21:33 | 7440-66-6 |      |
| Calcium  | <b>29.6</b>                | mg/L                      | 1.0                      | 0.12          | 1  | 02/05/22 08:33 | 02/07/22 21:33 | 7440-70-2 |      |
| Potassium  | <b>0.68</b>                | mg/L                      | 0.20                     | 0.15          | 1  | 02/05/22 08:33 | 02/07/22 21:33 | 7440-09-7 |      |
| Sodium   | <b>1.7</b>                 | mg/L                      | 1.0                      | 0.58          | 1  | 02/05/22 08:33 | 02/07/22 21:33 | 7440-23-5 |      |
| Magnesium  | <b>16.3</b>                | mg/L                      | 0.050                    | 0.012         | 1  | 02/05/22 08:33 | 02/07/22 21:33 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>                                      |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                            |                           |                          |               |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                            |                           |                          |               |    |                |                |           |      |
| Antimony   | ND                         | mg/L                      | 0.0030                   | 0.00078       | 1  | 02/10/22 08:25 | 02/11/22 19:48 | 7440-36-0 |      |
| Arsenic  | ND                         | mg/L                      | 0.0050                   | 0.0011        | 1  | 02/10/22 08:25 | 02/11/22 19:48 | 7440-38-2 |      |
| Barium   | <b>0.013</b>               | mg/L                      | 0.0050                   | 0.00067       | 1  | 02/10/22 08:25 | 02/11/22 19:48 | 7440-39-3 |      |
| Beryllium  | <b>0.000070J</b>           | mg/L                      | 0.00050                  | 0.000054      | 1  | 02/10/22 08:25 | 02/11/22 19:48 | 7440-41-7 |      |
| Boron  | ND                         | mg/L                      | 0.040                    | 0.0086        | 1  | 02/10/22 08:25 | 02/11/22 19:48 | 7440-42-8 |      |
| Cadmium  | ND                         | mg/L                      | 0.00050                  | 0.00011       | 1  | 02/10/22 08:25 | 02/11/22 19:48 | 7440-43-9 |      |
| Chromium   | ND                         | mg/L                      | 0.0050                   | 0.0011        | 1  | 02/10/22 08:25 | 02/11/22 19:48 | 7440-47-3 |      |
| Cobalt   | ND                         | mg/L                      | 0.0050                   | 0.00039       | 1  | 02/10/22 08:25 | 02/11/22 19:48 | 7440-48-4 |      |
| Copper   | ND                         | mg/L                      | 0.0050                   | 0.00050       | 1  | 02/10/22 08:25 | 02/11/22 19:48 | 7440-50-8 |      |
| Lead   | ND                         | mg/L                      | 0.0010                   | 0.00089       | 1  | 02/10/22 08:25 | 02/11/22 19:48 | 7439-92-1 |      |
| Nickel   | ND                         | mg/L                      | 0.0050                   | 0.00071       | 1  | 02/10/22 08:25 | 02/11/22 19:48 | 7440-02-0 |      |
| Selenium   | ND                         | mg/L                      | 0.0050                   | 0.0014        | 1  | 02/10/22 08:25 | 02/11/22 19:48 | 7782-49-2 |      |
| Silver   | ND                         | mg/L                      | 0.0050                   | 0.00044       | 1  | 02/10/22 08:25 | 02/11/22 19:48 | 7440-22-4 |      |
| Thallium   | ND                         | mg/L                      | 0.0010                   | 0.00018       | 1  | 02/10/22 08:25 | 02/11/22 19:48 | 7440-28-0 |      |
| Vanadium   | ND                         | mg/L                      | 0.010                    | 0.0019        | 1  | 02/10/22 08:25 | 02/11/22 19:48 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                            |                           |                          |               |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                            |                           |                          |               |    |                |                |           |      |
| Mercury  | ND                         | mg/L                      | 0.00020                  | 0.00013       | 1  | 02/08/22 10:20 | 02/08/22 15:43 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>                        |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: SM 2540C-2015                           |                            |                           |                          |               |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                            |                           |                          |               |    |                |                |           |      |
| Total Dissolved Solids                                     | <b>131</b>                 | mg/L                      | 10.0                     | 10.0          | 1  |                | 02/02/22 17:22 |           |      |
| <b>2320B Alkalinity</b>                                    |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: SM 2320B                                |                            |                           |                          |               |    |                |                |           |      |
| Pace Analytical Services - Minneapolis                     |                            |                           |                          |               |    |                |                |           |      |
| Alkalinity, Total as CaCO3                                 | <b>132</b>                 | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/03/22 22:26 |           |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>132</b>                 | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/03/22 22:26 |           |      |
| Alkalinity,Carbonate (CaCO3)                               | ND                         | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/03/22 22:26 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

**Sample: GWA-53**      **Lab ID: 92585058008**      Collected: 01/26/22 11:45      Received: 01/28/22 09:30      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 2.2     | mg/L  | 1.0    | 0.60  | 1  |          | 02/02/22 03:18 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/02/22 03:18 | 16984-48-8 |      |
| Sulfate                                   | 1.4     | mg/L  | 1.0    | 0.50  | 1  |          | 02/02/22 03:18 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: <b>GWA-53R</b>   | Lab ID: <b>92585058009</b> | Collected: 01/26/22 14:20 | Received: 01/28/22 09:30 | Matrix: Water |    |                |                |           |      |
|--|----------------------------|---------------------------|--------------------------|---------------|----|----------------|----------------|-----------|------|
| Parameters   | Results                    | Units                     | Report Limit             | MDL           | DF | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                            |                           |                          |               |    |                |                |           |      |
| Performed by   | <b>CUSTOMER</b>            |                           |                          |               | 1  |                | 01/28/22 14:45 |           |      |
| pH   | <b>7.78</b>                | Std. Units                |                          |               | 1  |                | 01/28/22 14:45 |           |      |
| <b>6010D ATL ICP</b>   |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                            |                           |                          |               |    |                |                |           |      |
| Zinc   | ND                         | mg/L                      | 0.020                    | 0.0085        | 1  | 02/05/22 08:33 | 02/07/22 21:37 | 7440-66-6 |      |
| Calcium  | <b>30.4</b>                | mg/L                      | 1.0                      | 0.12          | 1  | 02/05/22 08:33 | 02/07/22 21:37 | 7440-70-2 |      |
| Potassium  | <b>0.67</b>                | mg/L                      | 0.20                     | 0.15          | 1  | 02/05/22 08:33 | 02/07/22 21:37 | 7440-09-7 |      |
| Sodium   | <b>1.5</b>                 | mg/L                      | 1.0                      | 0.58          | 1  | 02/05/22 08:33 | 02/07/22 21:37 | 7440-23-5 |      |
| Magnesium  | <b>16.5</b>                | mg/L                      | 0.050                    | 0.012         | 1  | 02/05/22 08:33 | 02/07/22 21:37 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                            |                           |                          |               |    |                |                |           |      |
| Antimony   | ND                         | mg/L                      | 0.0030                   | 0.00078       | 1  | 02/10/22 08:25 | 02/11/22 19:53 | 7440-36-0 |      |
| Arsenic  | ND                         | mg/L                      | 0.0050                   | 0.0011        | 1  | 02/10/22 08:25 | 02/11/22 19:53 | 7440-38-2 |      |
| Barium   | <b>0.014</b>               | mg/L                      | 0.0050                   | 0.00067       | 1  | 02/10/22 08:25 | 02/11/22 19:53 | 7440-39-3 |      |
| Beryllium  | ND                         | mg/L                      | 0.00050                  | 0.000054      | 1  | 02/10/22 08:25 | 02/11/22 19:53 | 7440-41-7 |      |
| Boron  | ND                         | mg/L                      | 0.040                    | 0.0086        | 1  | 02/10/22 08:25 | 02/11/22 19:53 | 7440-42-8 |      |
| Cadmium  | ND                         | mg/L                      | 0.00050                  | 0.00011       | 1  | 02/10/22 08:25 | 02/11/22 19:53 | 7440-43-9 |      |
| Chromium   | ND                         | mg/L                      | 0.0050                   | 0.0011        | 1  | 02/10/22 08:25 | 02/11/22 19:53 | 7440-47-3 |      |
| Cobalt   | ND                         | mg/L                      | 0.0050                   | 0.00039       | 1  | 02/10/22 08:25 | 02/11/22 19:53 | 7440-48-4 |      |
| Copper   | ND                         | mg/L                      | 0.0050                   | 0.00050       | 1  | 02/10/22 08:25 | 02/11/22 19:53 | 7440-50-8 |      |
| Lead   | ND                         | mg/L                      | 0.0010                   | 0.00089       | 1  | 02/10/22 08:25 | 02/11/22 19:53 | 7439-92-1 |      |
| Nickel   | ND                         | mg/L                      | 0.0050                   | 0.00071       | 1  | 02/10/22 08:25 | 02/11/22 19:53 | 7440-02-0 |      |
| Selenium   | ND                         | mg/L                      | 0.0050                   | 0.0014        | 1  | 02/10/22 08:25 | 02/11/22 19:53 | 7782-49-2 |      |
| Silver   | ND                         | mg/L                      | 0.0050                   | 0.00044       | 1  | 02/10/22 08:25 | 02/11/22 19:53 | 7440-22-4 |      |
| Thallium   | ND                         | mg/L                      | 0.0010                   | 0.00018       | 1  | 02/10/22 08:25 | 02/11/22 19:53 | 7440-28-0 |      |
| Vanadium   | ND                         | mg/L                      | 0.010                    | 0.0019        | 1  | 02/10/22 08:25 | 02/11/22 19:53 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                            |                           |                          |               |    |                |                |           |      |
| Mercury  | ND                         | mg/L                      | 0.00020                  | 0.00013       | 1  | 02/08/22 10:20 | 02/08/22 15:45 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                            |                           |                          |               |    |                |                |           |      |
| Total Dissolved Solids   | <b>144</b>                 | mg/L                      | 10.0                     | 10.0          | 1  |                | 02/02/22 17:23 |           |      |
| <b>2320B Alkalinity</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                            |                           |                          |               |    |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>139</b>                 | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/03/22 22:39 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>139</b>                 | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/03/22 22:39 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND                         | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/03/22 22:39 |           |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

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**Sample: GWA-53R**      **Lab ID: 92585058009**      Collected: 01/26/22 14:20      Received: 01/28/22 09:30      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 2.4     | mg/L  | 1.0    | 0.60  | 1  |          | 02/02/22 04:00 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/02/22 04:00 | 16984-48-8 |      |
| Sulfate                                   | 1.6     | mg/L  | 1.0    | 0.50  | 1  |          | 02/02/22 04:00 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Sample: GWA-55   |          | Lab ID: 92585058010 |              | Collected: 01/26/22 15:30 |    | Received: 01/28/22 09:30 |                | Matrix: Water |      |
|--|----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results  | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |          |                     |              |                           |    |                          |                |               |      |
| Performed by   | CUSTOMER |                     |              |                           | 1  |                          | 01/28/22 14:45 |               |      |
| pH   | 7.21     | Std. Units          |              |                           | 1  |                          | 01/28/22 14:45 |               |      |
| <b>6010D ATL ICP</b>                                       |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND       | mg/L                | 0.020        | 0.0085                    | 1  | 02/05/22 08:33           | 02/07/22 21:42 | 7440-66-6     |      |
| Calcium  | 53.2     | mg/L                | 1.0          | 0.12                      | 1  | 02/05/22 08:33           | 02/07/22 21:42 | 7440-70-2     |      |
| Potassium  | 1.4      | mg/L                | 0.20         | 0.15                      | 1  | 02/05/22 08:33           | 02/07/22 21:42 | 7440-09-7     |      |
| Sodium   | 0.97J    | mg/L                | 1.0          | 0.58                      | 1  | 02/05/22 08:33           | 02/07/22 21:42 | 7440-23-5     |      |
| Magnesium  | 27.9     | mg/L                | 0.050        | 0.012                     | 1  | 02/05/22 08:33           | 02/07/22 21:42 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>                                      |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND       | mg/L                | 0.0030       | 0.00078                   | 1  | 02/10/22 08:25           | 02/11/22 19:59 | 7440-36-0     |      |
| Arsenic  | ND       | mg/L                | 0.0050       | 0.0011                    | 1  | 02/10/22 08:25           | 02/11/22 19:59 | 7440-38-2     |      |
| Barium   | 0.026    | mg/L                | 0.0050       | 0.00067                   | 1  | 02/10/22 08:25           | 02/11/22 19:59 | 7440-39-3     |      |
| Beryllium  | ND       | mg/L                | 0.00050      | 0.000054                  | 1  | 02/10/22 08:25           | 02/11/22 19:59 | 7440-41-7     |      |
| Boron  | ND       | mg/L                | 0.040        | 0.0086                    | 1  | 02/10/22 08:25           | 02/11/22 19:59 | 7440-42-8     |      |
| Cadmium  | ND       | mg/L                | 0.00050      | 0.00011                   | 1  | 02/10/22 08:25           | 02/11/22 19:59 | 7440-43-9     |      |
| Chromium   | ND       | mg/L                | 0.0050       | 0.0011                    | 1  | 02/10/22 08:25           | 02/11/22 19:59 | 7440-47-3     |      |
| Cobalt   | 0.0035J  | mg/L                | 0.0050       | 0.00039                   | 1  | 02/10/22 08:25           | 02/11/22 19:59 | 7440-48-4     |      |
| Copper   | ND       | mg/L                | 0.0050       | 0.00050                   | 1  | 02/10/22 08:25           | 02/11/22 19:59 | 7440-50-8     |      |
| Lead   | ND       | mg/L                | 0.0010       | 0.00089                   | 1  | 02/10/22 08:25           | 02/11/22 19:59 | 7439-92-1     |      |
| Nickel   | ND       | mg/L                | 0.0050       | 0.00071                   | 1  | 02/10/22 08:25           | 02/11/22 19:59 | 7440-02-0     |      |
| Selenium   | 0.0025J  | mg/L                | 0.0050       | 0.0014                    | 1  | 02/10/22 08:25           | 02/11/22 19:59 | 7782-49-2     |      |
| Silver   | ND       | mg/L                | 0.0050       | 0.00044                   | 1  | 02/10/22 08:25           | 02/11/22 19:59 | 7440-22-4     |      |
| Thallium   | ND       | mg/L                | 0.0010       | 0.00018                   | 1  | 02/10/22 08:25           | 02/11/22 19:59 | 7440-28-0     |      |
| Vanadium   | ND       | mg/L                | 0.010        | 0.0019                    | 1  | 02/10/22 08:25           | 02/11/22 19:59 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND       | mg/L                | 0.00020      | 0.00013                   | 1  | 02/08/22 15:00           | 02/09/22 08:45 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015                           |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | 244      | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/02/22 17:23 |               |      |
| <b>2320B Alkalinity</b>                                    |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B                                |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Minneapolis                     |          |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3                                 | 190      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/03/22 22:44 |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | 190      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/03/22 22:44 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND       | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/03/22 22:44 |               |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

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**Sample: GWA-55**      **Lab ID: 92585058010**      Collected: 01/26/22 15:30      Received: 01/28/22 09:30      Matrix: Water

| Parameters                                | Results     | Units | Report<br>Limit | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|---|-------------|-------|-----------------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>            |             |       |                 |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |             |       |                 |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |             |       |                 |       |    |          |                |            |      |
| Chloride                                  | <b>5.8</b>  | mg/L  | 1.0             | 0.60  | 1  |          | 02/02/22 04:42 | 16887-00-6 |      |
| Fluoride                                  | ND          | mg/L  | 0.10            | 0.050 | 1  |          | 02/02/22 04:42 | 16984-48-8 |      |
| Sulfate                                   | <b>32.5</b> | mg/L  | 1.0             | 0.50  | 1  |          | 02/02/22 04:42 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Sample: GWA-56   |                 | Lab ID: 92585058011 |              | Collected: 01/26/22 16:01 |    | Received: 01/28/22 09:30 |                | Matrix: Water |      |
|--|-----------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                 |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1  |                          | 01/28/22 14:45 |               |      |
| pH   | <b>7.45</b>     | Std. Units          |              |                           | 1  |                          | 01/28/22 14:45 |               |      |
| <b>6010D ATL ICP</b>                                       |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND              | mg/L                | 0.020        | 0.0085                    | 1  | 02/05/22 08:33           | 02/07/22 21:47 | 7440-66-6     |      |
| Calcium  | <b>37.6</b>     | mg/L                | 1.0          | 0.12                      | 1  | 02/05/22 08:33           | 02/07/22 21:47 | 7440-70-2     |      |
| Potassium  | <b>3.6</b>      | mg/L                | 0.20         | 0.15                      | 1  | 02/05/22 08:33           | 02/07/22 21:47 | 7440-09-7     |      |
| Sodium   | <b>39.4</b>     | mg/L                | 1.0          | 0.58                      | 1  | 02/05/22 08:33           | 02/07/22 21:47 | 7440-23-5     |      |
| Magnesium  | <b>22.4</b>     | mg/L                | 0.050        | 0.012                     | 1  | 02/05/22 08:33           | 02/07/22 21:47 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>                                      |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND              | mg/L                | 0.0030       | 0.00078                   | 1  | 02/10/22 08:25           | 02/11/22 20:05 | 7440-36-0     |      |
| Arsenic  | <b>0.0015J</b>  | mg/L                | 0.0050       | 0.0011                    | 1  | 02/10/22 08:25           | 02/11/22 20:05 | 7440-38-2     |      |
| Barium   | <b>0.032</b>    | mg/L                | 0.0050       | 0.00067                   | 1  | 02/10/22 08:25           | 02/11/22 20:05 | 7440-39-3     |      |
| Beryllium  | ND              | mg/L                | 0.00050      | 0.000054                  | 1  | 02/10/22 08:25           | 02/11/22 20:05 | 7440-41-7     |      |
| Boron  | <b>0.014J</b>   | mg/L                | 0.040        | 0.0086                    | 1  | 02/10/22 08:25           | 02/11/22 20:05 | 7440-42-8     |      |
| Cadmium  | ND              | mg/L                | 0.00050      | 0.00011                   | 1  | 02/10/22 08:25           | 02/11/22 20:05 | 7440-43-9     |      |
| Chromium   | ND              | mg/L                | 0.0050       | 0.0011                    | 1  | 02/10/22 08:25           | 02/11/22 20:05 | 7440-47-3     |      |
| Cobalt   | ND              | mg/L                | 0.0050       | 0.00039                   | 1  | 02/10/22 08:25           | 02/11/22 20:05 | 7440-48-4     |      |
| Copper   | ND              | mg/L                | 0.0050       | 0.00050                   | 1  | 02/10/22 08:25           | 02/11/22 20:05 | 7440-50-8     |      |
| Lead   | ND              | mg/L                | 0.0010       | 0.00089                   | 1  | 02/10/22 08:25           | 02/11/22 20:05 | 7439-92-1     |      |
| Nickel   | ND              | mg/L                | 0.0050       | 0.00071                   | 1  | 02/10/22 08:25           | 02/11/22 20:05 | 7440-02-0     |      |
| Selenium   | ND              | mg/L                | 0.0050       | 0.0014                    | 1  | 02/10/22 08:25           | 02/11/22 20:05 | 7782-49-2     |      |
| Silver   | ND              | mg/L                | 0.0050       | 0.00044                   | 1  | 02/10/22 08:25           | 02/11/22 20:05 | 7440-22-4     |      |
| Thallium   | ND              | mg/L                | 0.0010       | 0.00018                   | 1  | 02/10/22 08:25           | 02/11/22 20:05 | 7440-28-0     |      |
| Vanadium   | ND              | mg/L                | 0.010        | 0.0019                    | 1  | 02/10/22 08:25           | 02/11/22 20:05 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND              | mg/L                | 0.00020      | 0.00013                   | 1  | 02/08/22 15:00           | 02/09/22 08:56 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015                           |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | <b>278</b>      | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/02/22 17:23 |               |      |
| <b>2320B Alkalinity</b>                                    |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B                                |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Minneapolis                     |                 |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3                                 | <b>216</b>      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/03/22 22:50 |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>216</b>      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/03/22 22:50 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND              | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/03/22 22:50 |               |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

**Sample: GWA-56**      **Lab ID: 92585058011**      Collected: 01/26/22 16:01      Received: 01/28/22 09:30      Matrix: Water

| Parameters                                | Results       | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |               |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |               |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |               |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |               |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>5.2</b>    | mg/L  | 1.0    | 0.60  | 1  |          | 02/02/22 04:56 | 16887-00-6 |      |
| Fluoride                                  | <b>0.076J</b> | mg/L  | 0.10   | 0.050 | 1  |          | 02/02/22 04:56 | 16984-48-8 |      |
| Sulfate                                   | <b>47.1</b>   | mg/L  | 1.0    | 0.50  | 1  |          | 02/02/22 04:56 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: DUP-1                       |         | Lab ID: 92585058012  |              | Collected: 01/26/22 00:00 | Received: 01/28/22 09:30 | Matrix: Water  |                |            |      |
|-------------------------------------|---------|--|--------------|---------------------------|--------------------------|----------------|----------------|------------|------|
| Parameters                          | Results | Units  | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.    | Qual |
| <b>6010D ATL ICP</b>                |         | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Zinc                                | ND      | mg/L   | 0.020        | 0.0085                    | 1                        | 02/05/22 08:33 | 02/07/22 21:52 | 7440-66-6  |      |
| Calcium                             | 53.7    | mg/L   | 1.0          | 0.12                      | 1                        | 02/05/22 08:33 | 02/07/22 21:52 | 7440-70-2  |      |
| Potassium                           | 1.5     | mg/L   | 0.20         | 0.15                      | 1                        | 02/05/22 08:33 | 02/07/22 21:52 | 7440-09-7  |      |
| Sodium                              | 1.0     | mg/L   | 1.0          | 0.58                      | 1                        | 02/05/22 08:33 | 02/07/22 21:52 | 7440-23-5  |      |
| Magnesium                           | 28.3    | mg/L   | 0.050        | 0.012                     | 1                        | 02/05/22 08:33 | 02/07/22 21:52 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>               |         | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Antimony                            | ND      | mg/L   | 0.0030       | 0.00078                   | 1                        | 02/10/22 08:25 | 02/11/22 20:11 | 7440-36-0  |      |
| Arsenic                             | 0.0020J | mg/L   | 0.0050       | 0.0011                    | 1                        | 02/10/22 08:25 | 02/11/22 20:11 | 7440-38-2  |      |
| Barium                              | 0.029   | mg/L   | 0.0050       | 0.00067                   | 1                        | 02/10/22 08:25 | 02/11/22 20:11 | 7440-39-3  |      |
| Beryllium                           | ND      | mg/L   | 0.00050      | 0.000054                  | 1                        | 02/10/22 08:25 | 02/11/22 20:11 | 7440-41-7  |      |
| Boron                               | ND      | mg/L   | 0.040        | 0.0086                    | 1                        | 02/10/22 08:25 | 02/11/22 20:11 | 7440-42-8  |      |
| Cadmium                             | ND      | mg/L   | 0.00050      | 0.00011                   | 1                        | 02/10/22 08:25 | 02/11/22 20:11 | 7440-43-9  |      |
| Chromium                            | ND      | mg/L   | 0.0050       | 0.0011                    | 1                        | 02/10/22 08:25 | 02/11/22 20:11 | 7440-47-3  |      |
| Cobalt                              | 0.0039J | mg/L   | 0.0050       | 0.00039                   | 1                        | 02/10/22 08:25 | 02/11/22 20:11 | 7440-48-4  |      |
| Copper                              | ND      | mg/L   | 0.0050       | 0.00050                   | 1                        | 02/10/22 08:25 | 02/11/22 20:11 | 7440-50-8  |      |
| Lead                                | ND      | mg/L   | 0.0010       | 0.00089                   | 1                        | 02/10/22 08:25 | 02/11/22 20:11 | 7439-92-1  |      |
| Nickel                              | ND      | mg/L   | 0.0050       | 0.00071                   | 1                        | 02/10/22 08:25 | 02/11/22 20:11 | 7440-02-0  |      |
| Selenium                            | 0.0025J | mg/L   | 0.0050       | 0.0014                    | 1                        | 02/10/22 08:25 | 02/11/22 20:11 | 7782-49-2  |      |
| Silver                              | ND      | mg/L   | 0.0050       | 0.00044                   | 1                        | 02/10/22 08:25 | 02/11/22 20:11 | 7440-22-4  |      |
| Thallium                            | ND      | mg/L   | 0.0010       | 0.00018                   | 1                        | 02/10/22 08:25 | 02/11/22 20:11 | 7440-28-0  |      |
| Vanadium                            | ND      | mg/L   | 0.010        | 0.0019                    | 1                        | 02/10/22 08:25 | 02/11/22 20:11 | 7440-62-2  |      |
| <b>7470 Mercury</b>                 |         | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Mercury                             | ND      | mg/L   | 0.00020      | 0.00013                   | 1                        | 02/08/22 15:00 | 02/09/22 08:58 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b> |         | Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |              |                           |                          |                |                |            |      |
| Total Dissolved Solids              | 226     | mg/L   | 10.0         | 10.0                      | 1                        |                | 02/02/22 17:23 |            |      |
| <b>2320B Alkalinity</b>             |         | Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |              |                           |                          |                |                |            |      |
| Alkalinity, Total as CaCO3          | 193     | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/03/22 22:57 |            |      |
| Alkalinity,Bicarbonate (CaCO3)      | 193     | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/03/22 22:57 |            |      |
| Alkalinity,Carbonate (CaCO3)        | ND      | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/03/22 22:57 |            |      |
| <b>300.0 IC Anions 28 Days</b>      |         | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |              |                           |                          |                |                |            |      |
| Chloride                            | 5.8     | mg/L   | 1.0          | 0.60                      | 1                        |                | 02/02/22 05:10 | 16887-00-6 |      |
| Fluoride                            | ND      | mg/L   | 0.10         | 0.050                     | 1                        |                | 02/02/22 05:10 | 16984-48-8 |      |
| Sulfate                             | 32.7    | mg/L   | 1.0          | 0.50                      | 1                        |                | 02/02/22 05:10 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

**Sample: FB-2**      **Lab ID: 92585058013**      Collected: 01/26/22 16:15      Received: 01/28/22 09:30      Matrix: Water

| Parameters  | Results        | Units | Report  |          |    | Prepared       | Analyzed       | CAS No.    | Qual |
|---|----------------|-------|---------|----------|----|----------------|----------------|------------|------|
|   |                |       | Limit   | MDL      | DF |                |                |            |      |
| <b>6010D ATL ICP</b>  |                |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 6010D    Preparation Method: EPA 3010A |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |                |       |         |          |    |                |                |            |      |
| Zinc  | ND             | mg/L  | 0.020   | 0.0085   | 1  | 02/10/22 08:25 | 02/10/22 16:39 | 7440-66-6  |      |
| Potassium   | ND             | mg/L  | 0.20    | 0.15     | 1  | 02/10/22 08:25 | 02/10/22 16:39 | 7440-09-7  |      |
| Sodium  | ND             | mg/L  | 1.0     | 0.58     | 1  | 02/10/22 08:25 | 02/10/22 16:39 | 7440-23-5  |      |
| Calcium   | ND             | mg/L  | 1.0     | 0.12     | 1  | 02/10/22 08:25 | 02/10/22 16:39 | 7440-70-2  |      |
| Magnesium   | ND             | mg/L  | 0.050   | 0.012    | 1  | 02/10/22 08:25 | 02/10/22 16:39 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>   |                |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 6020B    Preparation Method: EPA 3005A |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |                |       |         |          |    |                |                |            |      |
| Antimony  | ND             | mg/L  | 0.0030  | 0.00078  | 1  | 02/10/22 08:25 | 02/11/22 20:17 | 7440-36-0  |      |
| Arsenic   | <b>0.0013J</b> | mg/L  | 0.0050  | 0.0011   | 1  | 02/10/22 08:25 | 02/11/22 20:17 | 7440-38-2  |      |
| Barium  | ND             | mg/L  | 0.0050  | 0.00067  | 1  | 02/10/22 08:25 | 02/11/22 20:17 | 7440-39-3  |      |
| Beryllium   | ND             | mg/L  | 0.00050 | 0.000054 | 1  | 02/10/22 08:25 | 02/11/22 20:17 | 7440-41-7  |      |
| Boron   | ND             | mg/L  | 0.040   | 0.0086   | 1  | 02/10/22 08:25 | 02/11/22 20:17 | 7440-42-8  |      |
| Cadmium   | ND             | mg/L  | 0.00050 | 0.00011  | 1  | 02/10/22 08:25 | 02/11/22 20:17 | 7440-43-9  |      |
| Chromium  | ND             | mg/L  | 0.0050  | 0.0011   | 1  | 02/10/22 08:25 | 02/11/22 20:17 | 7440-47-3  |      |
| Cobalt  | ND             | mg/L  | 0.0050  | 0.00039  | 1  | 02/10/22 08:25 | 02/11/22 20:17 | 7440-48-4  |      |
| Copper  | ND             | mg/L  | 0.0050  | 0.00050  | 1  | 02/10/22 08:25 | 02/11/22 20:17 | 7440-50-8  |      |
| Lead  | ND             | mg/L  | 0.0010  | 0.00089  | 1  | 02/10/22 08:25 | 02/11/22 20:17 | 7439-92-1  |      |
| Nickel  | ND             | mg/L  | 0.0050  | 0.00071  | 1  | 02/10/22 08:25 | 02/11/22 20:17 | 7440-02-0  |      |
| Selenium  | ND             | mg/L  | 0.0050  | 0.0014   | 1  | 02/10/22 08:25 | 02/11/22 20:17 | 7782-49-2  |      |
| Silver  | ND             | mg/L  | 0.0050  | 0.00044  | 1  | 02/10/22 08:25 | 02/11/22 20:17 | 7440-22-4  |      |
| Thallium  | ND             | mg/L  | 0.0010  | 0.00018  | 1  | 02/10/22 08:25 | 02/11/22 20:17 | 7440-28-0  |      |
| Vanadium  | ND             | mg/L  | 0.010   | 0.0019   | 1  | 02/10/22 08:25 | 02/11/22 20:17 | 7440-62-2  |      |
| <b>7470 Mercury</b>   |                |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 7470A    Preparation Method: EPA 7470A |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |                |       |         |          |    |                |                |            |      |
| Mercury   | ND             | mg/L  | 0.00020 | 0.00013  | 1  | 02/08/22 15:00 | 02/09/22 09:01 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b>                           |                |       |         |          |    |                |                |            |      |
| Analytical Method: SM 2540C-2015                              |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |                |       |         |          |    |                |                |            |      |
| Total Dissolved Solids  | ND             | mg/L  | 10.0    | 10.0     | 1  |                | 02/02/22 17:23 |            |      |
| <b>2320B Alkalinity</b>                                       |                |       |         |          |    |                |                |            |      |
| Analytical Method: SM 2320B                                   |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Minneapolis                        |                |       |         |          |    |                |                |            |      |
| Alkalinity, Total as CaCO3                                    | ND             | mg/L  | 5.0     | 1.8      | 1  |                | 02/03/22 23:03 |            |      |
| Alkalinity,Bicarbonate (CaCO3)                                | ND             | mg/L  | 5.0     | 1.8      | 1  |                | 02/03/22 23:03 |            |      |
| Alkalinity,Carbonate (CaCO3)                                  | ND             | mg/L  | 5.0     | 1.8      | 1  |                | 02/03/22 23:03 |            |      |
| <b>300.0 IC Anions 28 Days</b>                                |                |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                     |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Asheville                          |                |       |         |          |    |                |                |            |      |
| Chloride  | ND             | mg/L  | 1.0     | 0.60     | 1  |                | 02/02/22 05:24 | 16887-00-6 |      |
| Fluoride  | ND             | mg/L  | 0.10    | 0.050    | 1  |                | 02/02/22 05:24 | 16984-48-8 |      |
| Sulfate   | ND             | mg/L  | 1.0     | 0.50     | 1  |                | 02/02/22 05:24 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Sample: EB-1                        |         | Lab ID: 92585058014  |              | Collected: 01/26/22 16:10 | Received: 01/28/22 09:30 | Matrix: Water  |                |            |      |
|-------------------------------------|---------|--|--------------|---------------------------|--------------------------|----------------|----------------|------------|------|
| Parameters                          | Results | Units  | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.    | Qual |
| <b>6010D ATL ICP</b>                |         | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Zinc                                | ND      | mg/L   | 0.020        | 0.0085                    | 1                        | 02/10/22 08:25 | 02/10/22 16:44 | 7440-66-6  |      |
| Potassium                           | ND      | mg/L   | 0.20         | 0.15                      | 1                        | 02/10/22 08:25 | 02/10/22 16:44 | 7440-09-7  |      |
| Sodium                              | ND      | mg/L   | 1.0          | 0.58                      | 1                        | 02/10/22 08:25 | 02/10/22 16:44 | 7440-23-5  |      |
| Calcium                             | ND      | mg/L   | 1.0          | 0.12                      | 1                        | 02/10/22 08:25 | 02/10/22 16:44 | 7440-70-2  |      |
| Magnesium                           | ND      | mg/L   | 0.050        | 0.012                     | 1                        | 02/10/22 08:25 | 02/10/22 16:44 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>               |         | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Antimony                            | ND      | mg/L   | 0.0030       | 0.00078                   | 1                        | 02/10/22 08:25 | 02/11/22 20:23 | 7440-36-0  |      |
| Arsenic                             | ND      | mg/L   | 0.0050       | 0.0011                    | 1                        | 02/10/22 08:25 | 02/11/22 20:23 | 7440-38-2  |      |
| Barium                              | ND      | mg/L   | 0.0050       | 0.00067                   | 1                        | 02/10/22 08:25 | 02/11/22 20:23 | 7440-39-3  |      |
| Beryllium                           | ND      | mg/L   | 0.00050      | 0.000054                  | 1                        | 02/10/22 08:25 | 02/11/22 20:23 | 7440-41-7  |      |
| Boron                               | ND      | mg/L   | 0.040        | 0.0086                    | 1                        | 02/10/22 08:25 | 02/11/22 20:23 | 7440-42-8  |      |
| Cadmium                             | ND      | mg/L   | 0.00050      | 0.00011                   | 1                        | 02/10/22 08:25 | 02/11/22 20:23 | 7440-43-9  |      |
| Chromium                            | ND      | mg/L   | 0.0050       | 0.0011                    | 1                        | 02/10/22 08:25 | 02/11/22 20:23 | 7440-47-3  |      |
| Cobalt                              | ND      | mg/L   | 0.0050       | 0.00039                   | 1                        | 02/10/22 08:25 | 02/11/22 20:23 | 7440-48-4  |      |
| Copper                              | ND      | mg/L   | 0.0050       | 0.00050                   | 1                        | 02/10/22 08:25 | 02/11/22 20:23 | 7440-50-8  |      |
| Lead                                | ND      | mg/L   | 0.0010       | 0.00089                   | 1                        | 02/10/22 08:25 | 02/11/22 20:23 | 7439-92-1  |      |
| Nickel                              | ND      | mg/L   | 0.0050       | 0.00071                   | 1                        | 02/10/22 08:25 | 02/11/22 20:23 | 7440-02-0  |      |
| Selenium                            | ND      | mg/L   | 0.0050       | 0.0014                    | 1                        | 02/10/22 08:25 | 02/11/22 20:23 | 7782-49-2  |      |
| Silver                              | ND      | mg/L   | 0.0050       | 0.00044                   | 1                        | 02/10/22 08:25 | 02/11/22 20:23 | 7440-22-4  |      |
| Thallium                            | ND      | mg/L   | 0.0010       | 0.00018                   | 1                        | 02/10/22 08:25 | 02/11/22 20:23 | 7440-28-0  |      |
| Vanadium                            | ND      | mg/L   | 0.010        | 0.0019                    | 1                        | 02/10/22 08:25 | 02/11/22 20:23 | 7440-62-2  |      |
| <b>7470 Mercury</b>                 |         | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Mercury                             | ND      | mg/L   | 0.00020      | 0.00013                   | 1                        | 02/08/22 15:00 | 02/09/22 09:09 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b> |         | Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |              |                           |                          |                |                |            |      |
| Total Dissolved Solids              | ND      | mg/L   | 10.0         | 10.0                      | 1                        |                | 02/02/22 17:42 |            |      |
| <b>2320B Alkalinity</b>             |         | Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |              |                           |                          |                |                |            |      |
| Alkalinity, Total as CaCO3          | ND      | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/03/22 23:07 |            |      |
| Alkalinity,Bicarbonate (CaCO3)      | ND      | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/03/22 23:07 |            |      |
| Alkalinity,Carbonate (CaCO3)        | ND      | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/03/22 23:07 |            |      |
| <b>300.0 IC Anions 28 Days</b>      |         | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |              |                           |                          |                |                |            |      |
| Chloride                            | ND      | mg/L   | 1.0          | 0.60                      | 1                        |                | 02/02/22 06:06 | 16887-00-6 |      |
| Fluoride                            | ND      | mg/L   | 0.10         | 0.050                     | 1                        |                | 02/02/22 06:06 | 16984-48-8 |      |
| Sulfate                             | ND      | mg/L   | 1.0          | 0.50                      | 1                        |                | 02/02/22 06:06 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: GWC-18R  |           | Lab ID: 92585058015 |              | Collected: 01/27/22 13:06 |    | Received: 01/28/22 09:30 |                | Matrix: Water |      |
|--|-----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results   | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |           |                     |              |                           |    |                          |                |               |      |
| Performed by   | CUSTOMER  |                     |              |                           | 1  |                          | 01/28/22 14:46 |               |      |
| pH   | 7.76      | Std. Units          |              |                           | 1  |                          | 01/28/22 14:46 |               |      |
| <b>6010D ATL ICP</b>   |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |           |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND        | mg/L                | 0.020        | 0.0085                    | 1  | 02/10/22 08:25           | 02/10/22 17:15 | 7440-66-6     |      |
| Potassium  | 0.63      | mg/L                | 0.20         | 0.15                      | 1  | 02/10/22 08:25           | 02/10/22 17:15 | 7440-09-7     |      |
| Sodium   | 1.4       | mg/L                | 1.0          | 0.58                      | 1  | 02/10/22 08:25           | 02/10/22 17:15 | 7440-23-5     |      |
| Calcium  | 29.3      | mg/L                | 1.0          | 0.12                      | 1  | 02/10/22 08:25           | 02/10/22 17:15 | 7440-70-2     | M1   |
| Magnesium  | 16.4      | mg/L                | 0.050        | 0.012                     | 1  | 02/10/22 08:25           | 02/10/22 17:15 | 7439-95-4     | M1   |
| <b>6020 MET ICPMS</b>  |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |           |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND        | mg/L                | 0.0030       | 0.00078                   | 1  | 02/10/22 08:25           | 02/11/22 20:29 | 7440-36-0     |      |
| Arsenic  | ND        | mg/L                | 0.0050       | 0.0011                    | 1  | 02/10/22 08:25           | 02/11/22 20:29 | 7440-38-2     |      |
| Barium   | 0.014     | mg/L                | 0.0050       | 0.00067                   | 1  | 02/10/22 08:25           | 02/11/22 20:29 | 7440-39-3     |      |
| Beryllium  | 0.000055J | mg/L                | 0.00050      | 0.000054                  | 1  | 02/10/22 08:25           | 02/11/22 20:29 | 7440-41-7     |      |
| Boron  | ND        | mg/L                | 0.040        | 0.0086                    | 1  | 02/10/22 08:25           | 02/11/22 20:29 | 7440-42-8     |      |
| Cadmium  | ND        | mg/L                | 0.00050      | 0.00011                   | 1  | 02/10/22 08:25           | 02/11/22 20:29 | 7440-43-9     |      |
| Chromium   | 0.0015J   | mg/L                | 0.0050       | 0.0011                    | 1  | 02/10/22 08:25           | 02/11/22 20:29 | 7440-47-3     |      |
| Cobalt   | ND        | mg/L                | 0.0050       | 0.00039                   | 1  | 02/10/22 08:25           | 02/11/22 20:29 | 7440-48-4     |      |
| Copper   | ND        | mg/L                | 0.0050       | 0.00050                   | 1  | 02/10/22 08:25           | 02/11/22 20:29 | 7440-50-8     |      |
| Lead   | ND        | mg/L                | 0.0010       | 0.00089                   | 1  | 02/10/22 08:25           | 02/11/22 20:29 | 7439-92-1     |      |
| Nickel   | ND        | mg/L                | 0.0050       | 0.00071                   | 1  | 02/10/22 08:25           | 02/11/22 20:29 | 7440-02-0     |      |
| Selenium   | ND        | mg/L                | 0.0050       | 0.0014                    | 1  | 02/10/22 08:25           | 02/11/22 20:29 | 7782-49-2     |      |
| Silver   | ND        | mg/L                | 0.0050       | 0.00044                   | 1  | 02/10/22 08:25           | 02/11/22 20:29 | 7440-22-4     |      |
| Thallium   | ND        | mg/L                | 0.0010       | 0.00018                   | 1  | 02/10/22 08:25           | 02/11/22 20:29 | 7440-28-0     |      |
| Vanadium   | ND        | mg/L                | 0.010        | 0.0019                    | 1  | 02/10/22 08:25           | 02/11/22 20:29 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |           |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND        | mg/L                | 0.00020      | 0.00013                   | 1  | 02/08/22 15:00           | 02/09/22 09:12 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |           |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | 146       | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/02/22 17:43 |               |      |
| <b>2320B Alkalinity</b>  |           |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |           |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3   | 141       | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/04/22 15:23 |               |      |
| Alkalinity,Bicarbonate (CaCO3)   | 141       | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/04/22 15:23 |               |      |
| Alkalinity,Carbonate (CaCO3)   | ND        | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/04/22 15:23 |               |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

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**Sample: GWC-18R**      **Lab ID: 92585058015**      Collected: 01/27/22 13:06      Received: 01/28/22 09:30      Matrix: Water

| Parameters                                | Results    | Units | Report<br>Limit | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|---|------------|-------|-----------------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>            |            |       |                 |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |            |       |                 |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |            |       |                 |       |    |          |                |            |      |
| Chloride                                  | <b>2.3</b> | mg/L  | 1.0             | 0.60  | 1  |          | 02/02/22 06:20 | 16887-00-6 |      |
| Fluoride                                  | ND         | mg/L  | 0.10            | 0.050 | 1  |          | 02/02/22 06:20 | 16984-48-8 |      |
| Sulfate                                   | <b>2.1</b> | mg/L  | 1.0             | 0.50  | 1  |          | 02/02/22 06:20 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Sample: <b>GWC-19R</b>                                     |                 | Lab ID: <b>92585058016</b> |              | Collected: 01/27/22 14:20 | Received: 01/28/22 09:30 | Matrix: Water  |                |           |      |
|--|-----------------|----------------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results         | Units                      | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                 |                            |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |                            |              |                           | 1                        |                | 01/28/22 14:46 |           |      |
| pH   | <b>7.74</b>     | Std. Units                 |              |                           | 1                        |                | 01/28/22 14:46 |           |      |
| <b>6010D ATL ICP</b>                                       |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                 |                            |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                            |              |                           |                          |                |                |           |      |
| Zinc   | ND              | mg/L                       | 0.020        | 0.0085                    | 1                        | 02/10/22 08:25 | 02/10/22 17:35 | 7440-66-6 |      |
| Potassium  | <b>0.76</b>     | mg/L                       | 0.20         | 0.15                      | 1                        | 02/10/22 08:25 | 02/10/22 17:35 | 7440-09-7 |      |
| Sodium   | <b>1.3</b>      | mg/L                       | 1.0          | 0.58                      | 1                        | 02/10/22 08:25 | 02/10/22 17:35 | 7440-23-5 |      |
| Calcium  | <b>33.2</b>     | mg/L                       | 1.0          | 0.12                      | 1                        | 02/10/22 08:25 | 02/10/22 17:35 | 7440-70-2 |      |
| Magnesium  | <b>18.3</b>     | mg/L                       | 0.050        | 0.012                     | 1                        | 02/10/22 08:25 | 02/10/22 17:35 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>                                      |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                 |                            |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                            |              |                           |                          |                |                |           |      |
| Antimony   | ND              | mg/L                       | 0.0030       | 0.00078                   | 1                        | 02/10/22 08:25 | 02/11/22 20:47 | 7440-36-0 |      |
| Arsenic  | ND              | mg/L                       | 0.0050       | 0.0011                    | 1                        | 02/10/22 08:25 | 02/11/22 20:47 | 7440-38-2 |      |
| Barium   | <b>0.016</b>    | mg/L                       | 0.0050       | 0.00067                   | 1                        | 02/10/22 08:25 | 02/11/22 20:47 | 7440-39-3 |      |
| Beryllium  | ND              | mg/L                       | 0.00050      | 0.000054                  | 1                        | 02/10/22 08:25 | 02/11/22 20:47 | 7440-41-7 |      |
| Boron  | ND              | mg/L                       | 0.040        | 0.0086                    | 1                        | 02/10/22 08:25 | 02/11/22 20:47 | 7440-42-8 |      |
| Cadmium  | ND              | mg/L                       | 0.00050      | 0.00011                   | 1                        | 02/10/22 08:25 | 02/11/22 20:47 | 7440-43-9 |      |
| Chromium   | ND              | mg/L                       | 0.0050       | 0.0011                    | 1                        | 02/10/22 08:25 | 02/11/22 20:47 | 7440-47-3 |      |
| Cobalt   | ND              | mg/L                       | 0.0050       | 0.00039                   | 1                        | 02/10/22 08:25 | 02/11/22 20:47 | 7440-48-4 |      |
| Copper   | ND              | mg/L                       | 0.0050       | 0.00050                   | 1                        | 02/10/22 08:25 | 02/11/22 20:47 | 7440-50-8 |      |
| Lead   | ND              | mg/L                       | 0.0010       | 0.00089                   | 1                        | 02/10/22 08:25 | 02/11/22 20:47 | 7439-92-1 |      |
| Nickel   | ND              | mg/L                       | 0.0050       | 0.00071                   | 1                        | 02/10/22 08:25 | 02/11/22 20:47 | 7440-02-0 |      |
| Selenium   | ND              | mg/L                       | 0.0050       | 0.0014                    | 1                        | 02/10/22 08:25 | 02/11/22 20:47 | 7782-49-2 |      |
| Silver   | ND              | mg/L                       | 0.0050       | 0.00044                   | 1                        | 02/10/22 08:25 | 02/11/22 20:47 | 7440-22-4 |      |
| Thallium   | ND              | mg/L                       | 0.0010       | 0.00018                   | 1                        | 02/10/22 08:25 | 02/11/22 20:47 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L                       | 0.010        | 0.0019                    | 1                        | 02/10/22 08:25 | 02/11/22 20:47 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                 |                            |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                            |              |                           |                          |                |                |           |      |
| Mercury  | ND              | mg/L                       | 0.00020      | 0.00013                   | 1                        | 02/08/22 15:00 | 02/09/22 09:14 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>                        |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2540C-2015                           |                 |                            |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                            |              |                           |                          |                |                |           |      |
| Total Dissolved Solids                                     | <b>149</b>      | mg/L                       | 10.0         | 10.0                      | 1                        |                | 02/02/22 17:43 |           |      |
| <b>2320B Alkalinity</b>                                    |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2320B                                |                 |                            |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Minneapolis                     |                 |                            |              |                           |                          |                |                |           |      |
| Alkalinity, Total as CaCO3                                 | <b>149</b>      | mg/L                       | 5.0          | 1.8                       | 1                        |                | 02/04/22 15:29 |           |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>149</b>      | mg/L                       | 5.0          | 1.8                       | 1                        |                | 02/04/22 15:29 |           |      |
| Alkalinity,Carbonate (CaCO3)                               | ND              | mg/L                       | 5.0          | 1.8                       | 1                        |                | 02/04/22 15:29 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

**Sample: GWC-19R**      **Lab ID: 92585058016**      Collected: 01/27/22 14:20      Received: 01/28/22 09:30      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 2.5     | mg/L  | 1.0    | 0.60  | 1  |          | 02/02/22 06:34 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/02/22 06:34 | 16984-48-8 |      |
| Sulfate                                   | 3.9     | mg/L  | 1.0    | 0.50  | 1  |          | 02/02/22 06:34 | 14808-79-8 |      |

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: GWC-20R  |          | Lab ID: 92585058017 |              | Collected: 01/27/22 15:52 |    | Received: 01/28/22 09:30 |                | Matrix: Water |      |
|--|----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results  | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |          |                     |              |                           |    |                          |                |               |      |
| Performed by   | CUSTOMER |                     |              |                           | 1  |                          | 01/28/22 14:46 |               |      |
| pH   | 7.73     | Std. Units          |              |                           | 1  |                          | 01/28/22 14:46 |               |      |
| <b>6010D ATL ICP</b>                                       |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND       | mg/L                | 0.020        | 0.0085                    | 1  | 02/10/22 08:25           | 02/10/22 17:39 | 7440-66-6     |      |
| Potassium  | 0.72     | mg/L                | 0.20         | 0.15                      | 1  | 02/10/22 08:25           | 02/10/22 17:39 | 7440-09-7     |      |
| Sodium   | 2.1      | mg/L                | 1.0          | 0.58                      | 1  | 02/10/22 08:25           | 02/10/22 17:39 | 7440-23-5     |      |
| Calcium  | 36.2     | mg/L                | 1.0          | 0.12                      | 1  | 02/10/22 08:25           | 02/10/22 17:39 | 7440-70-2     |      |
| Magnesium  | 20.0     | mg/L                | 0.050        | 0.012                     | 1  | 02/10/22 08:25           | 02/10/22 17:39 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>                                      |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND       | mg/L                | 0.0030       | 0.00078                   | 1  | 02/10/22 08:25           | 02/11/22 20:53 | 7440-36-0     |      |
| Arsenic  | ND       | mg/L                | 0.0050       | 0.0011                    | 1  | 02/10/22 08:25           | 02/11/22 20:53 | 7440-38-2     |      |
| Barium   | 0.028    | mg/L                | 0.0050       | 0.00067                   | 1  | 02/10/22 08:25           | 02/11/22 20:53 | 7440-39-3     |      |
| Beryllium  | ND       | mg/L                | 0.00050      | 0.000054                  | 1  | 02/10/22 08:25           | 02/11/22 20:53 | 7440-41-7     |      |
| Boron  | ND       | mg/L                | 0.040        | 0.0086                    | 1  | 02/10/22 08:25           | 02/11/22 20:53 | 7440-42-8     |      |
| Cadmium  | ND       | mg/L                | 0.00050      | 0.00011                   | 1  | 02/10/22 08:25           | 02/11/22 20:53 | 7440-43-9     |      |
| Chromium   | ND       | mg/L                | 0.0050       | 0.0011                    | 1  | 02/10/22 08:25           | 02/11/22 20:53 | 7440-47-3     |      |
| Cobalt   | ND       | mg/L                | 0.0050       | 0.00039                   | 1  | 02/10/22 08:25           | 02/11/22 20:53 | 7440-48-4     |      |
| Copper   | ND       | mg/L                | 0.0050       | 0.00050                   | 1  | 02/10/22 08:25           | 02/11/22 20:53 | 7440-50-8     |      |
| Lead   | ND       | mg/L                | 0.0010       | 0.00089                   | 1  | 02/10/22 08:25           | 02/11/22 20:53 | 7439-92-1     |      |
| Nickel   | ND       | mg/L                | 0.0050       | 0.00071                   | 1  | 02/10/22 08:25           | 02/11/22 20:53 | 7440-02-0     |      |
| Selenium   | ND       | mg/L                | 0.0050       | 0.0014                    | 1  | 02/10/22 08:25           | 02/11/22 20:53 | 7782-49-2     |      |
| Silver   | ND       | mg/L                | 0.0050       | 0.00044                   | 1  | 02/10/22 08:25           | 02/11/22 20:53 | 7440-22-4     |      |
| Thallium   | ND       | mg/L                | 0.0010       | 0.00018                   | 1  | 02/10/22 08:25           | 02/11/22 20:53 | 7440-28-0     |      |
| Vanadium   | ND       | mg/L                | 0.010        | 0.0019                    | 1  | 02/10/22 08:25           | 02/11/22 20:53 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND       | mg/L                | 0.00020      | 0.00013                   | 1  | 02/08/22 15:00           | 02/09/22 09:17 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015                           |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | 176      | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/02/22 17:43 |               |      |
| <b>2320B Alkalinity</b>                                    |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B                                |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Minneapolis                     |          |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3                                 | 171      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/04/22 15:34 |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | 171      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/04/22 15:34 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND       | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/04/22 15:34 |               |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

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**Sample: GWC-20R**      **Lab ID: 92585058017**      Collected: 01/27/22 15:52      Received: 01/28/22 09:30      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 1.9     | mg/L  | 1.0    | 0.60  | 1  |          | 02/02/22 06:47 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/02/22 06:47 | 16984-48-8 |      |
| Sulfate                                   | 1.7     | mg/L  | 1.0    | 0.50  | 1  |          | 02/02/22 06:47 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: GWC-22R  |                 | Lab ID: 92585058018 |              | Collected: 01/27/22 16:00 | Received: 01/28/22 09:30 | Matrix: Water  |                |           |      |
|--|-----------------|---------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                 |                     |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1                        |                | 01/28/22 14:46 |           |      |
| pH   | <b>7.28</b>     | Std. Units          |              |                           | 1                        |                | 01/28/22 14:46 |           |      |
| <b>6010D ATL ICP</b>                                       |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                 |                     |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |                          |                |                |           |      |
| Zinc   | ND              | mg/L                | 0.020        | 0.0085                    | 1                        | 02/10/22 08:25 | 02/10/22 17:44 | 7440-66-6 |      |
| Potassium  | <b>1.5</b>      | mg/L                | 0.20         | 0.15                      | 1                        | 02/10/22 08:25 | 02/10/22 17:44 | 7440-09-7 |      |
| Sodium   | <b>1.8</b>      | mg/L                | 1.0          | 0.58                      | 1                        | 02/10/22 08:25 | 02/10/22 17:44 | 7440-23-5 |      |
| Calcium  | <b>36.9</b>     | mg/L                | 1.0          | 0.12                      | 1                        | 02/10/22 08:25 | 02/10/22 17:44 | 7440-70-2 |      |
| Magnesium  | <b>20.0</b>     | mg/L                | 0.050        | 0.012                     | 1                        | 02/10/22 08:25 | 02/10/22 17:44 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>                                      |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                 |                     |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |                          |                |                |           |      |
| Antimony   | ND              | mg/L                | 0.0030       | 0.00078                   | 1                        | 02/10/22 08:25 | 02/11/22 20:59 | 7440-36-0 |      |
| Arsenic  | <b>0.0045J</b>  | mg/L                | 0.0050       | 0.0011                    | 1                        | 02/10/22 08:25 | 02/11/22 20:59 | 7440-38-2 |      |
| Barium   | <b>0.060</b>    | mg/L                | 0.0050       | 0.00067                   | 1                        | 02/10/22 08:25 | 02/11/22 20:59 | 7440-39-3 |      |
| Beryllium  | ND              | mg/L                | 0.00050      | 0.000054                  | 1                        | 02/10/22 08:25 | 02/11/22 20:59 | 7440-41-7 |      |
| Boron  | ND              | mg/L                | 0.040        | 0.0086                    | 1                        | 02/10/22 08:25 | 02/11/22 20:59 | 7440-42-8 |      |
| Cadmium  | ND              | mg/L                | 0.00050      | 0.00011                   | 1                        | 02/10/22 08:25 | 02/11/22 20:59 | 7440-43-9 |      |
| Chromium   | ND              | mg/L                | 0.0050       | 0.0011                    | 1                        | 02/10/22 08:25 | 02/11/22 20:59 | 7440-47-3 |      |
| Cobalt   | <b>0.0011J</b>  | mg/L                | 0.0050       | 0.00039                   | 1                        | 02/10/22 08:25 | 02/11/22 20:59 | 7440-48-4 |      |
| Copper   | ND              | mg/L                | 0.0050       | 0.00050                   | 1                        | 02/10/22 08:25 | 02/11/22 20:59 | 7440-50-8 |      |
| Lead   | ND              | mg/L                | 0.0010       | 0.00089                   | 1                        | 02/10/22 08:25 | 02/11/22 20:59 | 7439-92-1 |      |
| Nickel   | <b>0.00076J</b> | mg/L                | 0.0050       | 0.00071                   | 1                        | 02/10/22 08:25 | 02/11/22 20:59 | 7440-02-0 |      |
| Selenium   | ND              | mg/L                | 0.0050       | 0.0014                    | 1                        | 02/10/22 08:25 | 02/11/22 20:59 | 7782-49-2 |      |
| Silver   | ND              | mg/L                | 0.0050       | 0.00044                   | 1                        | 02/10/22 08:25 | 02/11/22 20:59 | 7440-22-4 |      |
| Thallium   | ND              | mg/L                | 0.0010       | 0.00018                   | 1                        | 02/10/22 08:25 | 02/11/22 20:59 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L                | 0.010        | 0.0019                    | 1                        | 02/10/22 08:25 | 02/11/22 20:59 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                 |                     |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |                          |                |                |           |      |
| Mercury  | ND              | mg/L                | 0.00020      | 0.00013                   | 1                        | 02/08/22 15:00 | 02/09/22 09:19 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>                        |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2540C-2015                           |                 |                     |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |                          |                |                |           |      |
| Total Dissolved Solids                                     | <b>167</b>      | mg/L                | 10.0         | 10.0                      | 1                        |                | 02/02/22 17:44 |           |      |
| <b>2320B Alkalinity</b>                                    |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2320B                                |                 |                     |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Minneapolis                     |                 |                     |              |                           |                          |                |                |           |      |
| Alkalinity, Total as CaCO3                                 | <b>176</b>      | mg/L                | 5.0          | 1.8                       | 1                        |                | 02/04/22 15:40 |           |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>176</b>      | mg/L                | 5.0          | 1.8                       | 1                        |                | 02/04/22 15:40 |           |      |
| Alkalinity,Carbonate (CaCO3)                               | ND              | mg/L                | 5.0          | 1.8                       | 1                        |                | 02/04/22 15:40 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

**Sample: GWC-22R**      **Lab ID: 92585058018**      Collected: 01/27/22 16:00      Received: 01/28/22 09:30      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 2.5     | mg/L  | 1.0    | 0.60  | 1  |          | 02/02/22 07:01 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/02/22 07:01 | 16984-48-8 |      |
| Sulfate                                   | 1.3     | mg/L  | 1.0    | 0.50  | 1  |          | 02/02/22 07:01 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: GWC-25R  |                 | Lab ID: 92585058019 |              | Collected: 01/27/22 13:53 | Received: 01/28/22 09:30 | Matrix: Water  |                |           |      |
|--|-----------------|---------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                     |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1                        |                | 01/28/22 14:46 |           |      |
| pH   | <b>7.46</b>     | Std. Units          |              |                           | 1                        |                | 01/28/22 14:46 |           |      |
| <b>6010D ATL ICP</b>   |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |                          |                |                |           |      |
| Zinc   | ND              | mg/L                | 0.020        | 0.0085                    | 1                        | 02/10/22 08:25 | 02/10/22 17:49 | 7440-66-6 |      |
| Potassium  | <b>0.66</b>     | mg/L                | 0.20         | 0.15                      | 1                        | 02/10/22 08:25 | 02/10/22 17:49 | 7440-09-7 |      |
| Sodium   | <b>1.3</b>      | mg/L                | 1.0          | 0.58                      | 1                        | 02/10/22 08:25 | 02/10/22 17:49 | 7440-23-5 |      |
| Calcium  | <b>34.4</b>     | mg/L                | 1.0          | 0.12                      | 1                        | 02/10/22 08:25 | 02/10/22 17:49 | 7440-70-2 |      |
| Magnesium  | <b>19.7</b>     | mg/L                | 0.050        | 0.012                     | 1                        | 02/10/22 08:25 | 02/10/22 17:49 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |                          |                |                |           |      |
| Antimony   | ND              | mg/L                | 0.0030       | 0.00078                   | 1                        | 02/10/22 08:25 | 02/11/22 21:05 | 7440-36-0 |      |
| Arsenic  | ND              | mg/L                | 0.0050       | 0.0011                    | 1                        | 02/10/22 08:25 | 02/11/22 21:05 | 7440-38-2 |      |
| Barium   | <b>0.017</b>    | mg/L                | 0.0050       | 0.00067                   | 1                        | 02/10/22 08:25 | 02/11/22 21:05 | 7440-39-3 |      |
| Beryllium  | ND              | mg/L                | 0.00050      | 0.000054                  | 1                        | 02/10/22 08:25 | 02/11/22 21:05 | 7440-41-7 |      |
| Boron  | ND              | mg/L                | 0.040        | 0.0086                    | 1                        | 02/10/22 08:25 | 02/11/22 21:05 | 7440-42-8 |      |
| Cadmium  | ND              | mg/L                | 0.00050      | 0.00011                   | 1                        | 02/10/22 08:25 | 02/11/22 21:05 | 7440-43-9 |      |
| Chromium   | ND              | mg/L                | 0.0050       | 0.0011                    | 1                        | 02/10/22 08:25 | 02/11/22 21:05 | 7440-47-3 |      |
| Cobalt   | ND              | mg/L                | 0.0050       | 0.00039                   | 1                        | 02/10/22 08:25 | 02/11/22 21:05 | 7440-48-4 |      |
| Copper   | ND              | mg/L                | 0.0050       | 0.00050                   | 1                        | 02/10/22 08:25 | 02/11/22 21:05 | 7440-50-8 |      |
| Lead   | ND              | mg/L                | 0.0010       | 0.00089                   | 1                        | 02/10/22 08:25 | 02/11/22 21:05 | 7439-92-1 |      |
| Nickel   | ND              | mg/L                | 0.0050       | 0.00071                   | 1                        | 02/10/22 08:25 | 02/11/22 21:05 | 7440-02-0 |      |
| Selenium   | ND              | mg/L                | 0.0050       | 0.0014                    | 1                        | 02/10/22 08:25 | 02/11/22 21:05 | 7782-49-2 |      |
| Silver   | ND              | mg/L                | 0.0050       | 0.00044                   | 1                        | 02/10/22 08:25 | 02/11/22 21:05 | 7440-22-4 |      |
| Thallium   | ND              | mg/L                | 0.0010       | 0.00018                   | 1                        | 02/10/22 08:25 | 02/11/22 21:05 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L                | 0.010        | 0.0019                    | 1                        | 02/10/22 08:25 | 02/11/22 21:05 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |                          |                |                |           |      |
| Mercury  | ND              | mg/L                | 0.00020      | 0.00013                   | 1                        | 02/08/22 15:00 | 02/09/22 09:22 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                     |              |                           |                          |                |                |           |      |
| Total Dissolved Solids   | <b>168</b>      | mg/L                | 10.0         | 10.0                      | 1                        |                | 02/02/22 17:44 |           |      |
| <b>2320B Alkalinity</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                 |                     |              |                           |                          |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>164</b>      | mg/L                | 5.0          | 1.8                       | 1                        |                | 02/04/22 15:45 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>164</b>      | mg/L                | 5.0          | 1.8                       | 1                        |                | 02/04/22 15:45 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND              | mg/L                | 5.0          | 1.8                       | 1                        |                | 02/04/22 15:45 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

**Sample: GWC-25R**      **Lab ID: 92585058019**      Collected: 01/27/22 13:53      Received: 01/28/22 09:30      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 2.4     | mg/L  | 1.0    | 0.60  | 1  |          | 02/04/22 13:50 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/04/22 13:50 | 16984-48-8 |      |
| Sulfate                                   | 2.0     | mg/L  | 1.0    | 0.50  | 1  |          | 02/04/22 13:50 | 14808-79-8 |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: GWA-55R  |                 | Lab ID: 92585058020 |              | Collected: 01/27/22 12:30 |    | Received: 01/28/22 09:30 |                | Matrix: Water |      |
|--|-----------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1  |                          | 01/28/22 14:47 |               |      |
| pH   | <b>7.27</b>     | Std. Units          |              |                           | 1  |                          | 01/28/22 14:47 |               |      |
| <b>6010D ATL ICP</b>   |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND              | mg/L                | 0.020        | 0.0085                    | 1  | 02/10/22 08:25           | 02/10/22 17:54 | 7440-66-6     |      |
| Potassium  | <b>1.0</b>      | mg/L                | 0.20         | 0.15                      | 1  | 02/10/22 08:25           | 02/10/22 17:54 | 7440-09-7     |      |
| Sodium   | <b>1.2</b>      | mg/L                | 1.0          | 0.58                      | 1  | 02/10/22 08:25           | 02/10/22 17:54 | 7440-23-5     |      |
| Calcium  | <b>44.4</b>     | mg/L                | 1.0          | 0.12                      | 1  | 02/10/22 08:25           | 02/10/22 17:54 | 7440-70-2     |      |
| Magnesium  | <b>24.8</b>     | mg/L                | 0.050        | 0.012                     | 1  | 02/10/22 08:25           | 02/10/22 17:54 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND              | mg/L                | 0.0030       | 0.00078                   | 1  | 02/10/22 08:25           | 02/11/22 21:11 | 7440-36-0     |      |
| Arsenic  | <b>0.0019J</b>  | mg/L                | 0.0050       | 0.0011                    | 1  | 02/10/22 08:25           | 02/11/22 21:11 | 7440-38-2     |      |
| Barium   | <b>0.032</b>    | mg/L                | 0.0050       | 0.00067                   | 1  | 02/10/22 08:25           | 02/11/22 21:11 | 7440-39-3     |      |
| Beryllium  | ND              | mg/L                | 0.00050      | 0.000054                  | 1  | 02/10/22 08:25           | 02/11/22 21:11 | 7440-41-7     |      |
| Boron  | ND              | mg/L                | 0.040        | 0.0086                    | 1  | 02/10/22 08:25           | 02/11/22 21:11 | 7440-42-8     |      |
| Cadmium  | ND              | mg/L                | 0.00050      | 0.00011                   | 1  | 02/10/22 08:25           | 02/11/22 21:11 | 7440-43-9     |      |
| Chromium   | ND              | mg/L                | 0.0050       | 0.0011                    | 1  | 02/10/22 08:25           | 02/11/22 21:11 | 7440-47-3     |      |
| Cobalt   | ND              | mg/L                | 0.0050       | 0.00039                   | 1  | 02/10/22 08:25           | 02/11/22 21:11 | 7440-48-4     |      |
| Copper   | ND              | mg/L                | 0.0050       | 0.00050                   | 1  | 02/10/22 08:25           | 02/11/22 21:11 | 7440-50-8     |      |
| Lead   | ND              | mg/L                | 0.0010       | 0.00089                   | 1  | 02/10/22 08:25           | 02/11/22 21:11 | 7439-92-1     |      |
| Nickel   | ND              | mg/L                | 0.0050       | 0.00071                   | 1  | 02/10/22 08:25           | 02/11/22 21:11 | 7440-02-0     |      |
| Selenium   | <b>0.0016J</b>  | mg/L                | 0.0050       | 0.0014                    | 1  | 02/10/22 08:25           | 02/11/22 21:11 | 7782-49-2     |      |
| Silver   | ND              | mg/L                | 0.0050       | 0.00044                   | 1  | 02/10/22 08:25           | 02/11/22 21:11 | 7440-22-4     |      |
| Thallium   | ND              | mg/L                | 0.0010       | 0.00018                   | 1  | 02/10/22 08:25           | 02/11/22 21:11 | 7440-28-0     |      |
| Vanadium   | ND              | mg/L                | 0.010        | 0.0019                    | 1  | 02/10/22 08:25           | 02/11/22 21:11 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND              | mg/L                | 0.00020      | 0.00013                   | 1  | 02/08/22 15:00           | 02/09/22 09:25 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | <b>207</b>      | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/02/22 17:44 |               |      |
| <b>2320B Alkalinity</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                 |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3   | <b>181</b>      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/04/22 16:15 |               |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>181</b>      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/04/22 16:15 |               |      |
| Alkalinity,Carbonate (CaCO3)   | ND              | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/04/22 16:15 |               |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

**Sample: GWA-55R**      **Lab ID: 92585058020**      Collected: 01/27/22 12:30      Received: 01/28/22 09:30      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 4.5     | mg/L  | 1.0    | 0.60  | 1  |          | 02/04/22 14:04 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/04/22 14:04 | 16984-48-8 |      |
| Sulfate                                   | 20.7    | mg/L  | 1.0    | 0.50  | 1  |          | 02/04/22 14:04 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Sample: DUP-2                       |                  | Lab ID: 92585058021  |         | Collected: 01/27/22 00:00 |    | Received: 01/28/22 09:30 |                | Matrix: Water |      |  |
|-------------------------------------|------------------|--|---------|---------------------------|----|--------------------------|----------------|---------------|------|--|
| Parameters                          | Results          | Units  | Report  |                           |    | Prepared                 | Analyzed       | CAS No.       | Qual |  |
|                                     |                  |  | Limit   | MDL                       | DF |                          |                |               |      |  |
| <b>6010D ATL ICP</b>                |                  | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |      |  |
| Zinc                                | ND               | mg/L   | 0.020   | 0.0085                    | 1  | 02/10/22 08:25           | 02/10/22 17:58 | 7440-66-6     |      |  |
| Potassium                           | <b>0.72</b>      | mg/L   | 0.20    | 0.15                      | 1  | 02/10/22 08:25           | 02/10/22 17:58 | 7440-09-7     |      |  |
| Sodium                              | <b>1.4</b>       | mg/L   | 1.0     | 0.58                      | 1  | 02/10/22 08:25           | 02/10/22 17:58 | 7440-23-5     |      |  |
| Calcium                             | <b>30.8</b>      | mg/L   | 1.0     | 0.12                      | 1  | 02/10/22 08:25           | 02/10/22 17:58 | 7440-70-2     |      |  |
| Magnesium                           | <b>16.8</b>      | mg/L   | 0.050   | 0.012                     | 1  | 02/10/22 08:25           | 02/10/22 17:58 | 7439-95-4     |      |  |
| <b>6020 MET ICPMS</b>               |                  | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |      |  |
| Antimony                            | <b>0.00090J</b>  | mg/L   | 0.0030  | 0.00078                   | 1  | 02/11/22 10:29           | 02/14/22 14:55 | 7440-36-0     | B    |  |
| Arsenic                             | ND               | mg/L   | 0.0050  | 0.0011                    | 1  | 02/11/22 10:29           | 02/14/22 14:55 | 7440-38-2     |      |  |
| Barium                              | <b>0.015</b>     | mg/L   | 0.0050  | 0.00067                   | 1  | 02/11/22 10:29           | 02/14/22 14:55 | 7440-39-3     |      |  |
| Beryllium                           | <b>0.000056J</b> | mg/L   | 0.00050 | 0.000054                  | 1  | 02/11/22 10:29           | 02/14/22 14:55 | 7440-41-7     |      |  |
| Boron                               | ND               | mg/L   | 0.040   | 0.0086                    | 1  | 02/11/22 10:29           | 02/14/22 14:55 | 7440-42-8     |      |  |
| Cadmium                             | ND               | mg/L   | 0.00050 | 0.00011                   | 1  | 02/11/22 10:29           | 02/14/22 14:55 | 7440-43-9     |      |  |
| Chromium                            | ND               | mg/L   | 0.0050  | 0.0011                    | 1  | 02/11/22 10:29           | 02/14/22 14:55 | 7440-47-3     |      |  |
| Cobalt                              | ND               | mg/L   | 0.0050  | 0.00039                   | 1  | 02/11/22 10:29           | 02/14/22 14:55 | 7440-48-4     |      |  |
| Copper                              | ND               | mg/L   | 0.0050  | 0.00050                   | 1  | 02/11/22 10:29           | 02/14/22 14:55 | 7440-50-8     |      |  |
| Lead                                | ND               | mg/L   | 0.0010  | 0.00089                   | 1  | 02/11/22 10:29           | 02/14/22 14:55 | 7439-92-1     |      |  |
| Nickel                              | ND               | mg/L   | 0.0050  | 0.00071                   | 1  | 02/11/22 10:29           | 02/14/22 14:55 | 7440-02-0     |      |  |
| Selenium                            | ND               | mg/L   | 0.0050  | 0.0014                    | 1  | 02/11/22 10:29           | 02/14/22 14:55 | 7782-49-2     |      |  |
| Silver                              | ND               | mg/L   | 0.0050  | 0.00044                   | 1  | 02/11/22 10:29           | 02/14/22 14:55 | 7440-22-4     |      |  |
| Thallium                            | ND               | mg/L   | 0.0010  | 0.00018                   | 1  | 02/11/22 10:29           | 02/14/22 14:55 | 7440-28-0     |      |  |
| Vanadium                            | ND               | mg/L   | 0.010   | 0.0019                    | 1  | 02/11/22 10:29           | 02/14/22 14:55 | 7440-62-2     |      |  |
| <b>7470 Mercury</b>                 |                  | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |      |  |
| Mercury                             | ND               | mg/L   | 0.00020 | 0.00013                   | 1  | 02/08/22 15:00           | 02/09/22 09:27 | 7439-97-6     |      |  |
| <b>2540C Total Dissolved Solids</b> |                  | Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |         |                           |    |                          |                |               |      |  |
| Total Dissolved Solids              | <b>147</b>       | mg/L   | 10.0    | 10.0                      | 1  |                          | 02/02/22 17:45 |               |      |  |
| <b>2320B Alkalinity</b>             |                  | Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |         |                           |    |                          |                |               |      |  |
| Alkalinity, Total as CaCO3          | <b>141</b>       | mg/L   | 5.0     | 1.8                       | 1  |                          | 02/04/22 16:20 |               |      |  |
| Alkalinity,Bicarbonate (CaCO3)      | <b>141</b>       | mg/L   | 5.0     | 1.8                       | 1  |                          | 02/04/22 16:20 |               |      |  |
| Alkalinity,Carbonate (CaCO3)        | ND               | mg/L   | 5.0     | 1.8                       | 1  |                          | 02/04/22 16:20 |               |      |  |
| <b>300.0 IC Anions 28 Days</b>      |                  | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |         |                           |    |                          |                |               |      |  |
| Chloride                            | <b>2.3</b>       | mg/L   | 1.0     | 0.60                      | 1  |                          | 02/04/22 14:18 | 16887-00-6    |      |  |
| Fluoride                            | ND               | mg/L   | 0.10    | 0.050                     | 1  |                          | 02/04/22 14:18 | 16984-48-8    |      |  |
| Sulfate                             | <b>2.1</b>       | mg/L   | 1.0     | 0.50                      | 1  |                          | 02/04/22 14:18 | 14808-79-8    |      |  |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

**Sample: FB-3**      **Lab ID: 92585058022**      Collected: 01/27/22 16:30      Received: 01/28/22 09:30      Matrix: Water

| Parameters  | Results | Units | Report  |          |    | Prepared       | Analyzed       | CAS No.    | Qual |
|---|---------|-------|---------|----------|----|----------------|----------------|------------|------|
|   |         |       | Limit   | MDL      | DF |                |                |            |      |
| <b>6010D ATL ICP</b>  |         |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 6010D    Preparation Method: EPA 3010A |         |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |         |       |         |          |    |                |                |            |      |
| Zinc  | ND      | mg/L  | 0.020   | 0.0085   | 1  | 02/10/22 08:25 | 02/10/22 18:13 | 7440-66-6  |      |
| Potassium   | ND      | mg/L  | 0.20    | 0.15     | 1  | 02/10/22 08:25 | 02/10/22 18:13 | 7440-09-7  |      |
| Sodium  | ND      | mg/L  | 1.0     | 0.58     | 1  | 02/10/22 08:25 | 02/10/22 18:13 | 7440-23-5  |      |
| Calcium   | ND      | mg/L  | 1.0     | 0.12     | 1  | 02/10/22 08:25 | 02/10/22 18:13 | 7440-70-2  |      |
| Magnesium   | ND      | mg/L  | 0.050   | 0.012    | 1  | 02/10/22 08:25 | 02/10/22 18:13 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>   |         |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 6020B    Preparation Method: EPA 3005A |         |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |         |       |         |          |    |                |                |            |      |
| Antimony  | ND      | mg/L  | 0.0030  | 0.00078  | 1  | 02/11/22 10:29 | 02/14/22 15:01 | 7440-36-0  |      |
| Arsenic   | ND      | mg/L  | 0.0050  | 0.0011   | 1  | 02/11/22 10:29 | 02/14/22 15:01 | 7440-38-2  |      |
| Barium  | ND      | mg/L  | 0.0050  | 0.00067  | 1  | 02/11/22 10:29 | 02/14/22 15:01 | 7440-39-3  |      |
| Beryllium   | ND      | mg/L  | 0.00050 | 0.000054 | 1  | 02/11/22 10:29 | 02/14/22 15:01 | 7440-41-7  |      |
| Boron   | ND      | mg/L  | 0.040   | 0.0086   | 1  | 02/11/22 10:29 | 02/14/22 15:01 | 7440-42-8  |      |
| Cadmium   | ND      | mg/L  | 0.00050 | 0.00011  | 1  | 02/11/22 10:29 | 02/14/22 15:01 | 7440-43-9  |      |
| Chromium  | ND      | mg/L  | 0.0050  | 0.0011   | 1  | 02/11/22 10:29 | 02/14/22 15:01 | 7440-47-3  |      |
| Cobalt  | ND      | mg/L  | 0.0050  | 0.00039  | 1  | 02/11/22 10:29 | 02/14/22 15:01 | 7440-48-4  |      |
| Copper  | ND      | mg/L  | 0.0050  | 0.00050  | 1  | 02/11/22 10:29 | 02/14/22 15:01 | 7440-50-8  |      |
| Lead  | ND      | mg/L  | 0.0010  | 0.00089  | 1  | 02/11/22 10:29 | 02/14/22 15:01 | 7439-92-1  |      |
| Nickel  | ND      | mg/L  | 0.0050  | 0.00071  | 1  | 02/11/22 10:29 | 02/14/22 15:01 | 7440-02-0  |      |
| Selenium  | ND      | mg/L  | 0.0050  | 0.0014   | 1  | 02/11/22 10:29 | 02/14/22 15:01 | 7782-49-2  |      |
| Silver  | ND      | mg/L  | 0.0050  | 0.00044  | 1  | 02/11/22 10:29 | 02/14/22 15:01 | 7440-22-4  |      |
| Thallium  | ND      | mg/L  | 0.0010  | 0.00018  | 1  | 02/11/22 10:29 | 02/14/22 15:01 | 7440-28-0  |      |
| Vanadium  | ND      | mg/L  | 0.010   | 0.0019   | 1  | 02/11/22 10:29 | 02/14/22 15:01 | 7440-62-2  |      |
| <b>7470 Mercury</b>   |         |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 7470A    Preparation Method: EPA 7470A |         |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |         |       |         |          |    |                |                |            |      |
| Mercury   | ND      | mg/L  | 0.00020 | 0.00013  | 1  | 02/08/22 15:00 | 02/09/22 09:30 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b>                           |         |       |         |          |    |                |                |            |      |
| Analytical Method: SM 2540C-2015                              |         |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |         |       |         |          |    |                |                |            |      |
| Total Dissolved Solids  | ND      | mg/L  | 10.0    | 10.0     | 1  |                | 02/02/22 17:45 |            |      |
| <b>2320B Alkalinity</b>                                       |         |       |         |          |    |                |                |            |      |
| Analytical Method: SM 2320B                                   |         |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Minneapolis                        |         |       |         |          |    |                |                |            |      |
| Alkalinity, Total as CaCO3                                    | ND      | mg/L  | 5.0     | 1.8      | 1  |                | 02/04/22 16:24 |            |      |
| Alkalinity,Bicarbonate (CaCO3)                                | ND      | mg/L  | 5.0     | 1.8      | 1  |                | 02/04/22 16:24 |            |      |
| Alkalinity,Carbonate (CaCO3)                                  | ND      | mg/L  | 5.0     | 1.8      | 1  |                | 02/04/22 16:24 |            |      |
| <b>300.0 IC Anions 28 Days</b>                                |         |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                     |         |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Asheville                          |         |       |         |          |    |                |                |            |      |
| Chloride  | ND      | mg/L  | 1.0     | 0.60     | 1  |                | 02/04/22 15:00 | 16887-00-6 |      |
| Fluoride  | ND      | mg/L  | 0.10    | 0.050    | 1  |                | 02/04/22 15:00 | 16984-48-8 |      |
| Sulfate   | ND      | mg/L  | 1.0     | 0.50     | 1  |                | 02/04/22 15:00 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: <b>GWC-16R</b>   | Lab ID: <b>92585058023</b> | Collected: 01/28/22 09:38 | Received: 02/01/22 11:22 | Matrix: Water |    |                |                |           |      |
|--|----------------------------|---------------------------|--------------------------|---------------|----|----------------|----------------|-----------|------|
| Parameters   | Results                    | Units                     | Report Limit             | MDL           | DF | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                            |                           |                          |               |    |                |                |           |      |
| Performed by   | <b>CUSTOMER</b>            |                           |                          |               | 1  |                | 02/01/22 17:21 |           |      |
| pH   | <b>7.31</b>                | Std. Units                |                          |               | 1  |                | 02/01/22 17:21 |           |      |
| <b>6010D ATL ICP</b>   |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                            |                           |                          |               |    |                |                |           |      |
| Zinc   | <b>0.026</b>               | mg/L                      | 0.020                    | 0.0085        | 1  | 02/10/22 08:25 | 02/10/22 18:17 | 7440-66-6 |      |
| Potassium  | <b>5.7</b>                 | mg/L                      | 0.20                     | 0.15          | 1  | 02/10/22 08:25 | 02/10/22 18:17 | 7440-09-7 |      |
| Sodium   | <b>28.5</b>                | mg/L                      | 1.0                      | 0.58          | 1  | 02/10/22 08:25 | 02/10/22 18:17 | 7440-23-5 |      |
| Calcium  | <b>68.5</b>                | mg/L                      | 1.0                      | 0.12          | 1  | 02/10/22 08:25 | 02/10/22 18:17 | 7440-70-2 |      |
| Magnesium  | <b>23.9</b>                | mg/L                      | 0.050                    | 0.012         | 1  | 02/10/22 08:25 | 02/10/22 18:17 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                            |                           |                          |               |    |                |                |           |      |
| Antimony   | <b>0.027</b>               | mg/L                      | 0.0030                   | 0.00078       | 1  | 02/11/22 10:29 | 02/14/22 15:21 | 7440-36-0 |      |
| Arsenic  | ND                         | mg/L                      | 0.0050                   | 0.0011        | 1  | 02/11/22 10:29 | 02/14/22 15:21 | 7440-38-2 |      |
| Barium   | <b>0.049</b>               | mg/L                      | 0.0050                   | 0.00067       | 1  | 02/11/22 10:29 | 02/14/22 15:21 | 7440-39-3 |      |
| Beryllium  | ND                         | mg/L                      | 0.00050                  | 0.000054      | 1  | 02/11/22 10:29 | 02/14/22 15:21 | 7440-41-7 |      |
| Boron  | <b>0.021J</b>              | mg/L                      | 0.040                    | 0.0086        | 1  | 02/11/22 10:29 | 02/14/22 15:21 | 7440-42-8 |      |
| Cadmium  | ND                         | mg/L                      | 0.00050                  | 0.00011       | 1  | 02/11/22 10:29 | 02/14/22 15:21 | 7440-43-9 |      |
| Chromium   | <b>0.0011J</b>             | mg/L                      | 0.0050                   | 0.0011        | 1  | 02/11/22 10:29 | 02/14/22 15:21 | 7440-47-3 |      |
| Cobalt   | ND                         | mg/L                      | 0.0050                   | 0.00039       | 1  | 02/11/22 10:29 | 02/14/22 15:21 | 7440-48-4 |      |
| Copper   | <b>0.00088J</b>            | mg/L                      | 0.0050                   | 0.00050       | 1  | 02/11/22 10:29 | 02/14/22 15:21 | 7440-50-8 |      |
| Lead   | ND                         | mg/L                      | 0.0010                   | 0.00089       | 1  | 02/11/22 10:29 | 02/14/22 15:21 | 7439-92-1 |      |
| Nickel   | <b>0.0063</b>              | mg/L                      | 0.0050                   | 0.00071       | 1  | 02/11/22 10:29 | 02/14/22 15:21 | 7440-02-0 |      |
| Selenium   | ND                         | mg/L                      | 0.0050                   | 0.0014        | 1  | 02/11/22 10:29 | 02/14/22 15:21 | 7782-49-2 |      |
| Silver   | ND                         | mg/L                      | 0.0050                   | 0.00044       | 1  | 02/11/22 10:29 | 02/14/22 15:21 | 7440-22-4 |      |
| Thallium   | ND                         | mg/L                      | 0.0010                   | 0.00018       | 1  | 02/11/22 10:29 | 02/14/22 15:21 | 7440-28-0 |      |
| Vanadium   | ND                         | mg/L                      | 0.010                    | 0.0019        | 1  | 02/11/22 10:29 | 02/14/22 15:21 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                            |                           |                          |               |    |                |                |           |      |
| Mercury  | ND                         | mg/L                      | 0.00020                  | 0.00013       | 1  | 02/08/22 15:00 | 02/09/22 09:38 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                            |                           |                          |               |    |                |                |           |      |
| Total Dissolved Solids   | <b>317</b>                 | mg/L                      | 10.0                     | 10.0          | 1  |                | 02/03/22 12:41 |           |      |
| <b>2320B Alkalinity</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                            |                           |                          |               |    |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>315</b>                 | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/08/22 21:45 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>315</b>                 | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/08/22 21:45 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND                         | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/08/22 21:45 |           |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

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**Sample: GWC-16R**      **Lab ID: 92585058023**      Collected: 01/28/22 09:38      Received: 02/01/22 11:22      Matrix: Water

| Parameters                                | Results     | Units | Report<br>Limit | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|---|-------------|-------|-----------------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>            |             |       |                 |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |             |       |                 |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |             |       |                 |       |    |          |                |            |      |
| Chloride                                  | <b>1.6</b>  | mg/L  | 1.0             | 0.60  | 1  |          | 02/06/22 04:03 | 16887-00-6 |      |
| Fluoride                                  | <b>0.17</b> | mg/L  | 0.10            | 0.050 | 1  |          | 02/06/22 04:03 | 16984-48-8 |      |
| Sulfate                                   | <b>11.9</b> | mg/L  | 1.0             | 0.50  | 1  |          | 02/06/22 04:03 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: GWC-17R  |                 | Lab ID: 92585058024 |              | Collected: 01/28/22 10:20 |    | Received: 02/01/22 11:22 |                | Matrix: Water |      |
|--|-----------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1  |                          | 02/01/22 17:21 |               |      |
| pH   | <b>7.34</b>     | Std. Units          |              |                           | 1  |                          | 02/01/22 17:21 |               |      |
| <b>6010D ATL ICP</b>   |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND              | mg/L                | 0.020        | 0.0085                    | 1  | 02/10/22 08:25           | 02/10/22 18:22 | 7440-66-6     |      |
| Potassium  | <b>0.73</b>     | mg/L                | 0.20         | 0.15                      | 1  | 02/10/22 08:25           | 02/10/22 18:22 | 7440-09-7     |      |
| Sodium   | <b>2.5</b>      | mg/L                | 1.0          | 0.58                      | 1  | 02/10/22 08:25           | 02/10/22 18:22 | 7440-23-5     |      |
| Calcium  | <b>64.7</b>     | mg/L                | 1.0          | 0.12                      | 1  | 02/10/22 08:25           | 02/10/22 18:22 | 7440-70-2     |      |
| Magnesium  | <b>35.4</b>     | mg/L                | 0.050        | 0.012                     | 1  | 02/10/22 08:25           | 02/10/22 18:22 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND              | mg/L                | 0.0030       | 0.00078                   | 1  | 02/11/22 10:29           | 02/14/22 15:45 | 7440-36-0     |      |
| Arsenic  | ND              | mg/L                | 0.0050       | 0.0011                    | 1  | 02/11/22 10:29           | 02/14/22 15:45 | 7440-38-2     |      |
| Barium   | <b>0.018</b>    | mg/L                | 0.0050       | 0.00067                   | 1  | 02/11/22 10:29           | 02/14/22 15:45 | 7440-39-3     |      |
| Beryllium  | ND              | mg/L                | 0.00050      | 0.000054                  | 1  | 02/11/22 10:29           | 02/14/22 15:45 | 7440-41-7     |      |
| Boron  | ND              | mg/L                | 0.040        | 0.0086                    | 1  | 02/11/22 10:29           | 02/14/22 15:45 | 7440-42-8     |      |
| Cadmium  | ND              | mg/L                | 0.00050      | 0.00011                   | 1  | 02/11/22 10:29           | 02/14/22 15:45 | 7440-43-9     |      |
| Chromium   | ND              | mg/L                | 0.0050       | 0.0011                    | 1  | 02/11/22 10:29           | 02/14/22 15:45 | 7440-47-3     |      |
| Cobalt   | ND              | mg/L                | 0.0050       | 0.00039                   | 1  | 02/11/22 10:29           | 02/14/22 15:45 | 7440-48-4     |      |
| Copper   | ND              | mg/L                | 0.0050       | 0.00050                   | 1  | 02/11/22 10:29           | 02/14/22 15:45 | 7440-50-8     |      |
| Lead   | ND              | mg/L                | 0.0010       | 0.00089                   | 1  | 02/11/22 10:29           | 02/14/22 15:45 | 7439-92-1     |      |
| Nickel   | ND              | mg/L                | 0.0050       | 0.00071                   | 1  | 02/11/22 10:29           | 02/14/22 15:45 | 7440-02-0     |      |
| Selenium   | ND              | mg/L                | 0.0050       | 0.0014                    | 1  | 02/11/22 10:29           | 02/14/22 15:45 | 7782-49-2     |      |
| Silver   | ND              | mg/L                | 0.0050       | 0.00044                   | 1  | 02/11/22 10:29           | 02/14/22 15:45 | 7440-22-4     |      |
| Thallium   | ND              | mg/L                | 0.0010       | 0.00018                   | 1  | 02/11/22 10:29           | 02/14/22 15:45 | 7440-28-0     |      |
| Vanadium   | ND              | mg/L                | 0.010        | 0.0019                    | 1  | 02/11/22 10:29           | 02/14/22 15:45 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND              | mg/L                | 0.00020      | 0.00013                   | 1  | 02/08/22 15:00           | 02/09/22 09:40 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | <b>302</b>      | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/03/22 12:41 |               |      |
| <b>2320B Alkalinity</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                 |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3   | <b>300</b>      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/08/22 21:53 |               |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>300</b>      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/08/22 21:53 |               |      |
| Alkalinity,Carbonate (CaCO3)   | ND              | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/08/22 21:53 |               |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

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**Sample: GWC-17R**      **Lab ID: 92585058024**      Collected: 01/28/22 10:20      Received: 02/01/22 11:22      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 4.6     | mg/L  | 1.0    | 0.60  | 1  |          | 02/06/22 04:17 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/06/22 04:17 | 16984-48-8 |      |
| Sulfate                                   | 7.6     | mg/L  | 1.0    | 0.50  | 1  |          | 02/06/22 04:17 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

**Sample: GWC-18**      **Lab ID: 92585058025**      Collected: 01/28/22 12:04      Received: 02/01/22 11:22      Matrix: Water

| Parameters  | Results         | Units      | Report  |          |    | Prepared       | Analyzed       | CAS No.   | Qual |
|---|-----------------|------------|---------|----------|----|----------------|----------------|-----------|------|
|   |                 |            | Limit   | MDL      | DF |                |                |           |      |
| <b>Field Data</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte   |                 |            |         |          |    |                |                |           |      |
| Performed by  | <b>CUSTOMER</b> |            |         |          | 1  |                | 02/01/22 17:21 |           |      |
| pH  | <b>6.60</b>     | Std. Units |         |          | 1  |                | 02/01/22 17:21 |           |      |
| <b>6010D ATL ICP</b>  |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 6010D    Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |         |          |    |                |                |           |      |
| Zinc  | ND              | mg/L       | 0.020   | 0.0085   | 1  | 02/10/22 08:25 | 02/10/22 18:27 | 7440-66-6 |      |
| Potassium   | <b>1.1</b>      | mg/L       | 0.20    | 0.15     | 1  | 02/10/22 08:25 | 02/10/22 18:27 | 7440-09-7 |      |
| Sodium  | <b>1.5</b>      | mg/L       | 1.0     | 0.58     | 1  | 02/10/22 08:25 | 02/10/22 18:27 | 7440-23-5 |      |
| Calcium   | <b>19.1</b>     | mg/L       | 1.0     | 0.12     | 1  | 02/10/22 08:25 | 02/10/22 18:27 | 7440-70-2 |      |
| Magnesium   | <b>10.7</b>     | mg/L       | 0.050   | 0.012    | 1  | 02/10/22 08:25 | 02/10/22 18:27 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 6020B    Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |         |          |    |                |                |           |      |
| Antimony  | ND              | mg/L       | 0.0030  | 0.00078  | 1  | 02/11/22 10:29 | 02/14/22 15:51 | 7440-36-0 |      |
| Arsenic   | ND              | mg/L       | 0.0050  | 0.0011   | 1  | 02/11/22 10:29 | 02/14/22 15:51 | 7440-38-2 |      |
| Barium  | <b>0.044</b>    | mg/L       | 0.0050  | 0.00067  | 1  | 02/11/22 10:29 | 02/14/22 15:51 | 7440-39-3 |      |
| Beryllium   | ND              | mg/L       | 0.00050 | 0.000054 | 1  | 02/11/22 10:29 | 02/14/22 15:51 | 7440-41-7 |      |
| Boron   | ND              | mg/L       | 0.040   | 0.0086   | 1  | 02/11/22 10:29 | 02/14/22 15:51 | 7440-42-8 |      |
| Cadmium   | ND              | mg/L       | 0.00050 | 0.00011  | 1  | 02/11/22 10:29 | 02/14/22 15:51 | 7440-43-9 |      |
| Chromium  | <b>0.0014J</b>  | mg/L       | 0.0050  | 0.0011   | 1  | 02/11/22 10:29 | 02/14/22 15:51 | 7440-47-3 |      |
| Cobalt  | ND              | mg/L       | 0.0050  | 0.00039  | 1  | 02/11/22 10:29 | 02/14/22 15:51 | 7440-48-4 |      |
| Copper  | ND              | mg/L       | 0.0050  | 0.00050  | 1  | 02/11/22 10:29 | 02/14/22 15:51 | 7440-50-8 |      |
| Lead  | ND              | mg/L       | 0.0010  | 0.00089  | 1  | 02/11/22 10:29 | 02/14/22 15:51 | 7439-92-1 |      |
| Nickel  | ND              | mg/L       | 0.0050  | 0.00071  | 1  | 02/11/22 10:29 | 02/14/22 15:51 | 7440-02-0 |      |
| Selenium  | ND              | mg/L       | 0.0050  | 0.0014   | 1  | 02/11/22 10:29 | 02/14/22 15:51 | 7782-49-2 |      |
| Silver  | ND              | mg/L       | 0.0050  | 0.00044  | 1  | 02/11/22 10:29 | 02/14/22 15:51 | 7440-22-4 |      |
| Thallium  | ND              | mg/L       | 0.0010  | 0.00018  | 1  | 02/11/22 10:29 | 02/14/22 15:51 | 7440-28-0 |      |
| Vanadium  | ND              | mg/L       | 0.010   | 0.0019   | 1  | 02/11/22 10:29 | 02/14/22 15:51 | 7440-62-2 |      |
| <b>7470 Mercury</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 7470A    Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |         |          |    |                |                |           |      |
| Mercury   | ND              | mg/L       | 0.00020 | 0.00013  | 1  | 02/08/22 15:00 | 02/09/22 09:43 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                              |                 |            |         |          |    |                |                |           |      |
| Total Dissolved Solids  | <b>99.0</b>     | mg/L       | 10.0    | 10.0     | 1  |                | 02/03/22 12:41 |           |      |
| <b>2320B Alkalinity</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis   |                 |            |         |          |    |                |                |           |      |
| Alkalinity, Total as CaCO3  | <b>84.7</b>     | mg/L       | 5.0     | 1.8      | 1  |                | 02/08/22 22:00 |           |      |
| Alkalinity,Bicarbonate (CaCO3)  | <b>84.7</b>     | mg/L       | 5.0     | 1.8      | 1  |                | 02/08/22 22:00 |           |      |
| Alkalinity,Carbonate (CaCO3)  | ND              | mg/L       | 5.0     | 1.8      | 1  |                | 02/08/22 22:00 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

**Sample: GWC-18**      **Lab ID: 92585058025**      Collected: 01/28/22 12:04      Received: 02/01/22 11:22      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 2.1     | mg/L  | 1.0    | 0.60  | 1  |          | 02/06/22 04:31 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/06/22 04:31 | 16984-48-8 |      |
| Sulfate                                   | 1.6     | mg/L  | 1.0    | 0.50  | 1  |          | 02/06/22 04:31 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: GWC-21R  |          | Lab ID: 92585058026 |              | Collected: 01/28/22 12:17 |    | Received: 02/01/22 11:22 |                | Matrix: Water |      |
|--|----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results  | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |          |                     |              |                           |    |                          |                |               |      |
| Performed by   | CUSTOMER |                     |              |                           | 1  |                          | 02/01/22 17:21 |               |      |
| pH   | 6.69     | Std. Units          |              |                           | 1  |                          | 02/01/22 17:21 |               |      |
| <b>6010D ATL ICP</b>   |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |          |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND       | mg/L                | 0.020        | 0.0085                    | 1  | 02/10/22 08:25           | 02/10/22 18:32 | 7440-66-6     |      |
| Potassium  | 1.5      | mg/L                | 0.20         | 0.15                      | 1  | 02/10/22 08:25           | 02/10/22 18:32 | 7440-09-7     |      |
| Sodium   | 15.1     | mg/L                | 1.0          | 0.58                      | 1  | 02/10/22 08:25           | 02/10/22 18:32 | 7440-23-5     |      |
| Calcium  | 60.0     | mg/L                | 1.0          | 0.12                      | 1  | 02/10/22 08:25           | 02/10/22 18:32 | 7440-70-2     |      |
| Magnesium  | 29.9     | mg/L                | 0.050        | 0.012                     | 1  | 02/10/22 08:25           | 02/10/22 18:32 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |          |                     |              |                           |    |                          |                |               |      |
| Antimony   | 0.0061   | mg/L                | 0.0030       | 0.00078                   | 1  | 02/11/22 10:29           | 02/14/22 18:21 | 7440-36-0     | B    |
| Arsenic  | 0.0031J  | mg/L                | 0.0050       | 0.0011                    | 1  | 02/11/22 10:29           | 02/14/22 18:21 | 7440-38-2     |      |
| Barium   | 0.037    | mg/L                | 0.0050       | 0.00067                   | 1  | 02/11/22 10:29           | 02/14/22 18:21 | 7440-39-3     |      |
| Beryllium  | ND       | mg/L                | 0.00050      | 0.000054                  | 1  | 02/11/22 10:29           | 02/14/22 18:21 | 7440-41-7     |      |
| Boron  | 0.011J   | mg/L                | 0.040        | 0.0086                    | 1  | 02/11/22 10:29           | 02/14/22 18:21 | 7440-42-8     |      |
| Cadmium  | ND       | mg/L                | 0.00050      | 0.00011                   | 1  | 02/11/22 10:29           | 02/14/22 18:21 | 7440-43-9     |      |
| Chromium   | ND       | mg/L                | 0.0050       | 0.0011                    | 1  | 02/11/22 10:29           | 02/14/22 18:21 | 7440-47-3     |      |
| Cobalt   | ND       | mg/L                | 0.0050       | 0.00039                   | 1  | 02/11/22 10:29           | 02/14/22 18:21 | 7440-48-4     |      |
| Copper   | ND       | mg/L                | 0.0050       | 0.00050                   | 1  | 02/11/22 10:29           | 02/14/22 18:21 | 7440-50-8     |      |
| Lead   | ND       | mg/L                | 0.0010       | 0.00089                   | 1  | 02/11/22 10:29           | 02/14/22 18:21 | 7439-92-1     |      |
| Nickel   | 0.0014J  | mg/L                | 0.0050       | 0.00071                   | 1  | 02/11/22 10:29           | 02/14/22 18:21 | 7440-02-0     |      |
| Selenium   | ND       | mg/L                | 0.0050       | 0.0014                    | 1  | 02/11/22 10:29           | 02/14/22 18:21 | 7782-49-2     |      |
| Silver   | ND       | mg/L                | 0.0050       | 0.00044                   | 1  | 02/11/22 10:29           | 02/14/22 18:21 | 7440-22-4     |      |
| Thallium   | 0.00021J | mg/L                | 0.0010       | 0.00018                   | 1  | 02/11/22 10:29           | 02/14/22 18:21 | 7440-28-0     |      |
| Vanadium   | ND       | mg/L                | 0.010        | 0.0019                    | 1  | 02/11/22 10:29           | 02/14/22 18:21 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |          |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND       | mg/L                | 0.00020      | 0.00013                   | 1  | 02/08/22 15:00           | 02/09/22 09:46 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |          |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | 290      | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/03/22 12:41 |               |      |
| <b>2320B Alkalinity</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |          |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3   | 288      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/08/22 22:05 |               |      |
| Alkalinity,Bicarbonate (CaCO3)   | 288      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/08/22 22:05 |               |      |
| Alkalinity,Carbonate (CaCO3)   | ND       | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/08/22 22:05 |               |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

**Sample: GWC-21R**      **Lab ID: 92585058026**      Collected: 01/28/22 12:17      Received: 02/01/22 11:22      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 4.6     | mg/L  | 1.0    | 0.60  | 1  |          | 02/06/22 04:45 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/06/22 04:45 | 16984-48-8 |      |
| Sulfate                                   | 13.7    | mg/L  | 1.0    | 0.50  | 1  |          | 02/06/22 04:45 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: GWC-23R  |          | Lab ID: 92585058027 |              | Collected: 01/28/22 11:07 |    | Received: 02/01/22 11:22 |                | Matrix: Water |      |
|--|----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results  | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |          |                     |              |                           |    |                          |                |               |      |
| Performed by   | CUSTOMER |                     |              |                           | 1  |                          | 02/01/22 17:22 |               |      |
| pH   | 7.38     | Std. Units          |              |                           | 1  |                          | 02/01/22 17:22 |               |      |
| <b>6010D ATL ICP</b>   |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |          |                     |              |                           |    |                          |                |               |      |
| Zinc   | 0.0099J  | mg/L                | 0.020        | 0.0085                    | 1  | 02/10/22 08:25           | 02/10/22 18:36 | 7440-66-6     |      |
| Potassium  | 1.4      | mg/L                | 0.20         | 0.15                      | 1  | 02/10/22 08:25           | 02/10/22 18:36 | 7440-09-7     |      |
| Sodium   | 74.7     | mg/L                | 1.0          | 0.58                      | 1  | 02/10/22 08:25           | 02/10/22 18:36 | 7440-23-5     |      |
| Calcium  | 64.9     | mg/L                | 1.0          | 0.12                      | 1  | 02/10/22 08:25           | 02/10/22 18:36 | 7440-70-2     |      |
| Magnesium  | 34.0     | mg/L                | 0.050        | 0.012                     | 1  | 02/10/22 08:25           | 02/10/22 18:36 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |          |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND       | mg/L                | 0.0030       | 0.00078                   | 1  | 02/11/22 10:29           | 02/14/22 18:27 | 7440-36-0     |      |
| Arsenic  | 0.0026J  | mg/L                | 0.0050       | 0.0011                    | 1  | 02/11/22 10:29           | 02/14/22 18:27 | 7440-38-2     |      |
| Barium   | 0.036    | mg/L                | 0.0050       | 0.00067                   | 1  | 02/11/22 10:29           | 02/14/22 18:27 | 7440-39-3     |      |
| Beryllium  | ND       | mg/L                | 0.00050      | 0.000054                  | 1  | 02/11/22 10:29           | 02/14/22 18:27 | 7440-41-7     |      |
| Boron  | ND       | mg/L                | 0.040        | 0.0086                    | 1  | 02/11/22 10:29           | 02/14/22 18:27 | 7440-42-8     |      |
| Cadmium  | ND       | mg/L                | 0.00050      | 0.00011                   | 1  | 02/11/22 10:29           | 02/14/22 18:27 | 7440-43-9     |      |
| Chromium   | ND       | mg/L                | 0.0050       | 0.0011                    | 1  | 02/11/22 10:29           | 02/14/22 18:27 | 7440-47-3     |      |
| Cobalt   | ND       | mg/L                | 0.0050       | 0.00039                   | 1  | 02/11/22 10:29           | 02/14/22 18:27 | 7440-48-4     |      |
| Copper   | 0.00068J | mg/L                | 0.0050       | 0.00050                   | 1  | 02/11/22 10:29           | 02/14/22 18:27 | 7440-50-8     |      |
| Lead   | ND       | mg/L                | 0.0010       | 0.00089                   | 1  | 02/11/22 10:29           | 02/14/22 18:27 | 7439-92-1     |      |
| Nickel   | ND       | mg/L                | 0.0050       | 0.00071                   | 1  | 02/11/22 10:29           | 02/14/22 18:27 | 7440-02-0     |      |
| Selenium   | ND       | mg/L                | 0.0050       | 0.0014                    | 1  | 02/11/22 10:29           | 02/14/22 18:27 | 7782-49-2     |      |
| Silver   | ND       | mg/L                | 0.0050       | 0.00044                   | 1  | 02/11/22 10:29           | 02/14/22 18:27 | 7440-22-4     |      |
| Thallium   | ND       | mg/L                | 0.0010       | 0.00018                   | 1  | 02/11/22 10:29           | 02/14/22 18:27 | 7440-28-0     |      |
| Vanadium   | ND       | mg/L                | 0.010        | 0.0019                    | 1  | 02/11/22 10:29           | 02/14/22 18:27 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |          |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND       | mg/L                | 0.00020      | 0.00013                   | 1  | 02/08/22 15:00           | 02/09/22 09:48 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |          |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | 454      | mg/L                | 20.0         | 20.0                      | 1  |                          | 02/03/22 12:41 |               |      |
| <b>2320B Alkalinity</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |          |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3   | 345      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/08/22 22:12 |               |      |
| Alkalinity,Bicarbonate (CaCO3)   | 345      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/08/22 22:12 |               |      |
| Alkalinity,Carbonate (CaCO3)   | ND       | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/08/22 22:12 |               |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

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**Sample: GWC-23R**      **Lab ID: 92585058027**      Collected: 01/28/22 11:07      Received: 02/01/22 11:22      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 1.7     | mg/L  | 1.0    | 0.60  | 1  |          | 02/06/22 04:59 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/06/22 04:59 | 16984-48-8 |      |
| Sulfate                                   | 98.4    | mg/L  | 2.0    | 1.0   | 2  |          | 02/06/22 07:35 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: GWC-24R  |          | Lab ID: 92585058028 |              | Collected: 01/28/22 10:35 |    | Received: 02/01/22 11:22 |                | Matrix: Water |      |
|--|----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results  | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |          |                     |              |                           |    |                          |                |               |      |
| Performed by   | CUSTOMER |                     |              |                           | 1  |                          | 02/01/22 17:22 |               |      |
| pH   | 7.68     | Std. Units          |              |                           | 1  |                          | 02/01/22 17:22 |               |      |
| <b>6010D ATL ICP</b>   |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |          |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND       | mg/L                | 0.020        | 0.0085                    | 1  | 02/10/22 08:25           | 02/10/22 18:41 | 7440-66-6     |      |
| Potassium  | 0.87     | mg/L                | 0.20         | 0.15                      | 1  | 02/10/22 08:25           | 02/10/22 18:41 | 7440-09-7     |      |
| Sodium   | 1.5      | mg/L                | 1.0          | 0.58                      | 1  | 02/10/22 08:25           | 02/10/22 18:41 | 7440-23-5     |      |
| Calcium  | 34.4     | mg/L                | 1.0          | 0.12                      | 1  | 02/10/22 08:25           | 02/10/22 18:41 | 7440-70-2     |      |
| Magnesium  | 18.9     | mg/L                | 0.050        | 0.012                     | 1  | 02/10/22 08:25           | 02/10/22 18:41 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |          |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND       | mg/L                | 0.0030       | 0.00078                   | 1  | 02/11/22 10:29           | 02/14/22 18:33 | 7440-36-0     |      |
| Arsenic  | 0.0021J  | mg/L                | 0.0050       | 0.0011                    | 1  | 02/11/22 10:29           | 02/14/22 18:33 | 7440-38-2     |      |
| Barium   | 0.025    | mg/L                | 0.0050       | 0.00067                   | 1  | 02/11/22 10:29           | 02/14/22 18:33 | 7440-39-3     |      |
| Beryllium  | ND       | mg/L                | 0.00050      | 0.000054                  | 1  | 02/11/22 10:29           | 02/14/22 18:33 | 7440-41-7     |      |
| Boron  | ND       | mg/L                | 0.040        | 0.0086                    | 1  | 02/11/22 10:29           | 02/14/22 18:33 | 7440-42-8     |      |
| Cadmium  | ND       | mg/L                | 0.00050      | 0.00011                   | 1  | 02/11/22 10:29           | 02/14/22 18:33 | 7440-43-9     |      |
| Chromium   | ND       | mg/L                | 0.0050       | 0.0011                    | 1  | 02/11/22 10:29           | 02/14/22 18:33 | 7440-47-3     |      |
| Cobalt   | ND       | mg/L                | 0.0050       | 0.00039                   | 1  | 02/11/22 10:29           | 02/14/22 18:33 | 7440-48-4     |      |
| Copper   | ND       | mg/L                | 0.0050       | 0.00050                   | 1  | 02/11/22 10:29           | 02/14/22 18:33 | 7440-50-8     |      |
| Lead   | ND       | mg/L                | 0.0010       | 0.00089                   | 1  | 02/11/22 10:29           | 02/14/22 18:33 | 7439-92-1     |      |
| Nickel   | ND       | mg/L                | 0.0050       | 0.00071                   | 1  | 02/11/22 10:29           | 02/14/22 18:33 | 7440-02-0     |      |
| Selenium   | ND       | mg/L                | 0.0050       | 0.0014                    | 1  | 02/11/22 10:29           | 02/14/22 18:33 | 7782-49-2     |      |
| Silver   | ND       | mg/L                | 0.0050       | 0.00044                   | 1  | 02/11/22 10:29           | 02/14/22 18:33 | 7440-22-4     |      |
| Thallium   | ND       | mg/L                | 0.0010       | 0.00018                   | 1  | 02/11/22 10:29           | 02/14/22 18:33 | 7440-28-0     |      |
| Vanadium   | ND       | mg/L                | 0.010        | 0.0019                    | 1  | 02/11/22 10:29           | 02/14/22 18:33 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |          |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND       | mg/L                | 0.00020      | 0.00013                   | 1  | 02/08/22 15:00           | 02/09/22 09:51 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |          |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | 159      | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/03/22 12:41 |               |      |
| <b>2320B Alkalinity</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |          |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3   | 148      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/08/22 22:20 |               |      |
| Alkalinity,Bicarbonate (CaCO3)   | 148      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/08/22 22:20 |               |      |
| Alkalinity,Carbonate (CaCO3)   | ND       | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/08/22 22:20 |               |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

**Sample: GWC-24R**      **Lab ID: 92585058028**      Collected: 01/28/22 10:35      Received: 02/01/22 11:22      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 2.2     | mg/L  | 1.0    | 0.60  | 1  |          | 02/06/22 05:41 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/06/22 05:41 | 16984-48-8 |      |
| Sulfate                                   | 2.3     | mg/L  | 1.0    | 0.50  | 1  |          | 02/06/22 05:41 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Sample: DUP-3                       |                 | Lab ID: 92585058029  |         | Collected: 01/28/22 00:00 | Received: 02/01/22 11:22 | Matrix: Water  |                |            |      |  |
|-------------------------------------|-----------------|--|---------|---------------------------|--------------------------|----------------|----------------|------------|------|--|
| Parameters                          | Results         | Units  | Report  |                           |                          | Prepared       | Analyzed       | CAS No.    | Qual |  |
|                                     |                 |  | Limit   | MDL                       | DF                       |                |                |            |      |  |
| <b>6010D ATL ICP</b>                |                 | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |  |
| Zinc                                | ND              | mg/L   | 0.020   | 0.0085                    | 1                        | 02/10/22 08:25 | 02/10/22 18:46 | 7440-66-6  |      |  |
| Potassium                           | <b>0.83</b>     | mg/L   | 0.20    | 0.15                      | 1                        | 02/10/22 08:25 | 02/10/22 18:46 | 7440-09-7  |      |  |
| Sodium                              | <b>1.6</b>      | mg/L   | 1.0     | 0.58                      | 1                        | 02/10/22 08:25 | 02/10/22 18:46 | 7440-23-5  |      |  |
| Calcium                             | <b>33.5</b>     | mg/L   | 1.0     | 0.12                      | 1                        | 02/10/22 08:25 | 02/10/22 18:46 | 7440-70-2  |      |  |
| Magnesium                           | <b>18.5</b>     | mg/L   | 0.050   | 0.012                     | 1                        | 02/10/22 08:25 | 02/10/22 18:46 | 7439-95-4  |      |  |
| <b>6020 MET ICPMS</b>               |                 | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |  |
| Antimony                            | ND              | mg/L   | 0.0030  | 0.00078                   | 1                        | 02/11/22 10:29 | 02/14/22 18:39 | 7440-36-0  |      |  |
| Arsenic                             | <b>0.0015J</b>  | mg/L   | 0.0050  | 0.0011                    | 1                        | 02/11/22 10:29 | 02/14/22 18:39 | 7440-38-2  |      |  |
| Barium                              | <b>0.023</b>    | mg/L   | 0.0050  | 0.00067                   | 1                        | 02/11/22 10:29 | 02/14/22 18:39 | 7440-39-3  |      |  |
| Beryllium                           | ND              | mg/L   | 0.00050 | 0.000054                  | 1                        | 02/11/22 10:29 | 02/14/22 18:39 | 7440-41-7  |      |  |
| Boron                               | ND              | mg/L   | 0.040   | 0.0086                    | 1                        | 02/11/22 10:29 | 02/14/22 18:39 | 7440-42-8  |      |  |
| Cadmium                             | ND              | mg/L   | 0.00050 | 0.00011                   | 1                        | 02/11/22 10:29 | 02/14/22 18:39 | 7440-43-9  |      |  |
| Chromium                            | ND              | mg/L   | 0.0050  | 0.0011                    | 1                        | 02/11/22 10:29 | 02/14/22 18:39 | 7440-47-3  |      |  |
| Cobalt                              | ND              | mg/L   | 0.0050  | 0.00039                   | 1                        | 02/11/22 10:29 | 02/14/22 18:39 | 7440-48-4  |      |  |
| Copper                              | <b>0.00054J</b> | mg/L   | 0.0050  | 0.00050                   | 1                        | 02/11/22 10:29 | 02/14/22 18:39 | 7440-50-8  |      |  |
| Lead                                | ND              | mg/L   | 0.0010  | 0.00089                   | 1                        | 02/11/22 10:29 | 02/14/22 18:39 | 7439-92-1  |      |  |
| Nickel                              | ND              | mg/L   | 0.0050  | 0.00071                   | 1                        | 02/11/22 10:29 | 02/14/22 18:39 | 7440-02-0  |      |  |
| Selenium                            | ND              | mg/L   | 0.0050  | 0.0014                    | 1                        | 02/11/22 10:29 | 02/14/22 18:39 | 7782-49-2  |      |  |
| Silver                              | ND              | mg/L   | 0.0050  | 0.00044                   | 1                        | 02/11/22 10:29 | 02/14/22 18:39 | 7440-22-4  |      |  |
| Thallium                            | ND              | mg/L   | 0.0010  | 0.00018                   | 1                        | 02/11/22 10:29 | 02/14/22 18:39 | 7440-28-0  |      |  |
| Vanadium                            | ND              | mg/L   | 0.010   | 0.0019                    | 1                        | 02/11/22 10:29 | 02/14/22 18:39 | 7440-62-2  |      |  |
| <b>7470 Mercury</b>                 |                 | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |  |
| Mercury                             | ND              | mg/L   | 0.00020 | 0.00013                   | 1                        | 02/08/22 15:00 | 02/09/22 09:53 | 7439-97-6  |      |  |
| <b>2540C Total Dissolved Solids</b> |                 | Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |         |                           |                          |                |                |            |      |  |
| Total Dissolved Solids              | <b>156</b>      | mg/L   | 10.0    | 10.0                      | 1                        |                | 02/03/22 12:42 |            |      |  |
| <b>2320B Alkalinity</b>             |                 | Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |         |                           |                          |                |                |            |      |  |
| Alkalinity, Total as CaCO3          | <b>148</b>      | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/08/22 22:25 |            |      |  |
| Alkalinity,Bicarbonate (CaCO3)      | <b>148</b>      | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/08/22 22:25 |            |      |  |
| Alkalinity,Carbonate (CaCO3)        | ND              | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/08/22 22:25 |            |      |  |
| <b>300.0 IC Anions 28 Days</b>      |                 | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |         |                           |                          |                |                |            |      |  |
| Chloride                            | <b>2.2</b>      | mg/L   | 1.0     | 0.60                      | 1                        |                | 02/06/22 05:55 | 16887-00-6 |      |  |
| Fluoride                            | ND              | mg/L   | 0.10    | 0.050                     | 1                        |                | 02/06/22 05:55 | 16984-48-8 |      |  |
| Sulfate                             | <b>2.3</b>      | mg/L   | 1.0     | 0.50                      | 1                        |                | 02/06/22 05:55 | 14808-79-8 |      |  |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

| Sample: <b>FB-4</b> Lab ID: <b>92585058030</b> Collected: 01/28/22 11:55      Received: 02/01/22 11:22      Matrix: Water                 |         |       |              |          |   |     |                |                |            |         |      |
|---|---------|-------|--------------|----------|---|-----|----------------|----------------|------------|---------|------|
| Parameters  | Results | Units | Report Limit |          |   | MDL | DF             | Prepared       | Analyzed   | CAS No. | Qual |
| <b>6010D ATL ICP</b> Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA  |         |       |              |          |   |     |                |                |            |         |      |
| Zinc  | ND      | mg/L  | 0.020        | 0.0085   | 1 |     | 02/10/22 08:25 | 02/10/22 18:56 | 7440-66-6  |         |      |
| Potassium   | ND      | mg/L  | 0.20         | 0.15     | 1 |     | 02/10/22 08:25 | 02/10/22 18:56 | 7440-09-7  |         |      |
| Sodium  | ND      | mg/L  | 1.0          | 0.58     | 1 |     | 02/10/22 08:25 | 02/10/22 18:56 | 7440-23-5  |         |      |
| Calcium   | ND      | mg/L  | 1.0          | 0.12     | 1 |     | 02/10/22 08:25 | 02/10/22 18:56 | 7440-70-2  |         |      |
| Magnesium   | ND      | mg/L  | 0.050        | 0.012    | 1 |     | 02/10/22 08:25 | 02/10/22 18:56 | 7439-95-4  |         |      |
| <b>6020 MET ICPMS</b> Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |         |       |              |          |   |     |                |                |            |         |      |
| Antimony  | ND      | mg/L  | 0.0030       | 0.00078  | 1 |     | 02/11/22 10:29 | 02/14/22 18:45 | 7440-36-0  |         |      |
| Arsenic   | ND      | mg/L  | 0.0050       | 0.0011   | 1 |     | 02/11/22 10:29 | 02/14/22 18:45 | 7440-38-2  |         |      |
| Barium  | ND      | mg/L  | 0.0050       | 0.00067  | 1 |     | 02/11/22 10:29 | 02/14/22 18:45 | 7440-39-3  |         |      |
| Beryllium   | ND      | mg/L  | 0.00050      | 0.000054 | 1 |     | 02/11/22 10:29 | 02/14/22 18:45 | 7440-41-7  |         |      |
| Boron   | ND      | mg/L  | 0.040        | 0.0086   | 1 |     | 02/11/22 10:29 | 02/14/22 18:45 | 7440-42-8  |         |      |
| Cadmium   | ND      | mg/L  | 0.00050      | 0.00011  | 1 |     | 02/11/22 10:29 | 02/14/22 18:45 | 7440-43-9  |         |      |
| Chromium  | ND      | mg/L  | 0.0050       | 0.0011   | 1 |     | 02/11/22 10:29 | 02/14/22 18:45 | 7440-47-3  |         |      |
| Cobalt  | ND      | mg/L  | 0.0050       | 0.00039  | 1 |     | 02/11/22 10:29 | 02/14/22 18:45 | 7440-48-4  |         |      |
| Copper  | ND      | mg/L  | 0.0050       | 0.00050  | 1 |     | 02/11/22 10:29 | 02/14/22 18:45 | 7440-50-8  |         |      |
| Lead  | ND      | mg/L  | 0.0010       | 0.00089  | 1 |     | 02/11/22 10:29 | 02/14/22 18:45 | 7439-92-1  |         |      |
| Nickel  | ND      | mg/L  | 0.0050       | 0.00071  | 1 |     | 02/11/22 10:29 | 02/14/22 18:45 | 7440-02-0  |         |      |
| Selenium  | ND      | mg/L  | 0.0050       | 0.0014   | 1 |     | 02/11/22 10:29 | 02/14/22 18:45 | 7782-49-2  |         |      |
| Silver  | ND      | mg/L  | 0.0050       | 0.00044  | 1 |     | 02/11/22 10:29 | 02/14/22 18:45 | 7440-22-4  |         |      |
| Thallium  | ND      | mg/L  | 0.0010       | 0.00018  | 1 |     | 02/11/22 10:29 | 02/14/22 18:45 | 7440-28-0  |         |      |
| Vanadium  | ND      | mg/L  | 0.010        | 0.0019   | 1 |     | 02/11/22 10:29 | 02/14/22 18:45 | 7440-62-2  |         |      |
| <b>7470 Mercury</b> Analytical Method: EPA 7470A      Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA   |         |       |              |          |   |     |                |                |            |         |      |
| Mercury   | ND      | mg/L  | 0.00020      | 0.00013  | 1 |     | 02/09/22 11:00 | 02/09/22 15:40 | 7439-97-6  |         |      |
| <b>2540C Total Dissolved Solids</b> Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                  |         |       |              |          |   |     |                |                |            |         |      |
| Total Dissolved Solids  | ND      | mg/L  | 10.0         | 10.0     | 1 |     |                | 02/03/22 12:42 |            |         |      |
| <b>2320B Alkalinity</b> Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis   |         |       |              |          |   |     |                |                |            |         |      |
| Alkalinity, Total as CaCO <sub>3</sub>  | ND      | mg/L  | 5.0          | 1.8      | 1 |     |                | 02/08/22 22:37 |            |         |      |
| Alkalinity,Bicarbonate (CaCO <sub>3</sub> )   | ND      | mg/L  | 5.0          | 1.8      | 1 |     |                | 02/08/22 22:37 |            |         |      |
| Alkalinity,Carbonate (CaCO <sub>3</sub> )   | ND      | mg/L  | 5.0          | 1.8      | 1 |     |                | 02/08/22 22:37 |            |         |      |
| <b>300.0 IC Anions 28 Days</b> Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                          |         |       |              |          |   |     |                |                |            |         |      |
| Chloride  | ND      | mg/L  | 1.0          | 0.60     | 1 |     |                | 02/07/22 00:27 | 16887-00-6 |         |      |
| Fluoride  | ND      | mg/L  | 0.10         | 0.050    | 1 |     |                | 02/07/22 00:27 | 16984-48-8 |         |      |
| Sulfate   | ND      | mg/L  | 1.0          | 0.50     | 1 |     |                | 02/07/22 00:27 | 14808-79-8 |         |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

|                         |  |                       |  |
|-------------------------|--|-----------------------|--|
| QC Batch:               | 676146   | Analysis Method:      | EPA 6010D  |
| QC Batch Method:        | EPA 3010A  | Analysis Description: | 6010D ATL  |
|                         |  | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |
| Associated Lab Samples: | 92585058001, 92585058002, 92585058003, 92585058004, 92585058005, 92585058006, 92585058007, 92585058008, 92585058009, 92585058010, 92585058011, 92585058012 |                       |  |

|                         |  |         |       |
|-------------------------|--|---------|-------|
| METHOD BLANK:           | 3539086  | Matrix: | Water |
| Associated Lab Samples: | 92585058001, 92585058002, 92585058003, 92585058004, 92585058005, 92585058006, 92585058007, 92585058008, 92585058009, 92585058010, 92585058011, 92585058012 |         |       |

| Parameter | Units | Blank Result | Reporting Limit | MDL    | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|--------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 0.12   | 02/07/22 20:25 |            |
| Magnesium | mg/L  | ND           | 0.050           | 0.012  | 02/07/22 20:25 |            |
| Potassium | mg/L  | ND           | 0.20            | 0.15   | 02/07/22 20:25 |            |
| Sodium    | mg/L  | ND           | 1.0             | 0.58   | 02/07/22 20:25 |            |
| Zinc      | mg/L  | ND           | 0.020           | 0.0085 | 02/07/22 20:25 |            |

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 0.98J      | 98        | 80-120       |            |
| Magnesium | mg/L  | 1           | 1.0        | 103       | 80-120       |            |
| Potassium | mg/L  | 1           | 0.99       | 99        | 80-120       |            |
| Sodium    | mg/L  | 1           | 1.1        | 106       | 80-120       |            |
| Zinc      | mg/L  | 1           | 0.98       | 98        | 80-120       |            |

| Parameter | Units | 3539088   |            | 3539089   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|-----------|-------|-----------|------------|-----------|------------|----------|-----------|--------------|--------|---------|------|
|           |       | MS Result | MSD Result | MS Result | MSD Result |          |           |              |        |         |      |
| Calcium   | mg/L  | 1.1       | 1          | 1         | 2.1        | 2.1      | 102       | 100          | 75-125 | 1       | 20   |
| Magnesium | mg/L  | 0.44      | 1          | 1         | 1.5        | 1.5      | 102       | 103          | 75-125 | 1       | 20   |
| Potassium | mg/L  | 0.46      | 1          | 1         | 1.4        | 1.4      | 94        | 96           | 75-125 | 1       | 20   |
| Sodium    | mg/L  | 3.5       | 1          | 1         | 4.6        | 4.5      | 104       | 97           | 75-125 | 2       | 20   |
| Zinc      | mg/L  | ND        | 1          | 1         | 0.98       | 0.98     | 98        | 98           | 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.

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**QUALITY CONTROL DATA**

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

QC Batch: 677117 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92585058013, 92585058014, 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020, 92585058021, 92585058022, 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029, 92585058030

METHOD BLANK: 3543806 Matrix: Water  
Associated Lab Samples: 92585058013, 92585058014, 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020, 92585058021, 92585058022, 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029, 92585058030

| Parameter | Units | Blank Result | Reporting Limit | MDL    | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|--------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 0.12   | 02/10/22 16:30 |            |
| Magnesium | mg/L  | ND           | 0.050           | 0.012  | 02/10/22 16:30 |            |
| Potassium | mg/L  | ND           | 0.20            | 0.15   | 02/10/22 16:30 |            |
| Sodium    | mg/L  | ND           | 1.0             | 0.58   | 02/10/22 16:30 |            |
| Zinc      | mg/L  | ND           | 0.020           | 0.0085 | 02/10/22 16:30 |            |

LABORATORY CONTROL SAMPLE: 3543807

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 1.1        | 107       | 80-120       |            |
| Magnesium | mg/L  | 1           | 1.1        | 110       | 80-120       |            |
| Potassium | mg/L  | 1           | 1.0        | 104       | 80-120       |            |
| Sodium    | mg/L  | 1           | 1.1        | 110       | 80-120       |            |
| Zinc      | mg/L  | 1           | 1.0        | 104       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3543808 3543809

| Parameter | Units | 3543808        |                 | 3543809   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |      |
| Calcium   | mg/L  | 29.3           | 1               | 31.1      | 31.5       | 174      | 218       | 75-125       | 1   | 20      | M1   |
| Magnesium | mg/L  | 16.4           | 1               | 18.1      | 18.1       | 172      | 172       | 75-125       | 0   | 20      | M1   |
| Potassium | mg/L  | 0.63           | 1               | 1.7       | 1.7        | 104      | 108       | 75-125       | 3   | 20      |      |
| Sodium    | mg/L  | 1.4            | 1               | 2.4       | 2.4        | 99       | 105       | 75-125       | 2   | 20      |      |
| Zinc      | mg/L  | ND             | 1               | 0.96      | 1.0        | 96       | 100       | 75-125       | 4   | 20      |      |

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**QUALITY CONTROL DATA**

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

QC Batch: 677120 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004, 92585058005, 92585058006, 92585058007, 92585058008, 92585058009, 92585058010, 92585058011, 92585058012, 92585058013, 92585058014, 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020

METHOD BLANK: 3543812 Matrix: Water  
Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004, 92585058005, 92585058006, 92585058007, 92585058008, 92585058009, 92585058010, 92585058011, 92585058012, 92585058013, 92585058014, 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony  | mg/L  | ND           | 0.0030          | 0.00078  | 02/11/22 18:24 |            |
| Arsenic   | mg/L  | ND           | 0.0050          | 0.0011   | 02/11/22 18:24 |            |
| Barium    | mg/L  | ND           | 0.0050          | 0.00067  | 02/11/22 18:24 |            |
| Beryllium | mg/L  | ND           | 0.00050         | 0.000054 | 02/11/22 18:24 |            |
| Boron     | mg/L  | ND           | 0.040           | 0.0086   | 02/11/22 18:24 |            |
| Cadmium   | mg/L  | ND           | 0.00050         | 0.00011  | 02/11/22 18:24 |            |
| Chromium  | mg/L  | ND           | 0.0050          | 0.0011   | 02/11/22 18:24 |            |
| Cobalt    | mg/L  | ND           | 0.0050          | 0.00039  | 02/11/22 18:24 |            |
| Copper    | mg/L  | ND           | 0.0050          | 0.00050  | 02/11/22 18:24 |            |
| Lead      | mg/L  | ND           | 0.0010          | 0.00089  | 02/11/22 18:24 |            |
| Nickel    | mg/L  | ND           | 0.0050          | 0.00071  | 02/11/22 18:24 |            |
| Selenium  | mg/L  | ND           | 0.0050          | 0.0014   | 02/11/22 18:24 |            |
| Silver    | mg/L  | ND           | 0.0050          | 0.00044  | 02/11/22 18:24 |            |
| Thallium  | mg/L  | ND           | 0.0010          | 0.00018  | 02/11/22 18:24 |            |
| Vanadium  | mg/L  | ND           | 0.010           | 0.0019   | 02/11/22 18:24 |            |

LABORATORY CONTROL SAMPLE: 3543813

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony  | mg/L  | 0.1         | 0.11       | 108       | 80-120       |            |
| Arsenic   | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Barium    | mg/L  | 0.1         | 0.10       | 105       | 80-120       |            |
| Beryllium | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Boron     | mg/L  | 1           | 0.99       | 99        | 80-120       |            |
| Cadmium   | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Chromium  | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Cobalt    | mg/L  | 0.1         | 0.10       | 105       | 80-120       |            |
| Copper    | mg/L  | 0.1         | 0.10       | 102       | 80-120       |            |
| Lead      | mg/L  | 0.1         | 0.094      | 94        | 80-120       |            |
| Nickel    | mg/L  | 0.1         | 0.11       | 106       | 80-120       |            |
| Selenium  | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Silver    | mg/L  | 0.1         | 0.10       | 104       | 80-120       |            |
| Thallium  | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |
| Vanadium  | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Parameter | Units | 92585058002 |                | 3543814         |           | 3543815    |     | % Rec | % Rec  | % Rec | Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-----------------|-----------|------------|-----|-------|--------|-------|--------|-----|---------|------|
|           |       | Result      | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |     |       |        |       |        |     |         |      |
| Antimony  | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.11       | 104 | 110   | 75-125 | 6     | 20     |     |         |      |
| Arsenic   | mg/L  | 0.0030J     | 0.1            | 0.1             | 0.10      | 0.10       | 97  | 97    | 75-125 | 1     | 20     |     |         |      |
| Barium    | mg/L  | 0.023       | 0.1            | 0.1             | 0.13      | 0.14       | 106 | 122   | 75-125 | 11    | 20     |     |         |      |
| Beryllium | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.11       | 102 | 108   | 75-125 | 6     | 20     |     |         |      |
| Boron     | mg/L  | ND          | 1              | 1               | 1.0       | 1.1        | 102 | 109   | 75-125 | 7     | 20     |     |         |      |
| Cadmium   | mg/L  | ND          | 0.1            | 0.1             | 0.099     | 0.10       | 99  | 101   | 75-125 | 2     | 20     |     |         |      |
| Chromium  | mg/L  | 0.0012J     | 0.1            | 0.1             | 0.098     | 0.10       | 97  | 99    | 75-125 | 3     | 20     |     |         |      |
| Cobalt    | mg/L  | ND          | 0.1            | 0.1             | 0.095     | 0.10       | 95  | 100   | 75-125 | 5     | 20     |     |         |      |
| Copper    | mg/L  | ND          | 0.1            | 0.1             | 0.095     | 0.099      | 94  | 99    | 75-125 | 4     | 20     |     |         |      |
| Lead      | mg/L  | ND          | 0.1            | 0.1             | 0.094     | 0.099      | 94  | 99    | 75-125 | 5     | 20     |     |         |      |
| Nickel    | mg/L  | ND          | 0.1            | 0.1             | 0.096     | 0.10       | 96  | 102   | 75-125 | 6     | 20     |     |         |      |
| Selenium  | mg/L  | ND          | 0.1            | 0.1             | 0.096     | 0.099      | 96  | 99    | 75-125 | 3     | 20     |     |         |      |
| Silver    | mg/L  | ND          | 0.1            | 0.1             | 0.099     | 0.11       | 99  | 105   | 75-125 | 6     | 20     |     |         |      |
| Thallium  | mg/L  | ND          | 0.1            | 0.1             | 0.096     | 0.10       | 96  | 100   | 75-125 | 5     | 20     |     |         |      |
| Vanadium  | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.10       | 98  | 102   | 75-125 | 4     | 20     |     |         |      |

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

QC Batch: 677647 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92585058021, 92585058022, 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029, 92585058030

METHOD BLANK: 3546468 Matrix: Water  
Associated Lab Samples: 92585058021, 92585058022, 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029, 92585058030

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony  | mg/L  | 0.00078J     | 0.0030          | 0.00078  | 02/14/22 14:43 |            |
| Arsenic   | mg/L  | ND           | 0.0050          | 0.0011   | 02/14/22 14:43 |            |
| Barium    | mg/L  | ND           | 0.0050          | 0.00067  | 02/14/22 14:43 |            |
| Beryllium | mg/L  | ND           | 0.00050         | 0.000054 | 02/14/22 14:43 |            |
| Boron     | mg/L  | ND           | 0.040           | 0.0086   | 02/14/22 14:43 |            |
| Cadmium   | mg/L  | ND           | 0.00050         | 0.00011  | 02/14/22 14:43 |            |
| Chromium  | mg/L  | ND           | 0.0050          | 0.0011   | 02/14/22 14:43 |            |
| Cobalt    | mg/L  | ND           | 0.0050          | 0.00039  | 02/14/22 14:43 |            |
| Copper    | mg/L  | ND           | 0.0050          | 0.00050  | 02/14/22 14:43 |            |
| Lead      | mg/L  | ND           | 0.0010          | 0.00089  | 02/14/22 14:43 |            |
| Nickel    | mg/L  | ND           | 0.0050          | 0.00071  | 02/14/22 14:43 |            |
| Selenium  | mg/L  | ND           | 0.0050          | 0.0014   | 02/14/22 14:43 |            |
| Silver    | mg/L  | ND           | 0.0050          | 0.00044  | 02/14/22 14:43 |            |
| Thallium  | mg/L  | ND           | 0.0010          | 0.00018  | 02/14/22 14:43 |            |
| Vanadium  | mg/L  | ND           | 0.010           | 0.0019   | 02/14/22 14:43 |            |

LABORATORY CONTROL SAMPLE: 3546469

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony  | mg/L  | 0.1         | 0.11       | 109       | 80-120       |            |
| Arsenic   | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Barium    | mg/L  | 0.1         | 0.10       | 103       | 80-120       |            |
| Beryllium | mg/L  | 0.1         | 0.10       | 101       | 80-120       |            |
| Boron     | mg/L  | 1           | 1.0        | 101       | 80-120       |            |
| Cadmium   | mg/L  | 0.1         | 0.11       | 107       | 80-120       |            |
| Chromium  | mg/L  | 0.1         | 0.11       | 107       | 80-120       |            |
| Cobalt    | mg/L  | 0.1         | 0.11       | 108       | 80-120       |            |
| Copper    | mg/L  | 0.1         | 0.10       | 102       | 80-120       |            |
| Lead      | mg/L  | 0.1         | 0.10       | 101       | 80-120       |            |
| Nickel    | mg/L  | 0.1         | 0.11       | 107       | 80-120       |            |
| Selenium  | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Silver    | mg/L  | 0.1         | 0.10       | 103       | 80-120       |            |
| Thallium  | mg/L  | 0.1         | 0.10       | 102       | 80-120       |            |
| Vanadium  | mg/L  | 0.1         | 0.11       | 105       | 80-120       |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Parameter | Units | 92585058023 |                | 3546470         |           | 3546471    |          | % Rec | % Rec  | % Rec | Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-----------------|-----------|------------|----------|-------|--------|-------|--------|-----|---------|------|
|           |       | Result      | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec |       |        |       |        |     |         |      |
| Antimony  | mg/L  | 0.027       | 0.1            | 0.1             | 0.13      | 0.14       | 107      | 110   | 75-125 | 3     | 20     |     |         |      |
| Arsenic   | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.10       | 102      | 104   | 75-125 | 1     | 20     |     |         |      |
| Barium    | mg/L  | 0.049       | 0.1            | 0.1             | 0.16      | 0.17       | 115      | 119   | 75-125 | 3     | 20     |     |         |      |
| Beryllium | mg/L  | ND          | 0.1            | 0.1             | 0.095     | 0.097      | 95       | 97    | 75-125 | 2     | 20     |     |         |      |
| Boron     | mg/L  | 0.021J      | 1              | 1               | 0.95      | 0.96       | 93       | 94    | 75-125 | 1     | 20     |     |         |      |
| Cadmium   | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.10       | 105      | 105   | 75-125 | 0     | 20     |     |         |      |
| Chromium  | mg/L  | 0.0011J     | 0.1            | 0.1             | 0.10      | 0.10       | 104      | 100   | 75-125 | 3     | 20     |     |         |      |
| Cobalt    | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.095      | 100      | 95    | 75-125 | 6     | 20     |     |         |      |
| Copper    | mg/L  | 0.00088J    | 0.1            | 0.1             | 0.097     | 0.091      | 96       | 91    | 75-125 | 6     | 20     |     |         |      |
| Lead      | mg/L  | ND          | 0.1            | 0.1             | 0.094     | 0.095      | 94       | 95    | 75-125 | 0     | 20     |     |         |      |
| Nickel    | mg/L  | 0.0063      | 0.1            | 0.1             | 0.11      | 0.099      | 99       | 92    | 75-125 | 7     | 20     |     |         |      |
| Selenium  | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.10       | 99       | 102   | 75-125 | 3     | 20     |     |         |      |
| Silver    | mg/L  | ND          | 0.1            | 0.1             | 0.099     | 0.10       | 99       | 101   | 75-125 | 3     | 20     |     |         |      |
| Thallium  | mg/L  | ND          | 0.1            | 0.1             | 0.096     | 0.098      | 96       | 98    | 75-125 | 2     | 20     |     |         |      |
| Vanadium  | mg/L  | ND          | 0.1            | 0.1             | 0.11      | 0.10       | 106      | 101   | 75-125 | 5     | 20     |     |         |      |

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**QUALITY CONTROL DATA**

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

|                  |           |                       |  |
|------------------|-----------|-----------------------|--|
| QC Batch:        | 676529    | Analysis Method:      | EPA 7470A  |
| QC Batch Method: | EPA 7470A | Analysis Description: | 7470 Mercury                                     |
|                  |           | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004, 92585058005, 92585058006, 92585058007, 92585058008, 92585058009

METHOD BLANK: 3541084 Matrix: Water

Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004, 92585058005, 92585058006, 92585058007, 92585058008, 92585058009

| Parameter | Units | Blank Result | Reporting Limit | MDL     | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|---------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00020         | 0.00013 | 02/08/22 14:45 |            |

LABORATORY CONTROL SAMPLE: 3541085

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0024     | 94        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3541086 3541087

| Parameter | Units | 3541086        |                 | 3541087   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |        |         |      |
| Mercury   | mg/L  | ND             | 0.0025          | 0.0025    | 0.0024     | 0.0023   | 90        | 87           | 75-125 | 3       | 20   |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

|                  |           |                       |  |
|------------------|-----------|-----------------------|--|
| QC Batch:        | 676728    | Analysis Method:      | EPA 7470A  |
| QC Batch Method: | EPA 7470A | Analysis Description: | 7470 Mercury                                     |
|                  |           | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92585058010, 92585058011, 92585058012, 92585058013, 92585058014, 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020, 92585058021, 92585058022, 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029

METHOD BLANK: 3541855 Matrix: Water

Associated Lab Samples: 92585058010, 92585058011, 92585058012, 92585058013, 92585058014, 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020, 92585058021, 92585058022, 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029

| Parameter | Units | Blank Result | Reporting Limit | MDL     | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|---------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00020         | 0.00013 | 02/09/22 08:40 |            |

LABORATORY CONTROL SAMPLE: 3541856

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0022     | 89        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3541857 3541858

| Parameter | Units | 92585058010 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    | 0.0024     | 92       | 94        | 75-125       | 2   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

|                            |  |
|----------------------------|--|
| QC Batch: 677024           | Analysis Method: EPA 7470A                                   |
| QC Batch Method: EPA 7470A | Analysis Description: 7470 Mercury                           |
|                            | Laboratory: Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92585058030

METHOD BLANK: 3543214 Matrix: Water

Associated Lab Samples: 92585058030

| Parameter | Units | Blank Result | Reporting Limit | MDL     | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|---------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00020         | 0.00013 | 02/09/22 15:30 |            |

LABORATORY CONTROL SAMPLE: 3543215

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0025     | 101       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3543216 3543217

| Parameter | Units | 3543216            |                | 3543217         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|
|           |       | 92585717001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |      |
| Mercury   | mg/L  | ND                 | 0.0025         | 0.0025          | 0.0025    | 0.0024   | 98        | 95           | 75-125 | 4       | 20   |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

QC Batch: 675202

Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004

METHOD BLANK: 3533883

Matrix: Water

Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 02/01/22 14:06 |            |

LABORATORY CONTROL SAMPLE: 3533884

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 384        | 96        | 80-120       |            |

SAMPLE DUPLICATE: 3533885

| Parameter              | Units | 92584543008 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 57.0               | 52.0       | 9   | 25      |            |

SAMPLE DUPLICATE: 3533886

| Parameter              | Units | 92585000001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 56.0               | 66.0       | 16  | 25      |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

|                  |               |                       |  |
|------------------|---------------|-----------------------|--|
| QC Batch:        | 675522        | Analysis Method:      | SM 2540C-2015                                    |
| QC Batch Method: | SM 2540C-2015 | Analysis Description: | 2540C Total Dissolved Solids                     |
|                  |               | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92585058005, 92585058006, 92585058007, 92585058008, 92585058009, 92585058010, 92585058011, 92585058012, 92585058013

METHOD BLANK: 3535377 Matrix: Water  
Associated Lab Samples: 92585058005, 92585058006, 92585058007, 92585058008, 92585058009, 92585058010, 92585058011, 92585058012, 92585058013

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 02/02/22 17:20 |            |

LABORATORY CONTROL SAMPLE: 3535378

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 382        | 96        | 80-120       |            |

SAMPLE DUPLICATE: 3535379

| Parameter              | Units | 92583955021 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 290                | 301        | 4   | 25      |            |

SAMPLE DUPLICATE: 3535380

| Parameter              | Units | 92584814001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 4960000 ug/L       | 4580       | 8   | 25      |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

QC Batch: 675523

Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92585058014, 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020, 92585058021, 92585058022

METHOD BLANK: 3535385

Matrix: Water

Associated Lab Samples: 92585058014, 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020, 92585058021, 92585058022

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 02/02/22 17:42 |            |

LABORATORY CONTROL SAMPLE: 3535386

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 382        | 96        | 80-120       |            |

SAMPLE DUPLICATE: 3535387

| Parameter              | Units | 92585058014 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | ND                 | ND         |     | 25      |            |

SAMPLE DUPLICATE: 3535388

| Parameter              | Units | 92585058019 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 168                | 193        | 14  | 25      |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

QC Batch: 675783

Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029, 92585058030

METHOD BLANK: 3536822

Matrix: Water

Associated Lab Samples: 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029, 92585058030

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 02/03/22 12:37 |            |

LABORATORY CONTROL SAMPLE: 3536823

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 376        | 94        | 80-120       |            |

SAMPLE DUPLICATE: 3536824

| Parameter              | Units | 92584785018 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 274                | 288        | 5   | 25      |            |

SAMPLE DUPLICATE: 3536825

| Parameter              | Units | 92583603003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 155                | 146        | 6   | 25      |            |

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

QC Batch: 796924 Analysis Method: SM 2320B  
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Minneapolis  
Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004

METHOD BLANK: 4235804 Matrix: Water  
Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004

| Parameter                      | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|--------------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO3     | mg/L  | ND           | 5.0             | 1.8 | 02/03/22 14:42 |            |
| Alkalinity,Bicarbonate (CaCO3) | mg/L  | ND           | 5.0             | 1.8 | 02/03/22 14:42 |            |
| Alkalinity,Carbonate (CaCO3)   | mg/L  | ND           | 5.0             | 1.8 | 02/03/22 14:42 |            |

LABORATORY CONTROL SAMPLE & LCSD: 4235805 4235806

| Parameter                  | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|----------------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| Alkalinity, Total as CaCO3 | mg/L  | 40          | 41.8       | 42.0        | 105       | 105        | 90-110       | 0   | 20      |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4235807 4235808

| Parameter                  | Units | 10595854005 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 127                | 40             | 40              | 166       | 166        | 99       | 98        | 80-120       | 0   | 20      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4235809 4235810

| Parameter                  | Units | 92585058002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 132                | 40             | 40              | 171       | 170        | 98       | 97        | 80-120       | 0   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

QC Batch: 797156

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 92585058005, 92585058006, 92585058007, 92585058008, 92585058009, 92585058010, 92585058011, 92585058012, 92585058013, 92585058014

METHOD BLANK: 4236642

Matrix: Water

Associated Lab Samples: 92585058005, 92585058006, 92585058007, 92585058008, 92585058009, 92585058010, 92585058011, 92585058012, 92585058013, 92585058014

| Parameter                                   | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|---|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub>      | mg/L  | ND           | 5.0             | 1.8 | 02/03/22 20:09 |            |
| Alkalinity,Bicarbonate (CaCO <sub>3</sub> ) | mg/L  | ND           | 5.0             | 1.8 | 02/03/22 20:09 |            |
| Alkalinity,Carbonate (CaCO <sub>3</sub> )   | mg/L  | ND           | 5.0             | 1.8 | 02/03/22 20:09 |            |

LABORATORY CONTROL SAMPLE & LCSD: 4236643

4236644

| Parameter                              | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|--|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 40          | 42.2       | 42.2        | 106       | 106        | 90-110       | 0   | 20      |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4236645

4236646

| Parameter                              | Units | 10595801002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|--|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 73.8               | 40             | 40              | 114       | 114        | 101      | 102       | 80-120       | 0   | 20      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4236647

4236648

| Parameter                              | Units | 10595871007 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|--|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 884                | 40             | 40              | 923       | 924        | 98       | 100       | 80-120       | 0   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

QC Batch: 797193 Analysis Method: SM 2320B  
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Minneapolis  
Associated Lab Samples: 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020, 92585058021, 92585058022

METHOD BLANK: 4236738 Matrix: Water  
Associated Lab Samples: 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020, 92585058021, 92585058022

| Parameter                      | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|--------------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO3     | mg/L  | ND           | 5.0             | 1.8 | 02/04/22 14:59 |            |
| Alkalinity,Bicarbonate (CaCO3) | mg/L  | ND           | 5.0             | 1.8 | 02/04/22 14:59 |            |
| Alkalinity,Carbonate (CaCO3)   | mg/L  | ND           | 5.0             | 1.8 | 02/04/22 14:59 |            |

LABORATORY CONTROL SAMPLE & LCSD: 4236739 4236740

| Parameter                  | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|----------------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| Alkalinity, Total as CaCO3 | mg/L  | 40          | 42.0       | 41.9        | 105       | 105        | 90-110       | 0   | 20      |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4236741 4236742

| Parameter                  | Units | 10595930001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 191                | 40             | 40              | 229       | 231        | 95       | 99        | 80-120       | 1   | 20      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4236743 4236744

| Parameter                  | Units | 10595930002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 82.0               | 40             | 40              | 121       | 121        | 98       | 98        | 80-120       | 0   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

|                  |          |                       |  |
|------------------|----------|-----------------------|--|
| QC Batch:        | 797866   | Analysis Method:      | SM 2320B                               |
| QC Batch Method: | SM 2320B | Analysis Description: | 2320B Alkalinity                       |
|                  |          | Laboratory:           | Pace Analytical Services - Minneapolis |

Associated Lab Samples: 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029, 92585058030

METHOD BLANK: 4239372 Matrix: Water  
Associated Lab Samples: 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029, 92585058030

| Parameter                      | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|--------------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO3     | mg/L  | ND           | 5.0             | 1.8 | 02/08/22 21:36 |            |
| Alkalinity,Bicarbonate (CaCO3) | mg/L  | ND           | 5.0             | 1.8 | 02/08/22 21:36 |            |
| Alkalinity,Carbonate (CaCO3)   | mg/L  | ND           | 5.0             | 1.8 | 02/08/22 21:36 |            |

LABORATORY CONTROL SAMPLE & LCSD: 4239373 4239374

| Parameter                  | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|----------------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| Alkalinity, Total as CaCO3 | mg/L  | 40          | 41.8       | 41.3        | 104       | 103        | 90-110       | 1   | 20      |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4239375 4239376

| Parameter                  | Units | 10596751001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 22.6               | 40             | 40              | 53.6      | 59.6       | 78       | 93        | 80-120       | 10  | 20      | M1   |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4239377 4239378

| Parameter                  | Units | 92585555002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 84.2               | 40             | 40              | 121       | 124        | 92       | 100       | 80-120       | 2   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

QC Batch: 675177 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004, 92585058005, 92585058006, 92585058007, 92585058008

METHOD BLANK: 3533812 Matrix: Water  
Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004, 92585058005, 92585058006, 92585058007, 92585058008

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 02/01/22 19:53 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 02/01/22 19:53 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 02/01/22 19:53 |            |

LABORATORY CONTROL SAMPLE: 3533813

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 53.1       | 106       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.5        | 102       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 50.9       | 102       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3533814 3533815

| Parameter | Units | 92584984011 |                 | 3533815   |                 | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|-----------|-------|-------------|-----------------|-----------|-----------------|----------|-----------|--------------|--------|---------|------|
|           |       | MS Result   | MSD Spike Conc. | MS Result | MSD Spike Conc. |          |           |              |        |         |      |
| Chloride  | mg/L  | 5.8         | 50              | 50        | 56.4            | 57.4     | 101       | 103          | 90-110 | 2       | 10   |
| Fluoride  | mg/L  | 0.48        | 2.5             | 2.5       | 2.9             | 3.0      | 98        | 100          | 90-110 | 2       | 10   |
| Sulfate   | mg/L  | 27.5        | 50              | 50        | 77.3            | 79.0     | 99        | 103          | 90-110 | 2       | 10   |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3533816 3533817

| Parameter | Units | 92584984021 |                 | 3533817   |                 | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual  |
|-----------|-------|-------------|-----------------|-----------|-----------------|----------|-----------|--------------|--------|---------|-------|
|           |       | MS Result   | MSD Spike Conc. | MS Result | MSD Spike Conc. |          |           |              |        |         |       |
| Chloride  | mg/L  | 7.7         | 50              | 50        | 59.9            | 57.3     | 104       | 99           | 90-110 | 4       | 10    |
| Fluoride  | mg/L  | 0.19        | 2.5             | 2.5       | 2.6             | 2.4      | 95        | 90           | 90-110 | 5       | 10    |
| Sulfate   | mg/L  | 87.5        | 50              | 50        | 115             | 114      | 56        | 52           | 90-110 | 1       | 10 M1 |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

|                  |                        |                       |                                      |
|------------------|------------------------|-----------------------|--------------------------------------|
| QC Batch:        | 675178                 | Analysis Method:      | EPA 300.0 Rev 2.1 1993               |
| QC Batch Method: | EPA 300.0 Rev 2.1 1993 | Analysis Description: | 300.0 IC Anions                      |
|                  |                        | Laboratory:           | Pace Analytical Services - Asheville |

Associated Lab Samples: 92585058009, 92585058010, 92585058011, 92585058012, 92585058013, 92585058014, 92585058015, 92585058016, 92585058017, 92585058018

METHOD BLANK: 3533818 Matrix: Water  
Associated Lab Samples: 92585058009, 92585058010, 92585058011, 92585058012, 92585058013, 92585058014, 92585058015, 92585058016, 92585058017, 92585058018

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 02/02/22 03:33 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 02/02/22 03:33 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 02/02/22 03:33 |            |

LABORATORY CONTROL SAMPLE: 3533819

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 49.5       | 99        | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.4        | 96        | 90-110       |            |
| Sulfate   | mg/L  | 50          | 48.4       | 97        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3533820 3533821

| Parameter | Units | 3533820            |                | 3533821         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|
|           |       | 92585058009 Result | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |      |
| Chloride  | mg/L  | 2.4                | 50             | 50              | 56.3      | 53.9     | 108       | 103          | 90-110 | 4       | 10   |
| Fluoride  | mg/L  | ND                 | 2.5            | 2.5             | 2.5       | 2.4      | 101       | 96           | 90-110 | 5       | 10   |
| Sulfate   | mg/L  | 1.6                | 50             | 50              | 55.3      | 54.4     | 107       | 106          | 90-110 | 2       | 10   |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92585058

QC Batch: 675484 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92585058019, 92585058020, 92585058021, 92585058022

METHOD BLANK: 3535178 Matrix: Water  
Associated Lab Samples: 92585058019, 92585058020, 92585058021, 92585058022

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 02/04/22 12:13 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 02/04/22 12:13 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 02/04/22 12:13 |            |

LABORATORY CONTROL SAMPLE: 3535179

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 50.4       | 101       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.5        | 98        | 90-110       |            |
| Sulfate   | mg/L  | 50          | 49.3       | 99        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3535180 3535181

| Parameter | Units | MS                 |             | MSD         |       | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|-------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92585451002 Result | Spike Conc. | Spike Conc. | Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 65.5               | 50          | 50          | 50    | 101       | 102        | 71       | 74        | 90-110       | 1   | 10      | M1   |
| Fluoride  | mg/L  | 0.46               | 2.5         | 2.5         | 2.5   | 2.9       | 2.9        | 97       | 97        | 90-110       | 0   | 10      |      |
| Sulfate   | mg/L  | 122                | 50          | 50          | 50    | 169       | 170        | 94       | 96        | 90-110       | 1   | 10      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3535182 3535183

| Parameter | Units | MS                 |             | MSD         |       | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|-------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92584785016 Result | Spike Conc. | Spike Conc. | Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 4.9                | 50          | 50          | 50    | 57.1      | 56.8       | 104      | 104       | 90-110       | 1   | 10      |      |
| Fluoride  | mg/L  | ND                 | 2.5         | 2.5         | 2.5   | 2.5       | 2.5        | 100      | 100       | 90-110       | 0   | 10      |      |
| Sulfate   | mg/L  | 89.9               | 50          | 50          | 50    | 117       | 117        | 54       | 55        | 90-110       | 0   | 10      | M1   |

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**QUALITY CONTROL DATA**

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

|                  |                        |                       |                                      |
|------------------|------------------------|-----------------------|--------------------------------------|
| QC Batch:        | 676288                 | Analysis Method:      | EPA 300.0 Rev 2.1 1993               |
| QC Batch Method: | EPA 300.0 Rev 2.1 1993 | Analysis Description: | 300.0 IC Anions                      |
|                  |                        | Laboratory:           | Pace Analytical Services - Asheville |

Associated Lab Samples: 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029

METHOD BLANK: 3539901 Matrix: Water  
Associated Lab Samples: 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 02/06/22 17:16 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 02/06/22 17:16 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 02/06/22 17:16 |            |

LABORATORY CONTROL SAMPLE: 3539902

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 52.2       | 104       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.5        | 99        | 90-110       |            |
| Sulfate   | mg/L  | 50          | 50.9       | 102       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3539903 3539904

| Parameter | Units | MS                 |             | MSD         |        | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|--------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92586144012 Result | Spike Conc. | Spike Conc. | Result |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 4.2                | 50          | 50          | 63.7   | 64.4      | 119        | 120      | 90-110    | 1            | 10  | M1      |      |
| Fluoride  | mg/L  | ND                 | 2.5         | 2.5         | 2.9    | 2.9       | 113        | 116      | 90-110    | 2            | 10  | M1      |      |
| Sulfate   | mg/L  | 3.0                | 50          | 50          | 62.0   | 62.7      | 118        | 119      | 90-110    | 1            | 10  | M1      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3539905 3539906

| Parameter | Units | MS                 |             | MSD         |        | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|--------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92586259001 Result | Spike Conc. | Spike Conc. | Result |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 46.0               | 50          | 50          | 84.0   | 85.4      | 76         | 79       | 90-110    | 2            | 10  | M1      |      |
| Fluoride  | mg/L  | 9.9                | 2.5         | 2.5         | 11.5   | 10.9      | 64         | 38       | 90-110    | 6            | 10  | M1      |      |
| Sulfate   | mg/L  | 750                | 50          | 50          | 782    | 783       | 64         | 65       | 90-110    | 0            | 10  | M1      |      |

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

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**QUALITY CONTROL DATA**

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

|   |  |
|---|--|
| QC Batch: 676332                        | Analysis Method: EPA 300.0 Rev 2.1 1993          |
| QC Batch Method: EPA 300.0 Rev 2.1 1993 | Analysis Description: 300.0 IC Anions            |
|   | Laboratory: Pace Analytical Services - Asheville |

Associated Lab Samples: 92585058030

METHOD BLANK: 3540061 Matrix: Water

Associated Lab Samples: 92585058030

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 02/06/22 23:27 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 02/06/22 23:27 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 02/06/22 23:27 |            |

LABORATORY CONTROL SAMPLE: 3540062

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 47.3       | 95        | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.3        | 92        | 90-110       |            |
| Sulfate   | mg/L  | 50          | 45.8       | 92        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3540063 3540064

| Parameter | Units | 92585058030 |       | MS Spike Conc. |       | MSD Spike Conc. |    | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-------|----------------|-------|-----------------|----|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | Result      | Conc. | Conc.          | Conc. |                 |    |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | ND          | 50    | 50             | 48.9  | 49.4            | 98 | 99        | 90-110     | 1        | 10        |              |     |         |      |
| Fluoride  | mg/L  | ND          | 2.5   | 2.5            | 2.3   | 2.3             | 92 | 93        | 90-110     | 1        | 10        |              |     |         |      |
| Sulfate   | mg/L  | ND          | 50    | 50             | 48.2  | 48.7            | 96 | 97        | 90-110     | 1        | 10        |              |     |         |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3540065 3540066

| Parameter | Units | 9258555010 |       | MS Spike Conc. |       | MSD Spike Conc. |     | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|------------|-------|----------------|-------|-----------------|-----|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | Result     | Conc. | Conc.          | Conc. |                 |     |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 4.8        | 50    | 50             | 55.6  | 55.1            | 102 | 101       | 90-110     | 1        | 10        |              |     |         |      |
| Fluoride  | mg/L  | ND         | 2.5   | 2.5            | 2.5   | 2.5             | 100 | 100       | 90-110     | 0        | 10        |              |     |         |      |
| Sulfate   | mg/L  | 1.2        | 50    | 50             | 51.6  | 51.1            | 101 | 100       | 90-110     | 1        | 10        |              |     |         |      |

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

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## QUALIFIERS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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 - 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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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.

BC The same analyte was detected in an associated blank at a concentration above 1/2 the reporting limit but below the laboratory reporting limit.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Lab ID      | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|-----------------|----------|-------------------|------------------|
| 92585058001 | GWA-38    |                 |          |                   |                  |
| 92585058002 | GWA-52    |                 |          |                   |                  |
| 92585058003 | GWA-54    |                 |          |                   |                  |
| 92585058005 | GWA-36RA  |                 |          |                   |                  |
| 92585058006 | GWA-37    |                 |          |                   |                  |
| 92585058007 | GWA-51RZ  |                 |          |                   |                  |
| 92585058008 | GWA-53    |                 |          |                   |                  |
| 92585058009 | GWA-53R   |                 |          |                   |                  |
| 92585058010 | GWA-55    |                 |          |                   |                  |
| 92585058011 | GWA-56    |                 |          |                   |                  |
| 92585058015 | GWC-18R   |                 |          |                   |                  |
| 92585058016 | GWC-19R   |                 |          |                   |                  |
| 92585058017 | GWC-20R   |                 |          |                   |                  |
| 92585058018 | GWC-22R   |                 |          |                   |                  |
| 92585058019 | GWC-25R   |                 |          |                   |                  |
| 92585058020 | GWA-55R   |                 |          |                   |                  |
| 92585058023 | GWC-16R   |                 |          |                   |                  |
| 92585058024 | GWC-17R   |                 |          |                   |                  |
| 92585058025 | GWC-18    |                 |          |                   |                  |
| 92585058026 | GWC-21R   |                 |          |                   |                  |
| 92585058027 | GWC-23R   |                 |          |                   |                  |
| 92585058028 | GWC-24R   |                 |          |                   |                  |
| 92585058001 | GWA-38    | EPA 3010A       | 676146   | EPA 6010D         | 676271           |
| 92585058002 | GWA-52    | EPA 3010A       | 676146   | EPA 6010D         | 676271           |
| 92585058003 | GWA-54    | EPA 3010A       | 676146   | EPA 6010D         | 676271           |
| 92585058004 | FB-1      | EPA 3010A       | 676146   | EPA 6010D         | 676271           |
| 92585058005 | GWA-36RA  | EPA 3010A       | 676146   | EPA 6010D         | 676271           |
| 92585058006 | GWA-37    | EPA 3010A       | 676146   | EPA 6010D         | 676271           |
| 92585058007 | GWA-51RZ  | EPA 3010A       | 676146   | EPA 6010D         | 676271           |
| 92585058008 | GWA-53    | EPA 3010A       | 676146   | EPA 6010D         | 676271           |
| 92585058009 | GWA-53R   | EPA 3010A       | 676146   | EPA 6010D         | 676271           |
| 92585058010 | GWA-55    | EPA 3010A       | 676146   | EPA 6010D         | 676271           |
| 92585058011 | GWA-56    | EPA 3010A       | 676146   | EPA 6010D         | 676271           |
| 92585058012 | DUP-1     | EPA 3010A       | 676146   | EPA 6010D         | 676271           |
| 92585058013 | FB-2      | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058014 | EB-1      | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058015 | GWC-18R   | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058016 | GWC-19R   | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058017 | GWC-20R   | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058018 | GWC-22R   | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058019 | GWC-25R   | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058020 | GWA-55R   | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058021 | DUP-2     | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058022 | FB-3      | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058023 | GWC-16R   | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058024 | GWC-17R   | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058025 | GWC-18    | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058026 | GWC-21R   | EPA 3010A       | 677117   | EPA 6010D         | 677432           |

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Lab ID      | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|-----------------|----------|-------------------|------------------|
| 92585058027 | GWC-23R   | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058028 | GWC-24R   | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058029 | DUP-3     | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058030 | FB-4      | EPA 3010A       | 677117   | EPA 6010D         | 677432           |
| 92585058001 | GWA-38    | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058002 | GWA-52    | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058003 | GWA-54    | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058004 | FB-1      | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058005 | GWA-36RA  | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058006 | GWA-37    | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058007 | GWA-51RZ  | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058008 | GWA-53    | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058009 | GWA-53R   | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058010 | GWA-55    | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058011 | GWA-56    | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058012 | DUP-1     | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058013 | FB-2      | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058014 | EB-1      | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058015 | GWC-18R   | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058016 | GWC-19R   | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058017 | GWC-20R   | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058018 | GWC-22R   | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058019 | GWC-25R   | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058020 | GWA-55R   | EPA 3005A       | 677120   | EPA 6020B         | 677422           |
| 92585058021 | DUP-2     | EPA 3005A       | 677647   | EPA 6020B         | 677773           |
| 92585058022 | FB-3      | EPA 3005A       | 677647   | EPA 6020B         | 677773           |
| 92585058023 | GWC-16R   | EPA 3005A       | 677647   | EPA 6020B         | 677773           |
| 92585058024 | GWC-17R   | EPA 3005A       | 677647   | EPA 6020B         | 677773           |
| 92585058025 | GWC-18    | EPA 3005A       | 677647   | EPA 6020B         | 677773           |
| 92585058026 | GWC-21R   | EPA 3005A       | 677647   | EPA 6020B         | 677773           |
| 92585058027 | GWC-23R   | EPA 3005A       | 677647   | EPA 6020B         | 677773           |
| 92585058028 | GWC-24R   | EPA 3005A       | 677647   | EPA 6020B         | 677773           |
| 92585058029 | DUP-3     | EPA 3005A       | 677647   | EPA 6020B         | 677773           |
| 92585058030 | FB-4      | EPA 3005A       | 677647   | EPA 6020B         | 677773           |
| 92585058001 | GWA-38    | EPA 7470A       | 676529   | EPA 7470A         | 676769           |
| 92585058002 | GWA-52    | EPA 7470A       | 676529   | EPA 7470A         | 676769           |
| 92585058003 | GWA-54    | EPA 7470A       | 676529   | EPA 7470A         | 676769           |
| 92585058004 | FB-1      | EPA 7470A       | 676529   | EPA 7470A         | 676769           |
| 92585058005 | GWA-36RA  | EPA 7470A       | 676529   | EPA 7470A         | 676769           |
| 92585058006 | GWA-37    | EPA 7470A       | 676529   | EPA 7470A         | 676769           |
| 92585058007 | GWA-51RZ  | EPA 7470A       | 676529   | EPA 7470A         | 676769           |
| 92585058008 | GWA-53    | EPA 7470A       | 676529   | EPA 7470A         | 676769           |
| 92585058009 | GWA-53R   | EPA 7470A       | 676529   | EPA 7470A         | 676769           |
| 92585058010 | GWA-55    | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058011 | GWA-56    | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058012 | DUP-1     | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058013 | FB-2      | EPA 7470A       | 676728   | EPA 7470A         | 676959           |

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Lab ID      | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|-----------------|----------|-------------------|------------------|
| 92585058014 | EB-1      | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058015 | GWC-18R   | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058016 | GWC-19R   | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058017 | GWC-20R   | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058018 | GWC-22R   | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058019 | GWC-25R   | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058020 | GWA-55R   | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058021 | DUP-2     | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058022 | FB-3      | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058023 | GWC-16R   | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058024 | GWC-17R   | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058025 | GWC-18    | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058026 | GWC-21R   | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058027 | GWC-23R   | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058028 | GWC-24R   | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058029 | DUP-3     | EPA 7470A       | 676728   | EPA 7470A         | 676959           |
| 92585058030 | FB-4      | EPA 7470A       | 677024   | EPA 7470A         | 677121           |
| 92585058001 | GWA-38    | SM 2540C-2015   | 675202   |                   |                  |
| 92585058002 | GWA-52    | SM 2540C-2015   | 675202   |                   |                  |
| 92585058003 | GWA-54    | SM 2540C-2015   | 675202   |                   |                  |
| 92585058004 | FB-1      | SM 2540C-2015   | 675202   |                   |                  |
| 92585058005 | GWA-36RA  | SM 2540C-2015   | 675522   |                   |                  |
| 92585058006 | GWA-37    | SM 2540C-2015   | 675522   |                   |                  |
| 92585058007 | GWA-51RZ  | SM 2540C-2015   | 675522   |                   |                  |
| 92585058008 | GWA-53    | SM 2540C-2015   | 675522   |                   |                  |
| 92585058009 | GWA-53R   | SM 2540C-2015   | 675522   |                   |                  |
| 92585058010 | GWA-55    | SM 2540C-2015   | 675522   |                   |                  |
| 92585058011 | GWA-56    | SM 2540C-2015   | 675522   |                   |                  |
| 92585058012 | DUP-1     | SM 2540C-2015   | 675522   |                   |                  |
| 92585058013 | FB-2      | SM 2540C-2015   | 675522   |                   |                  |
| 92585058014 | EB-1      | SM 2540C-2015   | 675523   |                   |                  |
| 92585058015 | GWC-18R   | SM 2540C-2015   | 675523   |                   |                  |
| 92585058016 | GWC-19R   | SM 2540C-2015   | 675523   |                   |                  |
| 92585058017 | GWC-20R   | SM 2540C-2015   | 675523   |                   |                  |
| 92585058018 | GWC-22R   | SM 2540C-2015   | 675523   |                   |                  |
| 92585058019 | GWC-25R   | SM 2540C-2015   | 675523   |                   |                  |
| 92585058020 | GWA-55R   | SM 2540C-2015   | 675523   |                   |                  |
| 92585058021 | DUP-2     | SM 2540C-2015   | 675523   |                   |                  |
| 92585058022 | FB-3      | SM 2540C-2015   | 675523   |                   |                  |
| 92585058023 | GWC-16R   | SM 2540C-2015   | 675783   |                   |                  |
| 92585058024 | GWC-17R   | SM 2540C-2015   | 675783   |                   |                  |
| 92585058025 | GWC-18    | SM 2540C-2015   | 675783   |                   |                  |
| 92585058026 | GWC-21R   | SM 2540C-2015   | 675783   |                   |                  |
| 92585058027 | GWC-23R   | SM 2540C-2015   | 675783   |                   |                  |
| 92585058028 | GWC-24R   | SM 2540C-2015   | 675783   |                   |                  |
| 92585058029 | DUP-3     | SM 2540C-2015   | 675783   |                   |                  |

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Lab ID      | Sample ID | QC Batch Method        | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|------------------------|----------|-------------------|------------------|
| 92585058030 | FB-4      | SM 2540C-2015          | 675783   |                   |                  |
| 92585058001 | GWA-38    | SM 2320B               | 796924   |                   |                  |
| 92585058002 | GWA-52    | SM 2320B               | 796924   |                   |                  |
| 92585058003 | GWA-54    | SM 2320B               | 796924   |                   |                  |
| 92585058004 | FB-1      | SM 2320B               | 796924   |                   |                  |
| 92585058005 | GWA-36RA  | SM 2320B               | 797156   |                   |                  |
| 92585058006 | GWA-37    | SM 2320B               | 797156   |                   |                  |
| 92585058007 | GWA-51RZ  | SM 2320B               | 797156   |                   |                  |
| 92585058008 | GWA-53    | SM 2320B               | 797156   |                   |                  |
| 92585058009 | GWA-53R   | SM 2320B               | 797156   |                   |                  |
| 92585058010 | GWA-55    | SM 2320B               | 797156   |                   |                  |
| 92585058011 | GWA-56    | SM 2320B               | 797156   |                   |                  |
| 92585058012 | DUP-1     | SM 2320B               | 797156   |                   |                  |
| 92585058013 | FB-2      | SM 2320B               | 797156   |                   |                  |
| 92585058014 | EB-1      | SM 2320B               | 797156   |                   |                  |
| 92585058015 | GWC-18R   | SM 2320B               | 797193   |                   |                  |
| 92585058016 | GWC-19R   | SM 2320B               | 797193   |                   |                  |
| 92585058017 | GWC-20R   | SM 2320B               | 797193   |                   |                  |
| 92585058018 | GWC-22R   | SM 2320B               | 797193   |                   |                  |
| 92585058019 | GWC-25R   | SM 2320B               | 797193   |                   |                  |
| 92585058020 | GWA-55R   | SM 2320B               | 797193   |                   |                  |
| 92585058021 | DUP-2     | SM 2320B               | 797193   |                   |                  |
| 92585058022 | FB-3      | SM 2320B               | 797193   |                   |                  |
| 92585058023 | GWC-16R   | SM 2320B               | 797866   |                   |                  |
| 92585058024 | GWC-17R   | SM 2320B               | 797866   |                   |                  |
| 92585058025 | GWC-18    | SM 2320B               | 797866   |                   |                  |
| 92585058026 | GWC-21R   | SM 2320B               | 797866   |                   |                  |
| 92585058027 | GWC-23R   | SM 2320B               | 797866   |                   |                  |
| 92585058028 | GWC-24R   | SM 2320B               | 797866   |                   |                  |
| 92585058029 | DUP-3     | SM 2320B               | 797866   |                   |                  |
| 92585058030 | FB-4      | SM 2320B               | 797866   |                   |                  |
| 92585058001 | GWA-38    | EPA 300.0 Rev 2.1 1993 | 675177   |                   |                  |
| 92585058002 | GWA-52    | EPA 300.0 Rev 2.1 1993 | 675177   |                   |                  |
| 92585058003 | GWA-54    | EPA 300.0 Rev 2.1 1993 | 675177   |                   |                  |
| 92585058004 | FB-1      | EPA 300.0 Rev 2.1 1993 | 675177   |                   |                  |
| 92585058005 | GWA-36RA  | EPA 300.0 Rev 2.1 1993 | 675177   |                   |                  |
| 92585058006 | GWA-37    | EPA 300.0 Rev 2.1 1993 | 675177   |                   |                  |
| 92585058007 | GWA-51RZ  | EPA 300.0 Rev 2.1 1993 | 675177   |                   |                  |
| 92585058008 | GWA-53    | EPA 300.0 Rev 2.1 1993 | 675177   |                   |                  |
| 92585058009 | GWA-53R   | EPA 300.0 Rev 2.1 1993 | 675178   |                   |                  |
| 92585058010 | GWA-55    | EPA 300.0 Rev 2.1 1993 | 675178   |                   |                  |
| 92585058011 | GWA-56    | EPA 300.0 Rev 2.1 1993 | 675178   |                   |                  |
| 92585058012 | DUP-1     | EPA 300.0 Rev 2.1 1993 | 675178   |                   |                  |
| 92585058013 | FB-2      | EPA 300.0 Rev 2.1 1993 | 675178   |                   |                  |
| 92585058014 | EB-1      | EPA 300.0 Rev 2.1 1993 | 675178   |                   |                  |
| 92585058015 | GWC-18R   | EPA 300.0 Rev 2.1 1993 | 675178   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE


Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

| Lab ID      | Sample ID | QC Batch Method        | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|------------------------|----------|-------------------|------------------|
| 92585058016 | GWC-19R   | EPA 300.0 Rev 2.1 1993 | 675178   |                   |                  |
| 92585058017 | GWC-20R   | EPA 300.0 Rev 2.1 1993 | 675178   |                   |                  |
| 92585058018 | GWC-22R   | EPA 300.0 Rev 2.1 1993 | 675178   |                   |                  |
| 92585058019 | GWC-25R   | EPA 300.0 Rev 2.1 1993 | 675484   |                   |                  |
| 92585058020 | GWA-55R   | EPA 300.0 Rev 2.1 1993 | 675484   |                   |                  |
| 92585058021 | DUP-2     | EPA 300.0 Rev 2.1 1993 | 675484   |                   |                  |
| 92585058022 | FB-3      | EPA 300.0 Rev 2.1 1993 | 675484   |                   |                  |
| 92585058023 | GWC-16R   | EPA 300.0 Rev 2.1 1993 | 676288   |                   |                  |
| 92585058024 | GWC-17R   | EPA 300.0 Rev 2.1 1993 | 676288   |                   |                  |
| 92585058025 | GWC-18    | EPA 300.0 Rev 2.1 1993 | 676288   |                   |                  |
| 92585058026 | GWC-21R   | EPA 300.0 Rev 2.1 1993 | 676288   |                   |                  |
| 92585058027 | GWC-23R   | EPA 300.0 Rev 2.1 1993 | 676288   |                   |                  |
| 92585058028 | GWC-24R   | EPA 300.0 Rev 2.1 1993 | 676288   |                   |                  |
| 92585058029 | DUP-3     | EPA 300.0 Rev 2.1 1993 | 676288   |                   |                  |
| 92585058030 | FB-4      | EPA 300.0 Rev 2.1 1993 | 676332   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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|   |   |   |
|---|---|---|
|  | Document Name:<br><b>Sample Condition Upon Receipt (SCUR)</b> | Document Revised: November 15, 2021<br>Page 1 of 2  |
|   | Document No.:<br><b>F-CAR-CS-033-Rev.08</b>                   | Issuing Authority:<br>Pace Carolinas Quality Office |

**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name:

*GA Power*

Project #:

**WO#: 92585058**



Courier:  Commercial  Fed Ex  UPS  USPS  Client  Pace  Other:

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: *MS 1/29/22*

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Yes  No  N/A

Thermometer:

IR Guid ID: *214*

Type of Ice:

Wet  Blue  None

Cooler Temp:

*5.0*

Correction Factor:

Add/Subtract (°C)

*0.01*

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

*5.1*

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?

Yes  No

Comments/Discrepancy:

|  |  |     |
|--|--|-----|
| Chain of Custody Present?                        | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 1.  |
| Samples Arrived within Hold Time?                | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 2.  |
| Short Hold Time Analysis (<72 hr.)?              | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 3.  |
| Rush Turn Around Time Requested?                 | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 4.  |
| Sufficient Volume?                               | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 5.  |
| Correct Containers Used?                         | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 6.  |
| -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 | 7.  |
| Dissolved analysis: Samples Field Filtered?      | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 8.  |
| Sample Labels Match COC?                         | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 9.  |
| Includes Date/Time/ID/Analysis Matrix: <i>WT</i> |  |     |
| Headspace in VOA Vials (>5-6mm)?                 | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 10. |
| Trip Blank Present?                              | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 11. |
| Trip Blank Custody Seals Present?                | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |     |

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted:

Date/Time:

Project Manager SCURF Review:

Date:

Project Manager SRF Review:

Date:



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

|  |   |
|--|---|
| <b>Section A</b><br>Required Client Information:<br>Company: GA Power<br>Address: 1003 Weatherstone Parkway<br>Woodstock, Ga 30188<br>Email To: Kevin.Stephenson@Resoluteenv.com<br>Phone: (678)5489415 Fax:<br>Requested Due Date/TAT: 10 Day       | <b>Section B</b><br>Required Project Information:<br>Report To: Kristen Jurjko<br>Copy To: Rhonda Quinn<br>Purchase Order No.:<br>Project Name: Plant Bowen Landfill<br>Project Number:<br><b>Section C</b><br>Invoice Information:<br>Attention: Southern Co.<br>Company Name:<br>Address:<br>POC Name:<br>POC Project Reference:<br>POC Project Message:<br>POC Profile #: 2828 |
| <b>REGULATORY AGENCY</b><br>NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/><br>UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> CER |   |
| Site Location: <u>GA</u><br>STATE:   |   |

| ITEM # | Valid Matrix Codes<br>MATRIX CODE (see valid codes to left) | Sample Type (G=GRAB C=COMP) | DATE     | TIME  | DATE | TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives<br>Unpreserved<br>H <sub>2</sub> SO <sub>4</sub><br>HNO <sub>3</sub><br>HCl<br>NaOH<br>Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub><br>Methanol<br>Other | Analysis Test<br>Metals + State Metals<br>Cl, F, SO <sub>4</sub><br>Total/Carb/Bicarb Alk<br>TDS | Requested Analysis Filtered (Y/N) |           | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|--------|---|-----------------------------|----------|-------|------|------|---------------------------|-----------------|---|--|-----------------------------------|-----------|-------------------------|----------------------------|
|        |   |                             |          |       |      |      |                           |                 |   |  | COLLECTED                         | COMPOSITE |                         |                            |
| 1      | GWA-36  |                             |          |       |      |      |                           |                 |   |  |                                   |           |                         |                            |
| 2      | GWA-36R   |                             |          |       |      |      |                           |                 |   |  |                                   |           |                         |                            |
| 3      | GWA-37  |                             |          |       |      |      |                           |                 |   |  |                                   |           |                         |                            |
| 4      | GWA-38  |                             | 11/21/12 | 11:54 |      |      | 43                        | 1               |   |  |                                   |           |                         | S114                       |
| 5      | GWC-16R   |                             |          |       |      |      |                           |                 |   |  |                                   |           |                         |                            |
| 6      | GWC-17R   |                             |          |       |      |      |                           |                 |   |  |                                   |           |                         |                            |
| 7      | GWC-18  |                             |          |       |      |      |                           |                 |   |  |                                   |           |                         |                            |
| 8      | GWC-18R   |                             |          |       |      |      |                           |                 |   |  |                                   |           |                         |                            |
| 9      | GWC-19R   |                             |          |       |      |      |                           |                 |   |  |                                   |           |                         |                            |
| 10     | GWC-20R   |                             |          |       |      |      |                           |                 |   |  |                                   |           |                         |                            |
| 11     | GWC-21R   |                             |          |       |      |      |                           |                 |   |  |                                   |           |                         |                            |
| 12     | GWC-22R   |                             |          |       |      |      |                           |                 |   |  |                                   |           |                         |                            |

Additional Comments: Site Matrix includes Sb, As, Ba, Br, Cd, Cr, Cu, Pb, Ni, Se, Tl, V, Zn, Co

|                               |      |      |                           |       |      |
|-------------------------------|------|------|---------------------------|-------|------|
| RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE  | TIME |
|                               |      |      | <i>ML</i>                 | 11/29 | 0930 |

|                            |                         |
|----------------------------|-------------------------|
| SAMPLER NAME AND SIGNATURE |                         |
| PRINT Name of SAMPLER:     | <i>Kevin Stephenson</i> |
| SIGNATURE of SAMPLER:      | <i>Kevin Stephenson</i> |
| DATE Signed (MM/DD/YYYY):  | 11/21/12                |

Temp in °C: \_\_\_\_\_  
 Received on Ice (Y/N): \_\_\_\_\_  
 Custody Sealed Cooler (Y/N): \_\_\_\_\_  
 Samples Intact (Y/N): \_\_\_\_\_

Important Note: By signing this form you are accepting FACE'S NET 30 day payment terms and agreeing to the charges of 1.5% per month for any invoice not paid within 30 days

F-ALL-Q-020rev 07-15-Feb-2007



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A** Required Client Information:  
 Company: GA Power  
 Address: 1003 Weatherstone Parkway  
 City: Woodstock, Ga 30188

**Section B** Required Project Information:  
 Report To: Kristen Juniko  
 Copy To: Rhonda Quinn  
 Purchase Order No.:  
 Project Name: Plant Bowen Landfill  
 Project Number:

**Section C** Invoice Information:  
 Attention: Southern Co.  
 Company Name:  
 Address:  
 Phone:  
 Project Manager: Nicole D'oleo  
 Price Quote # 2928

Page: 2 of 3

**Section D** Valid Matrix Codes  
 MATRIX CODE (see valid codes to left)  
 SAMPLE TYPE (G=GRAB C=COMP)

| ITEM # | Requested Client Information | Valid Matrix Codes  | COLLECTED |      |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives |             |                                |                  |     |      |   | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Page Project No./ Lab I.D. |
|--------|------------------------------|---|-----------|------|------|---------------------------|-----------------|---------------|-------------|--------------------------------|------------------|-----|------|---|---------------|-----------------------------------|-------------------------|----------------------------|
|        |                              |   | DATE      | TIME | DATE |                           |                 | TIME          | Unpreserved | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HCl | NaOH | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> |               |                                   |                         |                            |
| 1      | GWS-23R                      | DOMESTIC WATER DW<br>WATER WWT<br>WASTE WATER WW<br>PRODUCT P<br>SOL/SOLID SL<br>OIL OL<br>WIFE WIP<br>AR ARP<br>OTHER AR OT<br>TISSUE TS |           |      |      |                           |                 |               |             |                                |                  |     |      |   |               |                                   |                         |                            |
| 2      | GWS-24R                      |   |           |      |      |                           |                 |               |             |                                |                  |     |      |   |               |                                   |                         |                            |
| 3      | GWS-25R                      |   |           |      |      |                           |                 |               |             |                                |                  |     |      |   |               |                                   |                         |                            |
| 4      | GWA-51RZ                     |   |           |      |      |                           |                 |               |             |                                |                  |     |      |   |               |                                   |                         |                            |
| 5      | GWA-52                       |   |           |      |      |                           |                 |               |             |                                |                  |     |      |   |               |                                   |                         |                            |
| 6      | GWA-53                       |   |           |      |      |                           |                 |               |             |                                |                  |     |      |   |               |                                   |                         |                            |
| 7      | GWA-54R                      |   |           |      |      |                           |                 |               |             |                                |                  |     |      |   |               |                                   |                         |                            |
| 8      | GWA-54                       |   |           |      |      |                           |                 |               |             |                                |                  |     |      |   |               |                                   |                         |                            |
| 9      | GWA-55                       |   |           |      |      |                           |                 |               |             |                                |                  |     |      |   |               |                                   |                         |                            |
| 10     | GWA-55R                      |   |           |      |      |                           |                 |               |             |                                |                  |     |      |   |               |                                   |                         |                            |
| 11     | GWA-56                       |   |           |      |      |                           |                 |               |             |                                |                  |     |      |   |               |                                   |                         |                            |
| 12     | GG-1                         |   |           |      |      |                           |                 |               |             |                                |                  |     |      |   |               |                                   |                         |                            |

**Section D** Additional Comments: (A-Z, 0-9, / -)  
 Sample IDs MUST BE UNIQUE

Relinquished by / Affiliation: [Signature] DATE: 11/28/09 TIME: 0930

Accepted by / Affiliation: [Signature] DATE: 11/28/09 TIME: 0930

Sampler Name and Signature: [Signature]

Print Name of Sampler: [Name]

Signature of Sampler: [Signature]

Date Signed: 11/25/09

Temp in °C: [ ]

Received on Ice (Y/N): [ ]

Custody Sealed Cooler (Y/N): [ ]

Samples Intact (Y/N): [ ]



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 3 of 3 Page 102 of 112

**Section A**  
 Requested Client Information  
 Company: GA Power  
 Address: 1003 Weatherstone Parkway  
 City: Woodstock, Ga 30188

**Section B**  
 Required Project Information  
 Report To: Kristen Juritko  
 Copy To: Rhonda Quinn  
 Purchase Order No.:  
 Project Name: Plant Bowen Landfill  
 Project Number:

**Section C**  
 Invoice Information  
 Attention: Southern Co.  
 Company Name:  
 Address:  
 P.O. Box:  
 Reference:  
 Project Manager: Nicole Dolco  
 Price Proposal #: 2928

**REGULATORY AGENCY**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER  **cont**

Site Location: GA  
 STATE: GA

| ITEM # | Section D<br>Required Client Information | Valid Matrix Codes<br>MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |       |      |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|--------|--|---|-----------------------------|-----------|-------|------|------|---------------------------|-----------------|---------------|---------------|-----------------------------------|-------------------------|----------------------------|
|        |  |   |                             | DATE      | TIME  | DATE | TIME |                           |                 |               |               |                                   |                         |                            |
| 1      | ---BUP-1---                              |   |                             |           |       |      |      |                           |                 |               |               |                                   |                         |                            |
| 2      | ---BUP-2---                              |   |                             |           |       |      |      |                           |                 |               |               |                                   |                         |                            |
| 3      | ---BUP-3---                              |   |                             |           |       |      |      |                           |                 |               |               |                                   |                         |                            |
| 4      | FBL-1                                    |   |                             | 1/28/12   | 12:18 |      |      | 4                         | 3               | 1             |               |                                   |                         |                            |
| 5      | ---EGBL---                               |   |                             |           |       |      |      |                           |                 |               |               |                                   |                         |                            |
| 6      | ---FBL---                                |   |                             |           |       |      |      |                           |                 |               |               |                                   |                         |                            |
| 7      | ---EGBL---                               |   |                             |           |       |      |      |                           |                 |               |               |                                   |                         |                            |
| 8      | ---FBL---                                |   |                             |           |       |      |      |                           |                 |               |               |                                   |                         |                            |
| 9      |  |   |                             |           |       |      |      |                           |                 |               |               |                                   |                         |                            |
| 10     |  |   |                             |           |       |      |      |                           |                 |               |               |                                   |                         |                            |
| 11     |  |   |                             |           |       |      |      |                           |                 |               |               |                                   |                         |                            |
| 12     |  |   |                             |           |       |      |      |                           |                 |               |               |                                   |                         |                            |

**ADDITIONAL COMMENTS**

REINQUISHED BY / AFFILIATION: ALL WORK DATE: 1/28 TIME: 0930

ACCEPTED BY / AFFILIATION: ALL WORK DATE: 1/28 TIME: 0930

**SAMPLER NAME AND SIGNATURE**

PRINT NAME OF SAMPLER: Kevin Stephenson

SIGNATURE OF SAMPLER: [Signature]

DATE SIGNED (MM/DD/YY): 1/28/12

Temp in °C: \_\_\_\_\_

Received on Ice (Y/N): \_\_\_\_\_

Custody Sealed Cooler (Y/N): \_\_\_\_\_

Samples Intact (Y/N): \_\_\_\_\_





# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

|   |  |   |  |   |  |
|---|--|---|--|---|--|
| <b>Section A</b><br>Required Client Information<br>Company: GA Power<br>Address: 1003 Weatherstone Parkway<br>Woodstock, Ga 30188 |  | <b>Section B</b><br>Required Project Information<br>Report To: Kristen Jurinko<br>Copy To: Rhonda Quinn |  | <b>Section C</b><br>Invoice Information:<br>Attention: Southern Co.<br>Company Name:<br>Address:<br>Pace Client Reference:<br>Pace Project Manager: Nicole Dolio<br>Pace Profile #: 2928  |  |
| Email To: Kevin.Stephenson@Resoluteenv.com<br>Phone: (678)5489415<br>Fac: 10 day<br>Requested Due Date/TAT:                       |  | Purchase Order No.:<br>Project Name: Plant Bowen Landfill<br>Project Number:                            |  | REGULATORY AGENCY<br><input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER<br><input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input checked="" type="checkbox"/><br>Site Location: GA<br>STATE: |  |

| ITEM # | Section B<br>Required Client Information | Valid Matrix Codes<br>MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |       |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives |      |      |      |      |      | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|--------|--|---|-----------------------------|-----------|-------|------|---------------------------|-----------------|---------------|------|------|------|------|------|---------------|-----------------------------------|-------------------------|----------------------------|
|        |  |   |                             | DATE      | TIME  | DATE |                           |                 | TIME          | DATE | TIME | DATE | TIME | DATE |               |                                   |                         |                            |
| 1      | -GWA-99-                                 | GWA-36RA  | GRAB                        | 11/24/12  | 10:25 |      | 43                        | 1               |               |      |      |      |      |      |               |                                   | 7.01                    |                            |
| 2      | -GWA-36RA                                | GWA-37  | GRAB                        | 11/24/12  | 13:10 |      | 43                        | 1               |               |      |      |      |      |      |               |                                   | 4.69                    |                            |
| 3      | -GWA-37                                  |   |                             |           |       |      |                           |                 |               |      |      |      |      |      |               |                                   |                         |                            |
| 4      | -GWA-39-                                 |   |                             |           |       |      |                           |                 |               |      |      |      |      |      |               |                                   |                         |                            |
| 5      | -GWA-46R-                                |   |                             |           |       |      |                           |                 |               |      |      |      |      |      |               |                                   |                         |                            |
| 6      | -GWA-47R-                                |   |                             |           |       |      |                           |                 |               |      |      |      |      |      |               |                                   |                         |                            |
| 7      | -GWA-48R-                                |   |                             |           |       |      |                           |                 |               |      |      |      |      |      |               |                                   |                         |                            |
| 8      | -GWA-19R-                                |   |                             |           |       |      |                           |                 |               |      |      |      |      |      |               |                                   |                         |                            |
| 9      | -GWA-19R-                                |   |                             |           |       |      |                           |                 |               |      |      |      |      |      |               |                                   |                         |                            |
| 10     | -GWA-20R-                                |   |                             |           |       |      |                           |                 |               |      |      |      |      |      |               |                                   |                         |                            |
| 11     | -GWA-24R-                                |   |                             |           |       |      |                           |                 |               |      |      |      |      |      |               |                                   |                         |                            |
| 12     | -GWA-22R-                                |   |                             |           |       |      |                           |                 |               |      |      |      |      |      |               |                                   |                         |                            |

ADDITIONAL COMMENTS: Materials include Sn, As, Ba, Be, Cd, Cr, Cu, Pb, Pt, Se, Tl, V, Zn, Co

RELINQUISHED BY / AFFILIATION: [Signature] DATE: 11/28/12 TIME: 0930

ACCEPTED BY / AFFILIATION: [Signature] DATE: 11/28/12 TIME: 0930

SAMPLER NAME AND SIGNATURE: [Signature] PRINT Name of SAMPLER: [Name] SIGNATURE of SAMPLER: [Signature] DATE Signed (MM/DD/YYYY): 11/24/12

Temp in °C: Received on Ice (Y/N): Custody Sealed Cooler (Y/N): Samples Intact (Y/N):







# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A**  
Required Client Information:

Company: GA Power  
 Address: 1003 Weatherstone Parkway  
 Woodstock, Ga 30188  
 Email To: Kevin.Stephenson@PaceAnalytical.com  
 Phone: (678)5489415  
 Requested Due Date/TAT: 18 Day

**Section B**  
Required Project Information:

Report To: Kristen Juriniko  
 Copy To: Rhonda Quinn  
 Purchase Order No.:  
 Project Name: Plant Bowen Landfill  
 Project Number:

**Section C**  
Invoice Information:

Attention: Southern Co.  
 Company Name:  
 Address:  
 Invoice Number:  
 Reference: Nicole D'Orto  
 Manager:  
 Pace Profile #: 2928

Page: 1 of 3

**REGULATORY AGENCY**

NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER

Site Location: GA  
 STATE:

| ITEM # | Section D<br>Required Client Information | Vial Matrix Code<br>MATRIX CODE | Sample Type (G=GRAB C=COMP) | COLLECTED |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|--------|--|---------------------------------|-----------------------------|-----------|------|---------------------------|-----------------|---------------|---------------|-----------------------------------|-------------------------|----------------------------|
|        |  |                                 |                             | DATE      | TIME |                           |                 |               |               |                                   |                         |                            |
| 1      | -GWA-36-                                 |                                 |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 2      | -GWA-36R-                                |                                 |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 3      | -GWA-37-                                 |                                 |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 4      | -GWA-38-                                 |                                 |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 5      | -GWA-16R-                                |                                 |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 6      | -GWA-17R-                                |                                 |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 7      | -GWA-18R-                                |                                 |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 8      | -GWA-19R-                                |                                 |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 9      | -GWA-19R-                                |                                 |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 10     | -GWA-20R-                                |                                 |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 11     | -GWA-21R-                                |                                 |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 12     | -GWA-22R-                                |                                 |                             |           |      |                           |                 |               |               |                                   |                         |                            |

ADDITIONAL COMMENTS: RILINQUISHED BY / AFFILIATION: DATE: TIME: ACCEPTED BY / AFFILIATION: DATE: TIME: SAMPLE CONDITIONS: Temp in °C: Received on Ice (Y/N): Custody Sealed Cooler (Y/N): Samples Intact (Y/N):

SAMPLER NAME AND SIGNATURE: PRINT Name of SAMPLER: SIGNATURE of SAMPLER: DATE Signed (MM/DD/YYYY):



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A** Required Client Information: **Section B** Required Project Information: **Section C** Invoice Information:

Company: **GA Power** Report To: **Kristen Jurifko** Attention: **Southern Co.**

Address: **1003 Weatherstone Parkway** Copy To: **Rhonda Quinn** Company Name: **Southern Co.**

Address: **Woodstock, Ga 30188** Address: **Plant Bowen Landfill** Project Name: **Plant Bowen Landfill**

mail To: **Kevin.Stephenson@Resoluteenv.com** Purchase Order No.: **678)5489415** Fax: **Project Number:**

Requested Due Date/Delay: **10 Day** Project Number: **2928**

**Section D** Required Client Information: **Valid Matrix Codes**

**SAMPLE ID** (A-Z, 0-9, /, .)  
**Sample ID# MUST BE UNIQUE**

Matrix: **GWG-25R** Valid Matrix Codes: **OW WASTE WATER, MW WASTE WATER, PW PRODUCT, SCULFOULD, OIL, W/P, AIR, OTHER**

Matrix Code: **GWG-25R** Sample Type: **G=GRAB C=COMP**

Collected Date/Time: **11/28/12 12:30**

Sample Temp at Collection: **43**

# of Containers: **1**

Analysis Test: **Metals + State Metals, Cl, F, SO4, Total/Carb/Bicarb Alk, TDS**

Requested Analysis Filtered (Y/N): **Y**

Residual Chlorine (Y/N): **Y**

Page Project No./ Lab I.D.: **1128 0940**

Relinquished by / Affiliation: **SC** Date: **11/28/12** Time: **12:30**

Accepted by / Affiliation: **AK** Date: **11/28/12** Time: **0940**

Temp in °C: \_\_\_\_\_ Received on Ice (Y/N): \_\_\_\_\_ Custody Sealed Cooler (Y/N): \_\_\_\_\_ Samples Intact (Y/N): \_\_\_\_\_

REGULATORY AGENCY:  NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER  CER

Site Location: \_\_\_\_\_ STATE: **GA**

SAMPLER NAME AND SIGNATURE: \_\_\_\_\_  
 PRINT Name of SAMPLER: \_\_\_\_\_  
 SIGNATURE of SAMPLER: \_\_\_\_\_  
 DATE Signed (MM/DD/YY): **11/28/12**



# CHAIN-OF-CUSTODY / Analytical Request Document

Section A Required Client Information: Company: GA Power Address: 1003 Weatherstone Parkway Woodstock, Ga 30188

Section B Required Project Information: Report To: Kristen Jurinko Copy To: Rhonda Quinn

Section C Invoice Information: Attention: Southern Co. Company Name: Address: Regulatory Agency: NIPDES  GROUND WATER  DRINKING WATER  UST  RCRA  OTHER


Contact Info: Kevin.Stephenson@Resoluteenv.com Project Name: Plant Bowen Landfill Site Location: GA

Requested Due Date/TIME: 18 Day Project Number: Requested Analysis Filtered (Y/N):

Table with columns for Matrix Code, Sample Type, Date, Time, Sample Temp, # of Containers, Preservatives, Analysis Test, and Residual Chlorine.

Main data table with columns for Item #, Matrix Code, Sample Type, Date, Time, Sample Temp, # of Containers, Preservatives, Analysis Test, and Sample Conditions.

SAMPLER NAME AND SIGNATURE: PRINT name of SAMPLER: SIGNATURE of SAMPLER: DATE Signed (MM/DD/YYYY):

|   |  |   |
|---|--|---|
|  | Document Name:<br>Sample Condition Upon Receipt (SCUR) | Document Revised: November 15, 2021<br>Page 1 of 2  |
|   | Document No.:<br>F-CAR-CS-033-Rev.08                   | Issuing Authority:<br>Pace Carolinas Quality Office |

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name:

*Got Power*

Project #

**WO# : 92585058**

PM: NMG

Due Date: 02/11/22

CLIENT: GA-GA Power

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

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: *2/11/22*

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen? *COH*

Thermometer:  IR Gun ID: *230* Type of Ice:  Wet  Blue  None

Cooler Temp:

*4.7* Correction Factor: *+0.2*  
 Add/Subtract (°C) *4.9*

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

Yes  No

|   |  |     | Comments/Discrepancy: |
|---|--|-----|-----------------------|
| Chain of Custody Present?                   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 1.  |                       |
| Samples Arrived within Hold Time?           | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 2.  |                       |
| Short Hold Time Analysis (<72 hr.)?         | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 3.  |                       |
| Rush Turn Around Time Requested?            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 4.  |                       |
| Sufficient Volume?                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 5.  |                       |
| Correct Containers Used?                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 6.  |                       |
| -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 | 7.  |                       |
| Dissolved analysis: Samples Field Filtered? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 8.  |                       |
| Sample Labels Match COC?                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 9.  |                       |
| -Includes Date/Time/ID/Analysis Matrix:     | <i>W</i>   |     |                       |
| Headspace in VOA Vials (>5-6mm)?            | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 10. |                       |
| Trip Blank Present?                         | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 11. |                       |
| Trip Blank Custody Seals Present?           | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |     |                       |

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_

Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A** Required Client Information  
 Company: GA Power  
 Address: 1003 Weatherstone Parkway, Woodstock, Ga 30188

**Section B** Required Project Information  
 Report To: Kristen Juriniko  
 Copy To: Rhonda Quinn  
 Purchase Order No.:  
 Project Name: Plant Bowen Landfill Cells 3 and 4  
 Project Number:

**Section C** Analytical Information  
 Attention: Southern Co.  
 Company Name:  
 Address:  
 POC Name: Nicole D'Orso  
 Reference: Face Project Manager  
 Face Profile #: 2928

Page: 1 of 3

**REGULATORY AGENCY**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER    
 Site Location: GA  
 STATE: GA

| ITEM # | Section D<br>Required Client Information | Value Matrix Codes<br>MATRIX CODE | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) |
|--------|--|-----------------------------------|-----------------------------|-----------|------|---------------------------|-----------------|---------------|---------------|-----------------------------------|-------------------------|
|        |  |                                   |                             | DATE      | TIME |                           |                 |               |               |                                   |                         |
| 1      | GWA-30                                   | WT G                              | 1/28/22                     | 09:38     | 4    | 3                         | 1               | X X X X       |               |                                   | 7.31                    |
| 2      | GWA-36R                                  | WT G                              | 1/28/22                     | 10:20     | 4    | 3                         | 1               | X X X X       |               |                                   | 7.34                    |
| 3      | GWA-37                                   | WT G                              | 1/28/22                     | 12:04     | 4    | 3                         | 1               | X X X X       |               |                                   | 6.60                    |
| 4      | GWA-88                                   |                                   |                             |           |      |                           |                 |               |               |                                   |                         |
| 5      | GWC-16R                                  |                                   |                             |           |      |                           |                 |               |               |                                   |                         |
| 6      | GWC-17R                                  |                                   |                             |           |      |                           |                 |               |               |                                   |                         |
| 7      | GWC-18                                   |                                   |                             |           |      |                           |                 |               |               |                                   |                         |
| 8      | GWC-19R                                  |                                   |                             |           |      |                           |                 |               |               |                                   |                         |
| 9      | GWC-19R                                  |                                   |                             |           |      |                           |                 |               |               |                                   |                         |
| 10     | GWC-20R                                  |                                   |                             |           |      |                           |                 |               |               |                                   |                         |
| 11     | GWC-21R                                  |                                   |                             |           |      |                           |                 |               |               |                                   |                         |
| 12     | GWC-22R                                  |                                   |                             |           |      |                           |                 |               |               |                                   |                         |

**ADDITIONAL COMMENTS**  
 G.T.L. V. Zn, Co

**RELINQUISHED BY / AFFILIATION**  
 William Leaker  
 Attye Garner  
 Ryan Williams / POC

**DATE**  
 2/1/22  
 2/1/22  
 2/1/22

**TIME**  
 0800  
 11:22  
 1700

**ACCEPTED BY / AFFILIATION**  
 Attye Garner  
 Ryan Williams / POC  
 Shaunice Paulk

**DATE**  
 2/1/22  
 2/1/22  
 2/1/22

**TIME**  
 0800  
 1122  
 1700

**SAMPLE CONDITIONS**  
 Temp in °C  
 Received on Ice? (Y/N)  
 Custody Sealed Cooler (Y/N)  
 Samples Intact (Y/N)

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: Meredith Dacca / Kevin Stephenson / William Leaker / Rocco Wall  
 SIGNATURE OF SAMPLER: [Signatures]  
 DATE SIGNED: 01/28/22



*Project Information*

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 2 of 3

|  |  |   |  |  |  |
|--|--|---|--|--|--|
| <b>Section A</b><br>Required Client Information:<br>Company: GA Power<br>Address: 1003 Weatherstone Parkway<br>Woodstock, Ga 30188<br>Email To: Kevin.Stephenson@Resoluteenr.com<br>Phone: (678)5489415<br>Requested Date Data/TAT: 10 Day       |  | <b>Section B</b><br>Required Project Information:<br>Report To: Kristen Jurmko<br>Copy To: Rhonda Quinn<br>Purchase Order No.:<br>Project Name: Plant Bowen Landfill<br>Project Number: |  | <b>Section C</b><br>Invoice Information:<br>Address: Southern Co.<br>Company Name:<br>Address:<br>POC Name:<br>Reference:<br>Manager:<br>POC Profile #: 2928 |  |
| <b>REGULATORY AGENCY</b><br><input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER<br><input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER |  | Site Location<br>STATE: GA  |  | Requested Analysis Filtered (Y/N)  |  |

| ITEM # | Section D<br>Required Client Information | Valid Matrix Codes<br>MATRIX CODE | CODE    | COLLECTED |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives                  |                  |     |      |   |          |       | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) |
|--------|--|-----------------------------------|---------|-----------|------|---------------------------|-----------------|--------------------------------|------------------|-----|------|---|----------|-------|---------------|-----------------------------------|-------------------------|
|        |  |                                   |         | DATE      | TIME |                           |                 | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HCl | NaOH | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | Methanol | Other |               |                                   |                         |
| 1      | GWC-23R                                  | WTG                               | 126122  | 1107      |      |                           | 4               |                                |                  |     |      |   |          |       |               |                                   |                         |
| 2      | GWC-24R                                  | WTG                               | 1128122 | 1035      |      |                           | 4               |                                |                  |     |      |   |          |       |               |                                   |                         |
| 3      | GWC-25R                                  |                                   |         |           |      |                           | 3               |                                |                  |     |      |   |          |       |               |                                   |                         |
| 4      | GWA-540Z                                 |                                   |         |           |      |                           | 1               |                                |                  |     |      |   |          |       |               |                                   |                         |
| 5      | GWA-59                                   |                                   |         |           |      |                           |                 |                                |                  |     |      |   |          |       |               |                                   |                         |
| 6      | GWC-23R                                  |                                   |         |           |      |                           |                 |                                |                  |     |      |   |          |       |               |                                   |                         |
| 7      | GWA-59R                                  |                                   |         |           |      |                           |                 |                                |                  |     |      |   |          |       |               |                                   |                         |
| 8      | GWA-54                                   |                                   |         |           |      |                           |                 |                                |                  |     |      |   |          |       |               |                                   |                         |
| 9      | GWA-59                                   |                                   |         |           |      |                           |                 |                                |                  |     |      |   |          |       |               |                                   |                         |
| 10     | GWA-59R                                  |                                   |         |           |      |                           |                 |                                |                  |     |      |   |          |       |               |                                   |                         |
| 11     | GWA-59                                   |                                   |         |           |      |                           |                 |                                |                  |     |      |   |          |       |               |                                   |                         |
| 12     | GWA-59                                   |                                   |         |           |      |                           |                 |                                |                  |     |      |   |          |       |               |                                   |                         |

|  |  |  |  |                       |  |                     |  |  |  |                       |  |                     |  |
|--|--|--|--|-----------------------|--|---------------------|--|--|--|-----------------------|--|---------------------|--|
| <b>ADDITIONAL COMMENTS</b><br>The Metals include Sn, As, Ba, Cd, Cr, Cu, Pb, Ni, Se, Tl, V, Zn, Co |  | <b>RELINQUISHED BY / AFFILIATION</b><br>William Labeer       |  | <b>DATE</b><br>2/1/22 |  | <b>TIME</b><br>0800 |  | <b>ACCEPTED BY / AFFILIATION</b><br>Ayoja Garner         |  | <b>DATE</b><br>2/1/22 |  | <b>TIME</b><br>0800 |  |
| <b>ADDITIONAL COMMENTS</b><br>Ayoja Garner<br>Ryan Williams / Pace                                 |  | <b>RELINQUISHED BY / AFFILIATION</b><br>Ryan Williams / Pace |  | <b>DATE</b><br>2/1/22 |  | <b>TIME</b><br>1700 |  | <b>ACCEPTED BY / AFFILIATION</b><br>Ryan Williams / Pace |  | <b>DATE</b><br>2/1/22 |  | <b>TIME</b><br>1700 |  |

|   |  |                                    |  |
|---|--|------------------------------------|--|
| <b>SAMPLER NAME AND SIGNATURE</b><br>PRINT Name of SAMPLER: Meredith Doocey<br>SIGNATURE of SAMPLER: <i>Meredith Doocey</i> |  | DATE signed (MM/DD/YYYY): 01/28/22 |  |
| <b>SAMPLER NAME AND SIGNATURE</b><br>PRINT Name of SAMPLER: William Labeer<br>SIGNATURE of SAMPLER: <i>William Labeer</i>   |  | DATE signed (MM/DD/YYYY): 01/28/22 |  |

|            |                       |                             |                      |
|------------|-----------------------|-----------------------------|----------------------|
| Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|            |                       |                             |                      |



February 17, 2022

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between February 01, 2022 and February 04, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Minneapolis

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

Sincerely,



Nicole D'Oleo  
nicole.d'oleo@pacelabs.com  
(704)875-9092  
Project Manager

Enclosures

cc: Michelle Barker, WOOD E&I  
Anna Bottum, ERM  
Andrea Brazell, ERM  
Kristen Jurinko  
Ms. Lauren Petty, Southern Company  
Rhonda Quinn, WOOD E&I  
Lacy Smith, ERM  
Caitlin Tillema, ERM  
Christine Weaver, ERM

Greg Wrenn, WOOD E&I



## REPORT OF LABORATORY ANALYSIS

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

## CERTIFICATIONS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

### Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414  
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab  
A2LA Certification #: 2926.01\*  
Alabama Certification #: 40770  
Alaska Contaminated Sites Certification #: 17-009\*  
Alaska DW Certification #: MN00064  
Arizona Certification #: AZ0014\*  
Arkansas DW Certification #: MN00064  
Arkansas WW Certification #: 88-0680  
California Certification #: 2929  
Colorado Certification #: MN00064  
Connecticut Certification #: PH-0256  
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137  
Florida Certification #: E87605\*  
Georgia Certification #: 959  
Hawaii Certification #: MN00064  
Idaho Certification #: MN00064  
Illinois Certification #: 200011  
Indiana Certification #: C-MN-01  
Iowa Certification #: 368  
Kansas Certification #: E-10167  
Kentucky DW Certification #: 90062  
Kentucky WW Certification #: 90062  
Louisiana DEQ Certification #: AI-03086\*  
Louisiana DW Certification #: MN00064  
Maine Certification #: MN00064\*  
Maryland Certification #: 322  
Michigan Certification #: 9909  
Minnesota Certification #: 027-053-137\*  
Minnesota Dept of Ag Approval: via MN 027-053-137  
Minnesota Petrofund Registration #: 1240\*  
Mississippi Certification #: MN00064

Missouri Certification #: 10100  
Montana Certification #: CERT0092  
Nebraska Certification #: NE-OS-18-06  
Nevada Certification #: MN00064  
New Hampshire Certification #: 2081\*  
New Jersey Certification #: MN002  
New York Certification #: 11647\*  
North Carolina DW Certification #: 27700  
North Carolina WW Certification #: 530  
North Dakota Certification #: R-036  
Ohio DW Certification #: 41244  
Ohio VAP Certification (1700) #: CL101  
Ohio VAP Certification (1800) #: CL110\*  
Oklahoma Certification #: 9507\*  
Oregon Primary Certification #: MN300001  
Oregon Secondary Certification #: MN200001\*  
Pennsylvania Certification #: 68-00563\*  
Puerto Rico Certification #: MN00064  
South Carolina Certification #:74003001  
Tennessee Certification #: TN02818  
Texas Certification #: T104704192\*  
Utah Certification #: MN00064\*  
Vermont Certification #: VT-027053137  
Virginia Certification #: 460163\*  
Washington Certification #: C486\*  
West Virginia DEP Certification #: 382  
West Virginia DW Certification #: 9952 C  
Wisconsin Certification #: 999407970  
Wyoming UST Certification #: via A2LA 2926.01  
USDA Permit #: P330-19-00208  
\*Please Note: Applicable air certifications are denoted with an asterisk (\*).

### Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006  
9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001  
South Carolina Drinking Water Cert. #: 99006003  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Louisiana DoH Drinking Water #: LA029  
Virginia/VELAP Certification #: 460221

### Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712  
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

### Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812  
North Carolina Certification #: 381

## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

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**Pace Analytical Services Peachtree Corners**  
South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Lab ID      | Sample ID | Matrix | Date Collected | Date Received  |
|-------------|-----------|--------|----------------|----------------|
| 92585555001 | GWA-39Z   | Water  | 01/31/22 13:50 | 02/01/22 11:22 |
| 92585555002 | GWA-40    | Water  | 01/31/22 14:25 | 02/01/22 11:22 |
| 92585555003 | GWA-41    | Water  | 01/31/22 12:55 | 02/01/22 11:22 |
| 92585555004 | GWA-41R   | Water  | 01/31/22 10:45 | 02/01/22 11:22 |
| 92585555005 | GWA-42    | Water  | 01/31/22 14:48 | 02/01/22 11:22 |
| 92585555006 | GWA-43    | Water  | 01/31/22 13:15 | 02/01/22 11:22 |
| 92585555007 | GWA-43R   | Water  | 01/31/22 12:05 | 02/01/22 11:22 |
| 92585555008 | GWC-44    | Water  | 01/31/22 15:30 | 02/01/22 11:22 |
| 92585555009 | GWC-46R   | Water  | 01/31/22 15:30 | 02/01/22 11:22 |
| 92585555010 | GWC-48    | Water  | 01/31/22 16:14 | 02/01/22 11:22 |
| 92585555011 | DUP-1     | Water  | 01/31/22 00:00 | 02/01/22 11:22 |
| 92585555012 | FB-1      | Water  | 01/31/22 15:50 | 02/01/22 11:22 |
| 92585555013 | GWC-45    | Water  | 02/01/22 12:55 | 02/04/22 11:45 |
| 92585555014 | GWC-45R   | Water  | 02/01/22 10:30 | 02/04/22 11:45 |
| 92585555015 | GWC-47    | Water  | 02/01/22 12:03 | 02/04/22 11:45 |
| 92585555016 | GWC-47R   | Water  | 02/01/22 10:40 | 02/04/22 11:45 |
| 92585555017 | GWC-49Z   | Water  | 02/01/22 12:23 | 02/04/22 11:45 |
| 92585555018 | GWC-49R   | Water  | 02/01/22 10:34 | 02/04/22 11:45 |
| 92585555019 | DUP-2     | Water  | 02/01/22 00:00 | 02/04/22 11:45 |
| 92585555020 | FB-2      | Water  | 02/01/22 15:45 | 02/04/22 11:45 |
| 92585555021 | GWA-39RZ  | Water  | 02/02/22 10:16 | 02/04/22 11:45 |
| 92585555022 | FB-3      | Water  | 02/02/22 16:04 | 02/04/22 11:45 |
| 92585555023 | EB-1      | Water  | 02/02/22 16:08 | 02/04/22 11:45 |

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|------------------------|----------|-------------------|------------|
| 92585555001 | GWA-39Z   | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
| 92585555002 | GWA-40    | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92585555003 | GWA-41    | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
| 92585555004 | GWA-41R   | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
| 92585555005 | GWA-42    | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
| 92585555006 | GWA-43    | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
| 92585555007 | GWA-43R   | EPA 6010D              | KH       | 5                 | PASI-GA    |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Lab ID     | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|------------|-----------|------------------------|----------|-------------------|------------|
| 9258555008 | GWC-44    | EPA 6020B              | CW1      | 15                | PASI-GA    |
|            |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|            |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|            |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|            |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|            |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|            |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|            |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|            |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|            |           | SM 2320B               | AR3      | 3                 | PASI-M     |
| 9258555009 | GWC-46R   | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|            |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|            |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|            |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|            |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|            |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|            |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|            |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|            |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|            |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
| 9258555010 | GWC-48    | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|            |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|            |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|            |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|            |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|            |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|            |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|            |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|            |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|            |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
| 9258555011 | DUP-1     | EPA 6020B              | CW1      | 15                | PASI-GA    |
|            |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|            |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|            |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|            |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|            |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|            |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|            |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|            |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|            |           | SM 2320B               | AR3      | 3                 | PASI-M     |
| 9258555012 | FB-1      | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|            |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|            |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|            |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|            |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|            |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|            |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|            |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|            |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|            |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
| 9258555013 | GWC-45    | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|            |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|            |           | EPA 6020B              | CW1      | 15                | PASI-GA    |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Lab ID     | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|------------|-----------|------------------------|----------|-------------------|------------|
| 9258555014 | GWC-45R   | EPA 7470A              | VB       | 1                 | PASI-GA    |
|            |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|            |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|            |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|            |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|            |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|            |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|            |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 9258555015 | GWC-47    | SM 2320B               | AR3      | 3                 | PASI-M     |
|            |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|            |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|            |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|            |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|            |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|            |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|            |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
| 9258555016 | GWC-47R   | EPA 6010D              | KH       | 5                 | PASI-GA    |
|            |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|            |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|            |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|            |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|            |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|            |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|            |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
| 9258555017 | GWC-49Z   | EPA 7470A              | VB       | 1                 | PASI-GA    |
|            |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|            |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|            |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|            |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|            |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|            |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|            |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 9258555018 | GWC-49R   | SM 2320B               | AR3      | 3                 | PASI-M     |
|            |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|            |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|            |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|            |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|            |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|            |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|            |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
| 9258555019 | DUP-2     | EPA 6010D              | KH       | 5                 | PASI-GA    |
|            |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|            |           | EPA 7470A              | VB       | 1                 | PASI-GA    |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|------------------------|----------|-------------------|------------|
| 92585555020 | FB-2      | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
| 92585555021 | GWA-39RZ  | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
| 92585555022 | FB-3      | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
| 92585555023 | EB-1      | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |

PASI-A = Pace Analytical Services - Asheville  
PASI-C = Pace Analytical Services - Charlotte  
PASI-GA = Pace Analytical Services - Peachtree Corners, GA  
PASI-M = Pace Analytical Services - Minneapolis

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Lab Sample ID          | Client Sample ID               | Result  | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|---------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |         |            |              |                |            |
| <b>9258555001</b>      | <b>GWA-39Z</b>                 |         |            |              |                |            |
|                        | Performed by                   | CUSTOME |            |              | 02/06/22 11:28 |            |
|                        |                                | R       |            |              |                |            |
|                        | pH                             | 6.41    | Std. Units |              | 02/06/22 11:28 |            |
| EPA 6010D              | Potassium                      | 1.3     | mg/L       | 0.20         | 02/14/22 14:43 |            |
| EPA 6010D              | Sodium                         | 2.4     | mg/L       | 1.0          | 02/14/22 14:43 |            |
| EPA 6010D              | Calcium                        | 12.7    | mg/L       | 1.0          | 02/14/22 14:43 |            |
| EPA 6010D              | Magnesium                      | 7.0     | mg/L       | 0.050        | 02/14/22 14:43 |            |
| EPA 6020B              | Arsenic                        | 0.0021J | mg/L       | 0.0050       | 02/12/22 15:55 |            |
| EPA 6020B              | Barium                         | 0.013   | mg/L       | 0.0050       | 02/12/22 15:55 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 61.0    | mg/L       | 10.0         | 02/03/22 16:06 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 60.6    | mg/L       | 5.0          | 02/08/22 22:40 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 60.6    | mg/L       | 5.0          | 02/08/22 22:40 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.0     | mg/L       | 1.0          | 02/07/22 01:12 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.2     | mg/L       | 1.0          | 02/07/22 01:12 |            |
| <b>9258555002</b>      | <b>GWA-40</b>                  |         |            |              |                |            |
|                        | Performed by                   | CUSTOME |            |              | 02/06/22 11:29 |            |
|                        |                                | R       |            |              |                |            |
|                        | pH                             | 6.85    | Std. Units |              | 02/06/22 11:29 |            |
| EPA 6010D              | Potassium                      | 0.97    | mg/L       | 0.20         | 02/14/22 14:48 |            |
| EPA 6010D              | Sodium                         | 1.4     | mg/L       | 1.0          | 02/14/22 14:48 |            |
| EPA 6010D              | Calcium                        | 18.5    | mg/L       | 1.0          | 02/14/22 14:48 | M1         |
| EPA 6010D              | Magnesium                      | 10.3    | mg/L       | 0.050        | 02/14/22 14:48 | M1         |
| EPA 6020B              | Antimony                       | 0.0014J | mg/L       | 0.0030       | 02/12/22 16:19 |            |
| EPA 6020B              | Barium                         | 0.0081  | mg/L       | 0.0050       | 02/12/22 16:19 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 81.0    | mg/L       | 10.0         | 02/03/22 16:06 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 84.2    | mg/L       | 5.0          | 02/08/22 22:44 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 84.2    | mg/L       | 5.0          | 02/08/22 22:44 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 0.71J   | mg/L       | 1.0          | 02/07/22 01:27 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.2     | mg/L       | 1.0          | 02/07/22 01:27 |            |
| <b>9258555003</b>      | <b>GWA-41</b>                  |         |            |              |                |            |
|                        | Performed by                   | CUSTOME |            |              | 02/06/22 11:30 |            |
|                        |                                | R       |            |              |                |            |
|                        | pH                             | 6.02    | Std. Units |              | 02/06/22 11:30 |            |
| EPA 6010D              | Potassium                      | 0.56    | mg/L       | 0.20         | 02/14/22 15:07 |            |
| EPA 6010D              | Sodium                         | 0.90J   | mg/L       | 1.0          | 02/14/22 15:07 |            |
| EPA 6010D              | Calcium                        | 14.5    | mg/L       | 1.0          | 02/14/22 15:07 |            |
| EPA 6010D              | Magnesium                      | 7.2     | mg/L       | 0.050        | 02/14/22 15:07 |            |
| EPA 6020B              | Barium                         | 0.022   | mg/L       | 0.0050       | 02/12/22 16:25 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 63.0    | mg/L       | 10.0         | 02/03/22 16:07 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 66.1    | mg/L       | 5.0          | 02/08/22 22:58 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 66.1    | mg/L       | 5.0          | 02/08/22 22:58 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.0     | mg/L       | 1.0          | 02/07/22 01:42 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.8     | mg/L       | 1.0          | 02/07/22 01:42 |            |
| <b>9258555004</b>      | <b>GWA-41R</b>                 |         |            |              |                |            |
|                        | Performed by                   | CUSTOME |            |              | 02/06/22 11:30 |            |
|                        |                                | R       |            |              |                |            |
|                        | pH                             | 6.63    | Std. Units |              | 02/06/22 11:30 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Lab Sample ID          | Client Sample ID                            | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|---|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                                  |          |            |              |                |            |
| <b>9258555004</b>      | <b>GWA-41R</b>                              |          |            |              |                |            |
| EPA 6010D              | Potassium                                   | 2.5      | mg/L       | 0.20         | 02/14/22 15:23 |            |
| EPA 6010D              | Calcium                                     | 39.3     | mg/L       | 1.0          | 02/14/22 15:23 |            |
| EPA 6010D              | Magnesium                                   | 20.1     | mg/L       | 0.050        | 02/14/22 15:23 |            |
| EPA 6020B              | Antimony                                    | 0.0011J  | mg/L       | 0.0030       | 02/12/22 16:31 |            |
| EPA 6020B              | Barium                                      | 0.031    | mg/L       | 0.0050       | 02/12/22 16:31 |            |
| EPA 6020B              | Boron                                       | 0.016J   | mg/L       | 0.040        | 02/12/22 16:31 |            |
| EPA 6020B              | Copper                                      | 0.0028J  | mg/L       | 0.0050       | 02/12/22 16:31 |            |
| EPA 6020B              | Nickel                                      | 0.00091J | mg/L       | 0.0050       | 02/12/22 16:31 |            |
| SM 2540C-2015          | Total Dissolved Solids                      | 184      | mg/L       | 10.0         | 02/03/22 16:07 |            |
| SM 2320B               | Alkalinity, Total as CaCO <sub>3</sub>      | 185      | mg/L       | 5.0          | 02/08/22 23:02 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO <sub>3</sub> ) | 185      | mg/L       | 5.0          | 02/08/22 23:02 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                                    | 1.0      | mg/L       | 1.0          | 02/07/22 01:57 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                                     | 8.5      | mg/L       | 1.0          | 02/07/22 01:57 |            |
| <b>9258555005</b>      | <b>GWA-42</b>                               |          |            |              |                |            |
|                        | Performed by                                | CUSTOMER |            |              | 02/06/22 11:30 |            |
|                        | pH  | 7.17     | Std. Units |              | 02/06/22 11:30 |            |
| EPA 6010D              | Potassium                                   | 0.26     | mg/L       | 0.20         | 02/14/22 15:27 |            |
| EPA 6010D              | Sodium                                      | 1.8      | mg/L       | 1.0          | 02/14/22 15:27 |            |
| EPA 6010D              | Calcium                                     | 37.3     | mg/L       | 1.0          | 02/14/22 15:27 |            |
| EPA 6010D              | Magnesium                                   | 15.2     | mg/L       | 0.050        | 02/14/22 15:27 |            |
| EPA 6020B              | Barium                                      | 0.0063   | mg/L       | 0.0050       | 02/12/22 16:49 |            |
| EPA 6020B              | Beryllium                                   | 0.00014J | mg/L       | 0.00050      | 02/12/22 16:49 |            |
| EPA 6020B              | Cadmium                                     | 0.00018J | mg/L       | 0.00050      | 02/12/22 16:49 |            |
| EPA 6020B              | Nickel                                      | 0.0011J  | mg/L       | 0.0050       | 02/12/22 16:49 |            |
| SM 2540C-2015          | Total Dissolved Solids                      | 132      | mg/L       | 10.0         | 02/03/22 16:07 |            |
| SM 2320B               | Alkalinity, Total as CaCO <sub>3</sub>      | 142      | mg/L       | 5.0          | 02/08/22 23:07 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO <sub>3</sub> ) | 142      | mg/L       | 5.0          | 02/08/22 23:07 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                                    | 2.0      | mg/L       | 1.0          | 02/07/22 02:12 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                                     | 1.1      | mg/L       | 1.0          | 02/07/22 02:12 |            |
| <b>9258555006</b>      | <b>GWA-43</b>                               |          |            |              |                |            |
|                        | Performed by                                | CUSTOMER |            |              | 02/06/22 11:31 |            |
|                        | pH  | 5.71     | Std. Units |              | 02/06/22 11:31 |            |
| EPA 6010D              | Potassium                                   | 0.31     | mg/L       | 0.20         | 02/14/22 15:32 |            |
| EPA 6010D              | Sodium                                      | 1.2      | mg/L       | 1.0          | 02/14/22 15:32 |            |
| EPA 6010D              | Calcium                                     | 2.2      | mg/L       | 1.0          | 02/14/22 15:32 |            |
| EPA 6010D              | Magnesium                                   | 0.45     | mg/L       | 0.050        | 02/14/22 15:32 |            |
| EPA 6020B              | Arsenic                                     | 0.0013J  | mg/L       | 0.0050       | 02/12/22 16:55 |            |
| EPA 6020B              | Barium                                      | 0.014    | mg/L       | 0.0050       | 02/12/22 16:55 |            |
| EPA 6020B              | Copper                                      | 0.0014J  | mg/L       | 0.0050       | 02/12/22 16:55 |            |
| EPA 6020B              | Nickel                                      | 0.00077J | mg/L       | 0.0050       | 02/12/22 16:55 |            |
| SM 2540C-2015          | Total Dissolved Solids                      | 25.0     | mg/L       | 10.0         | 02/03/22 16:07 |            |
| SM 2320B               | Alkalinity, Total as CaCO <sub>3</sub>      | 6.4      | mg/L       | 5.0          | 02/08/22 23:55 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO <sub>3</sub> ) | 6.4      | mg/L       | 5.0          | 02/08/22 23:55 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                                    | 1.1      | mg/L       | 1.0          | 02/07/22 02:27 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Lab Sample ID          | Client Sample ID               | Result    | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|-----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |           |            |              |                |            |
| <b>9258555007</b>      | <b>GWA-43R</b>                 |           |            |              |                |            |
|                        | Performed by                   | CUSTOME   |            |              | 02/06/22 11:31 |            |
|                        |                                | R         |            |              |                |            |
|                        | pH                             | 8.04      | Std. Units |              | 02/06/22 11:31 |            |
| EPA 6010D              | Potassium                      | 0.48      | mg/L       | 0.20         | 02/14/22 15:37 |            |
| EPA 6010D              | Sodium                         | 1.2       | mg/L       | 1.0          | 02/14/22 15:37 |            |
| EPA 6010D              | Calcium                        | 30.6      | mg/L       | 1.0          | 02/14/22 15:37 |            |
| EPA 6010D              | Magnesium                      | 16.9      | mg/L       | 0.050        | 02/14/22 15:37 |            |
| EPA 6020B              | Barium                         | 0.0076    | mg/L       | 0.0050       | 02/12/22 17:01 |            |
| EPA 6020B              | Boron                          | 0.011J    | mg/L       | 0.040        | 02/12/22 17:01 |            |
| EPA 6020B              | Chromium                       | 0.0011J   | mg/L       | 0.0050       | 02/12/22 17:01 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 128       | mg/L       | 10.0         | 02/03/22 16:07 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 140       | mg/L       | 5.0          | 02/08/22 23:15 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 140       | mg/L       | 5.0          | 02/08/22 23:15 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.7       | mg/L       | 1.0          | 02/07/22 02:42 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 2.5       | mg/L       | 1.0          | 02/07/22 02:42 |            |
| <b>9258555008</b>      | <b>GWC-44</b>                  |           |            |              |                |            |
|                        | Performed by                   | CUSTOME   |            |              | 02/06/22 11:31 |            |
|                        |                                | R         |            |              |                |            |
|                        | pH                             | 4.78      | Std. Units |              | 02/06/22 11:31 |            |
| EPA 6010D              | Potassium                      | 1.5       | mg/L       | 0.20         | 02/14/22 15:42 |            |
| EPA 6010D              | Sodium                         | 2.5       | mg/L       | 1.0          | 02/14/22 15:42 |            |
| EPA 6010D              | Calcium                        | 11.2      | mg/L       | 1.0          | 02/14/22 15:42 |            |
| EPA 6010D              | Magnesium                      | 2.0       | mg/L       | 0.050        | 02/14/22 15:42 |            |
| EPA 6020B              | Barium                         | 0.047     | mg/L       | 0.0050       | 02/12/22 17:07 |            |
| EPA 6020B              | Beryllium                      | 0.000065J | mg/L       | 0.00050      | 02/12/22 17:07 |            |
| EPA 6020B              | Boron                          | 0.015J    | mg/L       | 0.040        | 02/12/22 17:07 |            |
| EPA 6020B              | Cobalt                         | 0.0017J   | mg/L       | 0.0050       | 02/12/22 17:07 |            |
| EPA 6020B              | Copper                         | 0.00053J  | mg/L       | 0.0050       | 02/12/22 17:07 |            |
| EPA 6020B              | Selenium                       | 0.0018J   | mg/L       | 0.0050       | 02/12/22 17:07 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 63.0      | mg/L       | 10.0         | 02/03/22 16:07 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 4.2       | mg/L       | 1.0          | 02/07/22 03:27 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 29.7      | mg/L       | 1.0          | 02/07/22 03:27 |            |
| <b>9258555009</b>      | <b>GWC-46R</b>                 |           |            |              |                |            |
|                        | Performed by                   | CUSTOME   |            |              | 02/06/22 11:32 |            |
|                        |                                | R         |            |              |                |            |
|                        | pH                             | 7.48      | Std. Units |              | 02/06/22 11:32 |            |
| EPA 6010D              | Potassium                      | 1.6       | mg/L       | 0.20         | 02/14/22 15:46 |            |
| EPA 6010D              | Sodium                         | 13.0      | mg/L       | 1.0          | 02/14/22 15:46 |            |
| EPA 6010D              | Calcium                        | 39.9      | mg/L       | 1.0          | 02/14/22 15:46 |            |
| EPA 6010D              | Magnesium                      | 22.0      | mg/L       | 0.050        | 02/14/22 15:46 |            |
| EPA 6020B              | Barium                         | 0.011     | mg/L       | 0.0050       | 02/12/22 17:13 |            |
| EPA 6020B              | Chromium                       | 0.0051    | mg/L       | 0.0050       | 02/12/22 17:13 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 197       | mg/L       | 10.0         | 02/03/22 16:07 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 212       | mg/L       | 5.0          | 02/08/22 23:29 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 212       | mg/L       | 5.0          | 02/08/22 23:29 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.7       | mg/L       | 1.0          | 02/07/22 03:42 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 5.2       | mg/L       | 1.0          | 02/07/22 03:42 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Lab Sample ID          | Client Sample ID               | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |          |            |              |                |            |
| <b>9258555010</b>      | <b>GWC-48</b>                  |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/06/22 11:32 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 4.86     | Std. Units |              | 02/06/22 11:32 |            |
| EPA 6010D              | Potassium                      | 0.26     | mg/L       | 0.20         | 02/14/22 15:51 |            |
| EPA 6010D              | Sodium                         | 4.2      | mg/L       | 1.0          | 02/14/22 15:51 |            |
| EPA 6010D              | Calcium                        | 2.8      | mg/L       | 1.0          | 02/14/22 15:51 |            |
| EPA 6010D              | Magnesium                      | 0.67     | mg/L       | 0.050        | 02/14/22 15:51 |            |
| EPA 6020B              | Barium                         | 0.038    | mg/L       | 0.0050       | 02/12/22 17:19 |            |
| EPA 6020B              | Beryllium                      | 0.00036J | mg/L       | 0.00050      | 02/12/22 17:19 |            |
| EPA 6020B              | Cadmium                        | 0.00020J | mg/L       | 0.00050      | 02/12/22 17:19 |            |
| EPA 6020B              | Chromium                       | 0.0020J  | mg/L       | 0.0050       | 02/12/22 17:19 |            |
| EPA 6020B              | Cobalt                         | 0.0021J  | mg/L       | 0.0050       | 02/12/22 17:19 |            |
| EPA 6020B              | Nickel                         | 0.0052   | mg/L       | 0.0050       | 02/12/22 17:19 |            |
| EPA 7470A              | Mercury                        | 0.00039  | mg/L       | 0.00020      | 02/09/22 17:33 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 31.0     | mg/L       | 10.0         | 02/03/22 16:07 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 8.1      | mg/L       | 5.0          | 02/09/22 14:48 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 8.1      | mg/L       | 5.0          | 02/09/22 14:48 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 4.8      | mg/L       | 1.0          | 02/07/22 03:57 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.2      | mg/L       | 1.0          | 02/07/22 03:57 |            |
| <b>9258555011</b>      | <b>DUP-1</b>                   |          |            |              |                |            |
| EPA 6010D              | Potassium                      | 2.7      | mg/L       | 0.20         | 02/14/22 15:56 |            |
| EPA 6010D              | Calcium                        | 42.7     | mg/L       | 1.0          | 02/14/22 15:56 |            |
| EPA 6010D              | Magnesium                      | 21.6     | mg/L       | 0.050        | 02/14/22 15:56 |            |
| EPA 6020B              | Arsenic                        | 0.0012J  | mg/L       | 0.0050       | 02/14/22 20:27 | B          |
| EPA 6020B              | Barium                         | 0.029    | mg/L       | 0.0050       | 02/14/22 20:27 |            |
| EPA 6020B              | Boron                          | 0.020J   | mg/L       | 0.040        | 02/14/22 20:27 |            |
| EPA 6020B              | Copper                         | 0.0028J  | mg/L       | 0.0050       | 02/14/22 20:27 |            |
| EPA 6020B              | Nickel                         | 0.00095J | mg/L       | 0.0050       | 02/14/22 20:27 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 180      | mg/L       | 10.0         | 02/03/22 16:08 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 188      | mg/L       | 5.0          | 02/09/22 14:52 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 188      | mg/L       | 5.0          | 02/09/22 14:52 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.1      | mg/L       | 1.0          | 02/07/22 04:42 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 8.5      | mg/L       | 1.0          | 02/07/22 04:42 |            |
| <b>9258555012</b>      | <b>FB-1</b>                    |          |            |              |                |            |
| EPA 6020B              | Antimony                       | 0.0014J  | mg/L       | 0.0030       | 02/14/22 20:50 |            |
| <b>9258555013</b>      | <b>GWC-45</b>                  |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/07/22 10:38 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 4.88     | Std. Units |              | 02/07/22 10:38 |            |
| EPA 6010D              | Potassium                      | 0.22     | mg/L       | 0.20         | 02/14/22 16:34 |            |
| EPA 6010D              | Sodium                         | 1.6      | mg/L       | 1.0          | 02/14/22 16:34 |            |
| EPA 6010D              | Calcium                        | 1.1      | mg/L       | 1.0          | 02/14/22 16:34 |            |
| EPA 6010D              | Magnesium                      | 0.65     | mg/L       | 0.050        | 02/14/22 16:34 |            |
| EPA 6020B              | Antimony                       | 0.0020J  | mg/L       | 0.0030       | 02/14/22 21:50 |            |
| EPA 6020B              | Barium                         | 0.0072   | mg/L       | 0.0050       | 02/14/22 21:50 |            |
| EPA 6020B              | Boron                          | 0.019J   | mg/L       | 0.040        | 02/14/22 21:50 |            |

### REPORT OF LABORATORY ANALYSIS

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**SUMMARY OF DETECTION**

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Lab Sample ID          | Client Sample ID               | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |          |            |              |                |            |
| <b>9258555013</b>      | <b>GWC-45</b>                  |          |            |              |                |            |
| EPA 6020B              | Cobalt                         | 0.0013J  | mg/L       | 0.0050       | 02/14/22 21:50 |            |
| EPA 6020B              | Nickel                         | 0.0011J  | mg/L       | 0.0050       | 02/14/22 21:50 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 70.0     | mg/L       | 10.0         | 02/07/22 16:44 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 2.7J     | mg/L       | 5.0          | 02/09/22 22:15 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 2.7J     | mg/L       | 5.0          | 02/09/22 22:15 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 0.79J    | mg/L       | 1.0          | 02/11/22 13:42 |            |
| <b>9258555014</b>      | <b>GWC-45R</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/07/22 10:38 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 7.15     | Std. Units |              | 02/07/22 10:38 |            |
| EPA 6010D              | Potassium                      | 0.82     | mg/L       | 0.20         | 02/14/22 16:39 |            |
| EPA 6010D              | Sodium                         | 1.5      | mg/L       | 1.0          | 02/14/22 16:39 |            |
| EPA 6010D              | Calcium                        | 43.9     | mg/L       | 1.0          | 02/14/22 16:39 |            |
| EPA 6010D              | Magnesium                      | 23.8     | mg/L       | 0.050        | 02/14/22 16:39 |            |
| EPA 6020B              | Barium                         | 0.026    | mg/L       | 0.0050       | 02/14/22 21:56 |            |
| EPA 6020B              | Boron                          | 0.022J   | mg/L       | 0.040        | 02/14/22 21:56 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 201      | mg/L       | 10.0         | 02/07/22 16:44 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 188      | mg/L       | 5.0          | 02/09/22 21:08 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 188      | mg/L       | 5.0          | 02/09/22 21:08 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 4.3      | mg/L       | 1.0          | 02/12/22 16:39 | M1         |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 6.1      | mg/L       | 1.0          | 02/12/22 16:39 | M1         |
| <b>9258555015</b>      | <b>GWC-47</b>                  |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/07/22 10:38 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 7.55     | Std. Units |              | 02/07/22 10:38 |            |
| EPA 6010D              | Zinc                           | 0.038    | mg/L       | 0.020        | 02/14/22 16:44 |            |
| EPA 6010D              | Potassium                      | 0.55     | mg/L       | 0.20         | 02/14/22 16:44 |            |
| EPA 6010D              | Sodium                         | 3.4      | mg/L       | 1.0          | 02/14/22 16:44 |            |
| EPA 6010D              | Calcium                        | 21.3     | mg/L       | 1.0          | 02/14/22 16:44 |            |
| EPA 6010D              | Magnesium                      | 12.0     | mg/L       | 0.050        | 02/14/22 16:44 |            |
| EPA 6020B              | Barium                         | 0.0081   | mg/L       | 0.0050       | 02/14/22 22:02 |            |
| EPA 6020B              | Boron                          | 0.011J   | mg/L       | 0.040        | 02/14/22 22:02 |            |
| EPA 6020B              | Cadmium                        | 0.00014J | mg/L       | 0.00050      | 02/14/22 22:02 |            |
| EPA 6020B              | Chromium                       | 0.0015J  | mg/L       | 0.0050       | 02/14/22 22:02 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 107      | mg/L       | 10.0         | 02/07/22 16:45 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 100      | mg/L       | 5.0          | 02/09/22 21:14 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 100      | mg/L       | 5.0          | 02/09/22 21:14 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.0      | mg/L       | 1.0          | 02/12/22 17:21 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 4.3      | mg/L       | 1.0          | 02/12/22 17:21 |            |
| <b>9258555016</b>      | <b>GWC-47R</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/07/22 10:38 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 7.54     | Std. Units |              | 02/07/22 10:38 |            |
| EPA 6010D              | Zinc                           | 0.029    | mg/L       | 0.020        | 02/14/22 22:17 |            |
| EPA 6010D              | Potassium                      | 1.7      | mg/L       | 0.20         | 02/14/22 22:17 |            |
| EPA 6010D              | Sodium                         | 3.6      | mg/L       | 1.0          | 02/14/22 22:17 |            |

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Lab Sample ID          | Client Sample ID               | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |          |            |              |                |            |
| <b>9258555016</b>      | <b>GWC-47R</b>                 |          |            |              |                |            |
| EPA 6010D              | Calcium                        | 29.4     | mg/L       | 1.0          | 02/14/22 22:17 |            |
| EPA 6010D              | Magnesium                      | 14.6     | mg/L       | 0.050        | 02/14/22 22:17 |            |
| EPA 6020B              | Antimony                       | 0.0024J  | mg/L       | 0.0030       | 02/14/22 22:08 |            |
| EPA 6020B              | Barium                         | 0.0077   | mg/L       | 0.0050       | 02/14/22 22:08 |            |
| EPA 6020B              | Boron                          | 0.010J   | mg/L       | 0.040        | 02/14/22 22:08 |            |
| EPA 6020B              | Chromium                       | 0.0022J  | mg/L       | 0.0050       | 02/14/22 22:08 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 157      | mg/L       | 10.0         | 02/07/22 16:45 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 132      | mg/L       | 5.0          | 02/09/22 21:18 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 132      | mg/L       | 5.0          | 02/09/22 21:18 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.3      | mg/L       | 1.0          | 02/12/22 17:35 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 9.4      | mg/L       | 1.0          | 02/12/22 17:35 |            |
| <b>9258555017</b>      | <b>GWC-49Z</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/07/22 10:39 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 5.00     | Std. Units |              | 02/07/22 10:39 |            |
| EPA 6010D              | Potassium                      | 0.38     | mg/L       | 0.20         | 02/14/22 22:22 |            |
| EPA 6010D              | Sodium                         | 2.5      | mg/L       | 1.0          | 02/14/22 22:22 |            |
| EPA 6010D              | Calcium                        | 0.62J    | mg/L       | 1.0          | 02/14/22 22:22 |            |
| EPA 6010D              | Magnesium                      | 0.29     | mg/L       | 0.050        | 02/14/22 22:22 |            |
| EPA 6020B              | Antimony                       | 0.00097J | mg/L       | 0.0030       | 02/14/22 22:14 |            |
| EPA 6020B              | Barium                         | 0.0030J  | mg/L       | 0.0050       | 02/14/22 22:14 |            |
| EPA 6020B              | Boron                          | 0.0087J  | mg/L       | 0.040        | 02/14/22 22:14 |            |
| EPA 6020B              | Cobalt                         | 0.00066J | mg/L       | 0.0050       | 02/14/22 22:14 |            |
| EPA 6020B              | Nickel                         | 0.0014J  | mg/L       | 0.0050       | 02/14/22 22:14 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 27.0     | mg/L       | 10.0         | 02/07/22 16:45 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 3.4J     | mg/L       | 5.0          | 02/09/22 22:18 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 3.4J     | mg/L       | 5.0          | 02/09/22 22:18 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 0.93J    | mg/L       | 1.0          | 02/12/22 18:17 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 0.93J    | mg/L       | 1.0          | 02/12/22 18:17 |            |
| <b>9258555018</b>      | <b>GWC-49R</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/07/22 10:39 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 7.63     | Std. Units |              | 02/07/22 10:39 |            |
| EPA 6010D              | Potassium                      | 0.78     | mg/L       | 0.20         | 02/14/22 22:27 |            |
| EPA 6010D              | Sodium                         | 2.3      | mg/L       | 1.0          | 02/14/22 22:27 |            |
| EPA 6010D              | Calcium                        | 26.0     | mg/L       | 1.0          | 02/14/22 22:27 |            |
| EPA 6010D              | Magnesium                      | 14.5     | mg/L       | 0.050        | 02/14/22 22:27 |            |
| EPA 6020B              | Barium                         | 0.011    | mg/L       | 0.0050       | 02/14/22 22:20 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 125      | mg/L       | 10.0         | 02/07/22 16:45 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 121      | mg/L       | 5.0          | 02/09/22 21:36 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 121      | mg/L       | 5.0          | 02/09/22 21:36 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.1      | mg/L       | 1.0          | 02/12/22 18:31 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 2.5      | mg/L       | 1.0          | 02/12/22 18:31 |            |
| <b>9258555019</b>      | <b>DUP-2</b>                   |          |            |              |                |            |
| EPA 6010D              | Potassium                      | 0.73     | mg/L       | 0.20         | 02/14/22 22:32 |            |
| EPA 6010D              | Sodium                         | 1.3      | mg/L       | 1.0          | 02/14/22 22:32 |            |

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Lab Sample ID<br>Method | Client Sample ID<br>Parameters | Result  | Units      | Report Limit | Analyzed       | Qualifiers |
|-------------------------|--------------------------------|---------|------------|--------------|----------------|------------|
| <b>9258555019</b>       | <b>DUP-2</b>                   |         |            |              |                |            |
| EPA 6010D               | Calcium                        | 38.8    | mg/L       | 1.0          | 02/14/22 22:32 |            |
| EPA 6010D               | Magnesium                      | 21.2    | mg/L       | 0.050        | 02/14/22 22:32 |            |
| EPA 6020B               | Barium                         | 0.026   | mg/L       | 0.0050       | 02/14/22 22:38 |            |
| EPA 6020B               | Boron                          | 0.013J  | mg/L       | 0.040        | 02/14/22 22:38 |            |
| SM 2540C-2015           | Total Dissolved Solids         | 180     | mg/L       | 10.0         | 02/07/22 17:20 |            |
| SM 2320B                | Alkalinity, Total as CaCO3     | 190     | mg/L       | 5.0          | 02/09/22 21:42 |            |
| SM 2320B                | Alkalinity,Bicarbonate (CaCO3) | 190     | mg/L       | 5.0          | 02/09/22 21:42 |            |
| EPA 300.0 Rev 2.1 1993  | Chloride                       | 4.2     | mg/L       | 1.0          | 02/12/22 18:45 |            |
| EPA 300.0 Rev 2.1 1993  | Sulfate                        | 6.1     | mg/L       | 1.0          | 02/12/22 18:45 |            |
| <b>9258555021</b>       | <b>GWA-39RZ</b>                |         |            |              |                |            |
|                         | Performed by                   | CUSTOME |            |              | 02/07/22 10:39 |            |
|                         |                                | R       |            |              |                |            |
|                         | pH                             | 6.89    | Std. Units |              | 02/07/22 10:39 |            |
| EPA 6010D               | Potassium                      | 0.95    | mg/L       | 0.20         | 02/14/22 22:41 |            |
| EPA 6010D               | Sodium                         | 1.4     | mg/L       | 1.0          | 02/14/22 22:41 |            |
| EPA 6010D               | Calcium                        | 32.6    | mg/L       | 1.0          | 02/14/22 22:41 |            |
| EPA 6010D               | Magnesium                      | 17.1    | mg/L       | 0.050        | 02/14/22 22:41 |            |
| EPA 6020B               | Barium                         | 0.013   | mg/L       | 0.0050       | 02/14/22 22:50 |            |
| EPA 6020B               | Chromium                       | 0.0012J | mg/L       | 0.0050       | 02/14/22 22:50 |            |
| SM 2540C-2015           | Total Dissolved Solids         | 143     | mg/L       | 10.0         | 02/08/22 11:12 |            |
| SM 2320B                | Alkalinity, Total as CaCO3     | 146     | mg/L       | 5.0          | 02/09/22 21:57 |            |
| SM 2320B                | Alkalinity,Bicarbonate (CaCO3) | 146     | mg/L       | 5.0          | 02/09/22 21:57 |            |
| EPA 300.0 Rev 2.1 1993  | Chloride                       | 1.5     | mg/L       | 1.0          | 02/12/22 19:12 |            |
| EPA 300.0 Rev 2.1 1993  | Sulfate                        | 4.5     | mg/L       | 1.0          | 02/12/22 19:12 |            |
| <b>9258555022</b>       | <b>FB-3</b>                    |         |            |              |                |            |
| EPA 6020B               | Chromium                       | 0.0011J | mg/L       | 0.0050       | 02/14/22 23:02 |            |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Sample: GWA-39Z  |                 | Lab ID: 9258555001 |              | Collected: 01/31/22 13:50 |    | Received: 02/01/22 11:22 |                | Matrix: Water |      |
|--|-----------------|--------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units              | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                 |                    |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                    |              |                           | 1  |                          | 02/06/22 11:28 |               |      |
| pH   | <b>6.41</b>     | Std. Units         |              |                           | 1  |                          | 02/06/22 11:28 |               |      |
| <b>6010D ATL ICP</b>                                       |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                 |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                    |              |                           |    |                          |                |               |      |
| Zinc   | ND              | mg/L               | 0.020        | 0.0085                    | 1  | 02/14/22 09:41           | 02/14/22 14:43 | 7440-66-6     |      |
| Potassium  | <b>1.3</b>      | mg/L               | 0.20         | 0.15                      | 1  | 02/14/22 09:41           | 02/14/22 14:43 | 7440-09-7     |      |
| Sodium   | <b>2.4</b>      | mg/L               | 1.0          | 0.58                      | 1  | 02/14/22 09:41           | 02/14/22 14:43 | 7440-23-5     |      |
| Calcium  | <b>12.7</b>     | mg/L               | 1.0          | 0.12                      | 1  | 02/14/22 09:41           | 02/14/22 14:43 | 7440-70-2     |      |
| Magnesium  | <b>7.0</b>      | mg/L               | 0.050        | 0.012                     | 1  | 02/14/22 09:41           | 02/14/22 14:43 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>                                      |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                 |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                    |              |                           |    |                          |                |               |      |
| Antimony   | ND              | mg/L               | 0.0030       | 0.00078                   | 1  | 02/12/22 08:26           | 02/12/22 15:55 | 7440-36-0     |      |
| Arsenic  | <b>0.0021J</b>  | mg/L               | 0.0050       | 0.0011                    | 1  | 02/12/22 08:26           | 02/12/22 15:55 | 7440-38-2     |      |
| Barium   | <b>0.013</b>    | mg/L               | 0.0050       | 0.00067                   | 1  | 02/12/22 08:26           | 02/12/22 15:55 | 7440-39-3     |      |
| Beryllium  | ND              | mg/L               | 0.00050      | 0.000054                  | 1  | 02/12/22 08:26           | 02/12/22 15:55 | 7440-41-7     |      |
| Boron  | ND              | mg/L               | 0.040        | 0.0086                    | 1  | 02/12/22 08:26           | 02/12/22 15:55 | 7440-42-8     |      |
| Cadmium  | ND              | mg/L               | 0.00050      | 0.00011                   | 1  | 02/12/22 08:26           | 02/12/22 15:55 | 7440-43-9     |      |
| Chromium   | ND              | mg/L               | 0.0050       | 0.0011                    | 1  | 02/12/22 08:26           | 02/12/22 15:55 | 7440-47-3     |      |
| Cobalt   | ND              | mg/L               | 0.0050       | 0.00039                   | 1  | 02/12/22 08:26           | 02/12/22 15:55 | 7440-48-4     |      |
| Copper   | ND              | mg/L               | 0.0050       | 0.00050                   | 1  | 02/12/22 08:26           | 02/12/22 15:55 | 7440-50-8     |      |
| Lead   | ND              | mg/L               | 0.0010       | 0.00089                   | 1  | 02/12/22 08:26           | 02/12/22 15:55 | 7439-92-1     |      |
| Nickel   | ND              | mg/L               | 0.0050       | 0.00071                   | 1  | 02/12/22 08:26           | 02/12/22 15:55 | 7440-02-0     |      |
| Selenium   | ND              | mg/L               | 0.0050       | 0.0014                    | 1  | 02/12/22 08:26           | 02/12/22 15:55 | 7782-49-2     |      |
| Silver   | ND              | mg/L               | 0.0050       | 0.00044                   | 1  | 02/12/22 08:26           | 02/12/22 15:55 | 7440-22-4     |      |
| Thallium   | ND              | mg/L               | 0.0010       | 0.00018                   | 1  | 02/12/22 08:26           | 02/14/22 14:05 | 7440-28-0     |      |
| Vanadium   | ND              | mg/L               | 0.010        | 0.0019                    | 1  | 02/12/22 08:26           | 02/12/22 15:55 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                 |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                    |              |                           |    |                          |                |               |      |
| Mercury  | ND              | mg/L               | 0.00020      | 0.00013                   | 1  | 02/09/22 12:00           | 02/09/22 16:56 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015                           |                 |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                    |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | <b>61.0</b>     | mg/L               | 10.0         | 10.0                      | 1  |                          | 02/03/22 16:06 |               |      |
| <b>2320B Alkalinity</b>                                    |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B                                |                 |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Minneapolis                     |                 |                    |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3                                 | <b>60.6</b>     | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/08/22 22:40 |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>60.6</b>     | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/08/22 22:40 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND              | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/08/22 22:40 |               |      |

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

**Sample: GWA-39Z**      **Lab ID: 92585555001**      Collected: 01/31/22 13:50      Received: 02/01/22 11:22      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 1.0     | mg/L  | 1.0    | 0.60  | 1  |          | 02/07/22 01:12 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/07/22 01:12 | 16984-48-8 |      |
| Sulfate                                   | 1.2     | mg/L  | 1.0    | 0.50  | 1  |          | 02/07/22 01:12 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Sample: <b>GWA-40</b>  | Lab ID: <b>9258555002</b> | Collected: 01/31/22 14:25 | Received: 02/01/22 11:22 | Matrix: Water |    |                |                |           |      |
|--|---------------------------|---------------------------|--------------------------|---------------|----|----------------|----------------|-----------|------|
| Parameters   | Results                   | Units                     | Report Limit             | MDL           | DF | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                           |                           |                          |               |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                           |                           |                          |               |    |                |                |           |      |
| Performed by   | <b>CUSTOMER</b>           |                           |                          |               | 1  |                | 02/06/22 11:29 |           |      |
| pH   | <b>6.85</b>               | Std. Units                |                          |               | 1  |                | 02/06/22 11:29 |           |      |
| <b>6010D ATL ICP</b>   |                           |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                           |                           |                          |               |    |                |                |           |      |
| Zinc   | ND                        | mg/L                      | 0.020                    | 0.0085        | 1  | 02/14/22 09:41 | 02/14/22 14:48 | 7440-66-6 |      |
| Potassium  | <b>0.97</b>               | mg/L                      | 0.20                     | 0.15          | 1  | 02/14/22 09:41 | 02/14/22 14:48 | 7440-09-7 |      |
| Sodium   | <b>1.4</b>                | mg/L                      | 1.0                      | 0.58          | 1  | 02/14/22 09:41 | 02/14/22 14:48 | 7440-23-5 |      |
| Calcium  | <b>18.5</b>               | mg/L                      | 1.0                      | 0.12          | 1  | 02/14/22 09:41 | 02/14/22 14:48 | 7440-70-2 | M1   |
| Magnesium  | <b>10.3</b>               | mg/L                      | 0.050                    | 0.012         | 1  | 02/14/22 09:41 | 02/14/22 14:48 | 7439-95-4 | M1   |
| <b>6020 MET ICPMS</b>  |                           |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                           |                           |                          |               |    |                |                |           |      |
| Antimony   | <b>0.0014J</b>            | mg/L                      | 0.0030                   | 0.00078       | 1  | 02/12/22 08:26 | 02/12/22 16:19 | 7440-36-0 |      |
| Arsenic  | ND                        | mg/L                      | 0.0050                   | 0.0011        | 1  | 02/12/22 08:26 | 02/12/22 16:19 | 7440-38-2 |      |
| Barium   | <b>0.0081</b>             | mg/L                      | 0.0050                   | 0.00067       | 1  | 02/12/22 08:26 | 02/12/22 16:19 | 7440-39-3 |      |
| Beryllium  | ND                        | mg/L                      | 0.00050                  | 0.000054      | 1  | 02/12/22 08:26 | 02/12/22 16:19 | 7440-41-7 |      |
| Boron  | ND                        | mg/L                      | 0.040                    | 0.0086        | 1  | 02/12/22 08:26 | 02/12/22 16:19 | 7440-42-8 |      |
| Cadmium  | ND                        | mg/L                      | 0.00050                  | 0.00011       | 1  | 02/12/22 08:26 | 02/12/22 16:19 | 7440-43-9 |      |
| Chromium   | ND                        | mg/L                      | 0.0050                   | 0.0011        | 1  | 02/12/22 08:26 | 02/12/22 16:19 | 7440-47-3 |      |
| Cobalt   | ND                        | mg/L                      | 0.0050                   | 0.00039       | 1  | 02/12/22 08:26 | 02/12/22 16:19 | 7440-48-4 |      |
| Copper   | ND                        | mg/L                      | 0.0050                   | 0.00050       | 1  | 02/12/22 08:26 | 02/12/22 16:19 | 7440-50-8 |      |
| Lead   | ND                        | mg/L                      | 0.0010                   | 0.00089       | 1  | 02/12/22 08:26 | 02/12/22 16:19 | 7439-92-1 |      |
| Nickel   | ND                        | mg/L                      | 0.0050                   | 0.00071       | 1  | 02/12/22 08:26 | 02/12/22 16:19 | 7440-02-0 |      |
| Selenium   | ND                        | mg/L                      | 0.0050                   | 0.0014        | 1  | 02/12/22 08:26 | 02/12/22 16:19 | 7782-49-2 |      |
| Silver   | ND                        | mg/L                      | 0.0050                   | 0.00044       | 1  | 02/12/22 08:26 | 02/12/22 16:19 | 7440-22-4 |      |
| Thallium   | ND                        | mg/L                      | 0.0010                   | 0.00018       | 1  | 02/12/22 08:26 | 02/14/22 14:23 | 7440-28-0 |      |
| Vanadium   | ND                        | mg/L                      | 0.010                    | 0.0019        | 1  | 02/12/22 08:26 | 02/12/22 16:19 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                           |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                           |                           |                          |               |    |                |                |           |      |
| Mercury  | ND                        | mg/L                      | 0.00020                  | 0.00013       | 1  | 02/09/22 12:00 | 02/09/22 17:12 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                           |                           |                          |               |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                           |                           |                          |               |    |                |                |           |      |
| Total Dissolved Solids   | <b>81.0</b>               | mg/L                      | 10.0                     | 10.0          | 1  |                | 02/03/22 16:06 |           |      |
| <b>2320B Alkalinity</b>  |                           |                           |                          |               |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                           |                           |                          |               |    |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>84.2</b>               | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/08/22 22:44 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>84.2</b>               | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/08/22 22:44 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND                        | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/08/22 22:44 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

**Sample: GWA-40**      **Lab ID: 92585555002**      Collected: 01/31/22 14:25      Received: 02/01/22 11:22      Matrix: Water

| Parameters                                | Results      | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|--------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |              |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |              |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |              |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |              |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>0.71J</b> | mg/L  | 1.0    | 0.60  | 1  |          | 02/07/22 01:27 | 16887-00-6 |      |
| Fluoride                                  | ND           | mg/L  | 0.10   | 0.050 | 1  |          | 02/07/22 01:27 | 16984-48-8 |      |
| Sulfate                                   | <b>1.2</b>   | mg/L  | 1.0    | 0.50  | 1  |          | 02/07/22 01:27 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

**Sample: GWA-41**      **Lab ID: 9258555003**      Collected: 01/31/22 12:55      Received: 02/01/22 11:22      Matrix: Water

| Parameters  | Results         | Units      | Report  |          |    | Prepared       | Analyzed       | CAS No.   | Qual |
|---|-----------------|------------|---------|----------|----|----------------|----------------|-----------|------|
|   |                 |            | Limit   | MDL      | DF |                |                |           |      |
| <b>Field Data</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte   |                 |            |         |          |    |                |                |           |      |
| Performed by  | <b>CUSTOMER</b> |            |         |          | 1  |                | 02/06/22 11:30 |           |      |
| pH  | <b>6.02</b>     | Std. Units |         |          | 1  |                | 02/06/22 11:30 |           |      |
| <b>6010D ATL ICP</b>  |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |         |          |    |                |                |           |      |
| Zinc  | ND              | mg/L       | 0.020   | 0.0085   | 1  | 02/14/22 09:41 | 02/14/22 15:07 | 7440-66-6 |      |
| Potassium   | <b>0.56</b>     | mg/L       | 0.20    | 0.15     | 1  | 02/14/22 09:41 | 02/14/22 15:07 | 7440-09-7 |      |
| Sodium  | <b>0.90J</b>    | mg/L       | 1.0     | 0.58     | 1  | 02/14/22 09:41 | 02/14/22 15:07 | 7440-23-5 |      |
| Calcium   | <b>14.5</b>     | mg/L       | 1.0     | 0.12     | 1  | 02/14/22 09:41 | 02/14/22 15:07 | 7440-70-2 |      |
| Magnesium   | <b>7.2</b>      | mg/L       | 0.050   | 0.012    | 1  | 02/14/22 09:41 | 02/14/22 15:07 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |         |          |    |                |                |           |      |
| Antimony  | ND              | mg/L       | 0.0030  | 0.00078  | 1  | 02/12/22 08:26 | 02/12/22 16:25 | 7440-36-0 |      |
| Arsenic   | ND              | mg/L       | 0.0050  | 0.0011   | 1  | 02/12/22 08:26 | 02/12/22 16:25 | 7440-38-2 |      |
| Barium  | <b>0.022</b>    | mg/L       | 0.0050  | 0.00067  | 1  | 02/12/22 08:26 | 02/12/22 16:25 | 7440-39-3 |      |
| Beryllium   | ND              | mg/L       | 0.00050 | 0.000054 | 1  | 02/12/22 08:26 | 02/12/22 16:25 | 7440-41-7 |      |
| Boron   | ND              | mg/L       | 0.040   | 0.0086   | 1  | 02/12/22 08:26 | 02/12/22 16:25 | 7440-42-8 |      |
| Cadmium   | ND              | mg/L       | 0.00050 | 0.00011  | 1  | 02/12/22 08:26 | 02/12/22 16:25 | 7440-43-9 |      |
| Chromium  | ND              | mg/L       | 0.0050  | 0.0011   | 1  | 02/12/22 08:26 | 02/12/22 16:25 | 7440-47-3 |      |
| Cobalt  | ND              | mg/L       | 0.0050  | 0.00039  | 1  | 02/12/22 08:26 | 02/12/22 16:25 | 7440-48-4 |      |
| Copper  | ND              | mg/L       | 0.0050  | 0.00050  | 1  | 02/12/22 08:26 | 02/12/22 16:25 | 7440-50-8 |      |
| Lead  | ND              | mg/L       | 0.0010  | 0.00089  | 1  | 02/12/22 08:26 | 02/12/22 16:25 | 7439-92-1 |      |
| Nickel  | ND              | mg/L       | 0.0050  | 0.00071  | 1  | 02/12/22 08:26 | 02/12/22 16:25 | 7440-02-0 |      |
| Selenium  | ND              | mg/L       | 0.0050  | 0.0014   | 1  | 02/12/22 08:26 | 02/12/22 16:25 | 7782-49-2 |      |
| Silver  | ND              | mg/L       | 0.0050  | 0.00044  | 1  | 02/12/22 08:26 | 02/12/22 16:25 | 7440-22-4 |      |
| Thallium  | ND              | mg/L       | 0.0010  | 0.00018  | 1  | 02/12/22 08:26 | 02/14/22 14:29 | 7440-28-0 |      |
| Vanadium  | ND              | mg/L       | 0.010   | 0.0019   | 1  | 02/12/22 08:26 | 02/12/22 16:25 | 7440-62-2 |      |
| <b>7470 Mercury</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 7470A      Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |         |          |    |                |                |           |      |
| Mercury   | ND              | mg/L       | 0.00020 | 0.00013  | 1  | 02/09/22 12:00 | 02/09/22 17:15 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                                |                 |            |         |          |    |                |                |           |      |
| Total Dissolved Solids  | <b>63.0</b>     | mg/L       | 10.0    | 10.0     | 1  |                | 02/03/22 16:07 |           |      |
| <b>2320B Alkalinity</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis   |                 |            |         |          |    |                |                |           |      |
| Alkalinity, Total as CaCO3  | <b>66.1</b>     | mg/L       | 5.0     | 1.8      | 1  |                | 02/08/22 22:58 |           |      |
| Alkalinity,Bicarbonate (CaCO3)  | <b>66.1</b>     | mg/L       | 5.0     | 1.8      | 1  |                | 02/08/22 22:58 |           |      |
| Alkalinity,Carbonate (CaCO3)  | ND              | mg/L       | 5.0     | 1.8      | 1  |                | 02/08/22 22:58 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

**Sample: GWA-41**      **Lab ID: 92585555003**      Collected: 01/31/22 12:55      Received: 02/01/22 11:22      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 1.0     | mg/L  | 1.0    | 0.60  | 1  |          | 02/07/22 01:42 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/07/22 01:42 | 16984-48-8 |      |
| Sulfate                                   | 1.8     | mg/L  | 1.0    | 0.50  | 1  |          | 02/07/22 01:42 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Sample: GWA-41R  |                 | Lab ID: 9258555004 |              | Collected: 01/31/22 10:45 |    | Received: 02/01/22 11:22 |                | Matrix: Water |      |
|--|-----------------|--------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units              | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                 |                    |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                    |              |                           | 1  |                          | 02/06/22 11:30 |               |      |
| pH   | <b>6.63</b>     | Std. Units         |              |                           | 1  |                          | 02/06/22 11:30 |               |      |
| <b>6010D ATL ICP</b>                                       |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                 |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                    |              |                           |    |                          |                |               |      |
| Zinc   | ND              | mg/L               | 0.020        | 0.0085                    | 1  | 02/14/22 09:41           | 02/14/22 15:23 | 7440-66-6     |      |
| Potassium  | <b>2.5</b>      | mg/L               | 0.20         | 0.15                      | 1  | 02/14/22 09:41           | 02/14/22 15:23 | 7440-09-7     |      |
| Sodium   | ND              | mg/L               | 1.0          | 0.58                      | 1  | 02/14/22 09:41           | 02/14/22 15:23 | 7440-23-5     |      |
| Calcium  | <b>39.3</b>     | mg/L               | 1.0          | 0.12                      | 1  | 02/14/22 09:41           | 02/14/22 15:23 | 7440-70-2     |      |
| Magnesium  | <b>20.1</b>     | mg/L               | 0.050        | 0.012                     | 1  | 02/14/22 09:41           | 02/14/22 15:23 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>                                      |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                 |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                    |              |                           |    |                          |                |               |      |
| Antimony   | <b>0.0011J</b>  | mg/L               | 0.0030       | 0.00078                   | 1  | 02/12/22 08:26           | 02/12/22 16:31 | 7440-36-0     |      |
| Arsenic  | ND              | mg/L               | 0.0050       | 0.0011                    | 1  | 02/12/22 08:26           | 02/12/22 16:31 | 7440-38-2     |      |
| Barium   | <b>0.031</b>    | mg/L               | 0.0050       | 0.00067                   | 1  | 02/12/22 08:26           | 02/12/22 16:31 | 7440-39-3     |      |
| Beryllium  | ND              | mg/L               | 0.00050      | 0.000054                  | 1  | 02/12/22 08:26           | 02/12/22 16:31 | 7440-41-7     |      |
| Boron  | <b>0.016J</b>   | mg/L               | 0.040        | 0.0086                    | 1  | 02/12/22 08:26           | 02/12/22 16:31 | 7440-42-8     |      |
| Cadmium  | ND              | mg/L               | 0.00050      | 0.00011                   | 1  | 02/12/22 08:26           | 02/12/22 16:31 | 7440-43-9     |      |
| Chromium   | ND              | mg/L               | 0.0050       | 0.0011                    | 1  | 02/12/22 08:26           | 02/12/22 16:31 | 7440-47-3     |      |
| Cobalt   | ND              | mg/L               | 0.0050       | 0.00039                   | 1  | 02/12/22 08:26           | 02/12/22 16:31 | 7440-48-4     |      |
| Copper   | <b>0.0028J</b>  | mg/L               | 0.0050       | 0.00050                   | 1  | 02/12/22 08:26           | 02/12/22 16:31 | 7440-50-8     |      |
| Lead   | ND              | mg/L               | 0.0010       | 0.00089                   | 1  | 02/12/22 08:26           | 02/12/22 16:31 | 7439-92-1     |      |
| Nickel   | <b>0.00091J</b> | mg/L               | 0.0050       | 0.00071                   | 1  | 02/12/22 08:26           | 02/12/22 16:31 | 7440-02-0     |      |
| Selenium   | ND              | mg/L               | 0.0050       | 0.0014                    | 1  | 02/12/22 08:26           | 02/12/22 16:31 | 7782-49-2     |      |
| Silver   | ND              | mg/L               | 0.0050       | 0.00044                   | 1  | 02/12/22 08:26           | 02/12/22 16:31 | 7440-22-4     |      |
| Thallium   | ND              | mg/L               | 0.0010       | 0.00018                   | 1  | 02/12/22 08:26           | 02/14/22 14:35 | 7440-28-0     |      |
| Vanadium   | ND              | mg/L               | 0.010        | 0.0019                    | 1  | 02/12/22 08:26           | 02/12/22 16:31 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                 |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                    |              |                           |    |                          |                |               |      |
| Mercury  | ND              | mg/L               | 0.00020      | 0.00013                   | 1  | 02/09/22 12:00           | 02/09/22 17:17 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015                           |                 |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                    |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | <b>184</b>      | mg/L               | 10.0         | 10.0                      | 1  |                          | 02/03/22 16:07 |               |      |
| <b>2320B Alkalinity</b>                                    |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B                                |                 |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Minneapolis                     |                 |                    |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3                                 | <b>185</b>      | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/08/22 23:02 |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>185</b>      | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/08/22 23:02 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND              | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/08/22 23:02 |               |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

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**Sample: GWA-41R**      **Lab ID: 9258555004**      Collected: 01/31/22 10:45      Received: 02/01/22 11:22      Matrix: Water

| Parameters                                | Results    | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |            |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |            |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |            |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |            |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>1.0</b> | mg/L  | 1.0    | 0.60  | 1  |          | 02/07/22 01:57 | 16887-00-6 |      |
| Fluoride                                  | ND         | mg/L  | 0.10   | 0.050 | 1  |          | 02/07/22 01:57 | 16984-48-8 |      |
| Sulfate                                   | <b>8.5</b> | mg/L  | 1.0    | 0.50  | 1  |          | 02/07/22 01:57 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Sample: GWA-42   |                 | Lab ID: 9258555005 |              | Collected: 01/31/22 14:48 |    | Received: 02/01/22 11:22 |                | Matrix: Water |      |
|--|-----------------|--------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units              | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                 |                    |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                    |              |                           | 1  |                          | 02/06/22 11:30 |               |      |
| pH   | <b>7.17</b>     | Std. Units         |              |                           | 1  |                          | 02/06/22 11:30 |               |      |
| <b>6010D ATL ICP</b>                                       |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                 |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                    |              |                           |    |                          |                |               |      |
| Zinc   | ND              | mg/L               | 0.020        | 0.0085                    | 1  | 02/14/22 09:41           | 02/14/22 15:27 | 7440-66-6     |      |
| Potassium  | <b>0.26</b>     | mg/L               | 0.20         | 0.15                      | 1  | 02/14/22 09:41           | 02/14/22 15:27 | 7440-09-7     |      |
| Sodium   | <b>1.8</b>      | mg/L               | 1.0          | 0.58                      | 1  | 02/14/22 09:41           | 02/14/22 15:27 | 7440-23-5     |      |
| Calcium  | <b>37.3</b>     | mg/L               | 1.0          | 0.12                      | 1  | 02/14/22 09:41           | 02/14/22 15:27 | 7440-70-2     |      |
| Magnesium  | <b>15.2</b>     | mg/L               | 0.050        | 0.012                     | 1  | 02/14/22 09:41           | 02/14/22 15:27 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>                                      |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                 |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                    |              |                           |    |                          |                |               |      |
| Antimony   | ND              | mg/L               | 0.0030       | 0.00078                   | 1  | 02/12/22 08:26           | 02/12/22 16:49 | 7440-36-0     |      |
| Arsenic  | ND              | mg/L               | 0.0050       | 0.0011                    | 1  | 02/12/22 08:26           | 02/12/22 16:49 | 7440-38-2     |      |
| Barium   | <b>0.0063</b>   | mg/L               | 0.0050       | 0.00067                   | 1  | 02/12/22 08:26           | 02/12/22 16:49 | 7440-39-3     |      |
| Beryllium  | <b>0.00014J</b> | mg/L               | 0.00050      | 0.000054                  | 1  | 02/12/22 08:26           | 02/12/22 16:49 | 7440-41-7     |      |
| Boron  | ND              | mg/L               | 0.040        | 0.0086                    | 1  | 02/12/22 08:26           | 02/12/22 16:49 | 7440-42-8     |      |
| Cadmium  | <b>0.00018J</b> | mg/L               | 0.00050      | 0.00011                   | 1  | 02/12/22 08:26           | 02/12/22 16:49 | 7440-43-9     |      |
| Chromium   | ND              | mg/L               | 0.0050       | 0.0011                    | 1  | 02/12/22 08:26           | 02/12/22 16:49 | 7440-47-3     |      |
| Cobalt   | ND              | mg/L               | 0.0050       | 0.00039                   | 1  | 02/12/22 08:26           | 02/12/22 16:49 | 7440-48-4     |      |
| Copper   | ND              | mg/L               | 0.0050       | 0.00050                   | 1  | 02/12/22 08:26           | 02/12/22 16:49 | 7440-50-8     |      |
| Lead   | ND              | mg/L               | 0.0010       | 0.00089                   | 1  | 02/12/22 08:26           | 02/12/22 16:49 | 7439-92-1     |      |
| Nickel   | <b>0.0011J</b>  | mg/L               | 0.0050       | 0.00071                   | 1  | 02/12/22 08:26           | 02/12/22 16:49 | 7440-02-0     |      |
| Selenium   | ND              | mg/L               | 0.0050       | 0.0014                    | 1  | 02/12/22 08:26           | 02/12/22 16:49 | 7782-49-2     |      |
| Silver   | ND              | mg/L               | 0.0050       | 0.00044                   | 1  | 02/12/22 08:26           | 02/12/22 16:49 | 7440-22-4     |      |
| Thallium   | ND              | mg/L               | 0.0010       | 0.00018                   | 1  | 02/12/22 08:26           | 02/14/22 14:41 | 7440-28-0     |      |
| Vanadium   | ND              | mg/L               | 0.010        | 0.0019                    | 1  | 02/12/22 08:26           | 02/12/22 16:49 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                 |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                    |              |                           |    |                          |                |               |      |
| Mercury  | ND              | mg/L               | 0.00020      | 0.00013                   | 1  | 02/09/22 12:00           | 02/09/22 17:20 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015                           |                 |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                    |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | <b>132</b>      | mg/L               | 10.0         | 10.0                      | 1  |                          | 02/03/22 16:07 |               |      |
| <b>2320B Alkalinity</b>                                    |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B                                |                 |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Minneapolis                     |                 |                    |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3                                 | <b>142</b>      | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/08/22 23:07 |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>142</b>      | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/08/22 23:07 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND              | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/08/22 23:07 |               |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

**Sample: GWA-42**      **Lab ID: 92585555005**      Collected: 01/31/22 14:48      Received: 02/01/22 11:22      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 2.0     | mg/L  | 1.0    | 0.60  | 1  |          | 02/07/22 02:12 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/07/22 02:12 | 16984-48-8 |      |
| Sulfate                                   | 1.1     | mg/L  | 1.0    | 0.50  | 1  |          | 02/07/22 02:12 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Sample: <b>GWA-43</b>  |                 | Lab ID: <b>9258555006</b> |              | Collected: 01/31/22 13:15 | Received: 02/01/22 11:22 | Matrix: Water  |                |           |      |
|--|-----------------|---------------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results         | Units                     | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                           |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |                           |              |                           | 1                        |                | 02/06/22 11:31 |           |      |
| pH   | <b>5.71</b>     | Std. Units                |              |                           | 1                        |                | 02/06/22 11:31 |           |      |
| <b>6010D ATL ICP</b>   |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                           |              |                           |                          |                |                |           |      |
| Zinc   | ND              | mg/L                      | 0.020        | 0.0085                    | 1                        | 02/14/22 09:41 | 02/14/22 15:32 | 7440-66-6 |      |
| Potassium  | <b>0.31</b>     | mg/L                      | 0.20         | 0.15                      | 1                        | 02/14/22 09:41 | 02/14/22 15:32 | 7440-09-7 |      |
| Sodium   | <b>1.2</b>      | mg/L                      | 1.0          | 0.58                      | 1                        | 02/14/22 09:41 | 02/14/22 15:32 | 7440-23-5 |      |
| Calcium  | <b>2.2</b>      | mg/L                      | 1.0          | 0.12                      | 1                        | 02/14/22 09:41 | 02/14/22 15:32 | 7440-70-2 |      |
| Magnesium  | <b>0.45</b>     | mg/L                      | 0.050        | 0.012                     | 1                        | 02/14/22 09:41 | 02/14/22 15:32 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                           |              |                           |                          |                |                |           |      |
| Antimony   | ND              | mg/L                      | 0.0030       | 0.00078                   | 1                        | 02/12/22 08:26 | 02/12/22 16:55 | 7440-36-0 |      |
| Arsenic  | <b>0.0013J</b>  | mg/L                      | 0.0050       | 0.0011                    | 1                        | 02/12/22 08:26 | 02/12/22 16:55 | 7440-38-2 |      |
| Barium   | <b>0.014</b>    | mg/L                      | 0.0050       | 0.00067                   | 1                        | 02/12/22 08:26 | 02/12/22 16:55 | 7440-39-3 |      |
| Beryllium  | ND              | mg/L                      | 0.00050      | 0.000054                  | 1                        | 02/12/22 08:26 | 02/12/22 16:55 | 7440-41-7 |      |
| Boron  | ND              | mg/L                      | 0.040        | 0.0086                    | 1                        | 02/12/22 08:26 | 02/12/22 16:55 | 7440-42-8 |      |
| Cadmium  | ND              | mg/L                      | 0.00050      | 0.00011                   | 1                        | 02/12/22 08:26 | 02/12/22 16:55 | 7440-43-9 |      |
| Chromium   | ND              | mg/L                      | 0.0050       | 0.0011                    | 1                        | 02/12/22 08:26 | 02/12/22 16:55 | 7440-47-3 |      |
| Cobalt   | ND              | mg/L                      | 0.0050       | 0.00039                   | 1                        | 02/12/22 08:26 | 02/12/22 16:55 | 7440-48-4 |      |
| Copper   | <b>0.0014J</b>  | mg/L                      | 0.0050       | 0.00050                   | 1                        | 02/12/22 08:26 | 02/12/22 16:55 | 7440-50-8 |      |
| Lead   | ND              | mg/L                      | 0.0010       | 0.00089                   | 1                        | 02/12/22 08:26 | 02/12/22 16:55 | 7439-92-1 |      |
| Nickel   | <b>0.00077J</b> | mg/L                      | 0.0050       | 0.00071                   | 1                        | 02/12/22 08:26 | 02/12/22 16:55 | 7440-02-0 |      |
| Selenium   | ND              | mg/L                      | 0.0050       | 0.0014                    | 1                        | 02/12/22 08:26 | 02/12/22 16:55 | 7782-49-2 |      |
| Silver   | ND              | mg/L                      | 0.0050       | 0.00044                   | 1                        | 02/12/22 08:26 | 02/12/22 16:55 | 7440-22-4 |      |
| Thallium   | ND              | mg/L                      | 0.0010       | 0.00018                   | 1                        | 02/12/22 08:26 | 02/14/22 14:47 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L                      | 0.010        | 0.0019                    | 1                        | 02/12/22 08:26 | 02/12/22 16:55 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                           |              |                           |                          |                |                |           |      |
| Mercury  | ND              | mg/L                      | 0.00020      | 0.00013                   | 1                        | 02/09/22 12:00 | 02/09/22 17:23 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                           |              |                           |                          |                |                |           |      |
| Total Dissolved Solids   | <b>25.0</b>     | mg/L                      | 10.0         | 10.0                      | 1                        |                | 02/03/22 16:07 |           |      |
| <b>2320B Alkalinity</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                 |                           |              |                           |                          |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>6.4</b>      | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/08/22 23:55 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>6.4</b>      | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/08/22 23:55 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND              | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/08/22 23:55 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

**Sample: GWA-43**      **Lab ID: 92585555006**      Collected: 01/31/22 13:15      Received: 02/01/22 11:22      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 1.1     | mg/L  | 1.0    | 0.60  | 1  |          | 02/07/22 02:27 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/07/22 02:27 | 16984-48-8 |      |
| Sulfate                                   | ND      | mg/L  | 1.0    | 0.50  | 1  |          | 02/07/22 02:27 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Sample: GWA-43R  |                 | Lab ID: 9258555007 |              | Collected: 01/31/22 12:05 |    | Received: 02/01/22 11:22 |                | Matrix: Water |      |
|--|-----------------|--------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units              | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                    |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                    |              |                           | 1  |                          | 02/06/22 11:31 |               |      |
| pH   | <b>8.04</b>     | Std. Units         |              |                           | 1  |                          | 02/06/22 11:31 |               |      |
| <b>6010D ATL ICP</b>   |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                    |              |                           |    |                          |                |               |      |
| Zinc   | ND              | mg/L               | 0.020        | 0.0085                    | 1  | 02/14/22 09:41           | 02/14/22 15:37 | 7440-66-6     |      |
| Potassium  | <b>0.48</b>     | mg/L               | 0.20         | 0.15                      | 1  | 02/14/22 09:41           | 02/14/22 15:37 | 7440-09-7     |      |
| Sodium   | <b>1.2</b>      | mg/L               | 1.0          | 0.58                      | 1  | 02/14/22 09:41           | 02/14/22 15:37 | 7440-23-5     |      |
| Calcium  | <b>30.6</b>     | mg/L               | 1.0          | 0.12                      | 1  | 02/14/22 09:41           | 02/14/22 15:37 | 7440-70-2     |      |
| Magnesium  | <b>16.9</b>     | mg/L               | 0.050        | 0.012                     | 1  | 02/14/22 09:41           | 02/14/22 15:37 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>  |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                    |              |                           |    |                          |                |               |      |
| Antimony   | ND              | mg/L               | 0.0030       | 0.00078                   | 1  | 02/12/22 08:26           | 02/12/22 17:01 | 7440-36-0     |      |
| Arsenic  | ND              | mg/L               | 0.0050       | 0.0011                    | 1  | 02/12/22 08:26           | 02/12/22 17:01 | 7440-38-2     |      |
| Barium   | <b>0.0076</b>   | mg/L               | 0.0050       | 0.00067                   | 1  | 02/12/22 08:26           | 02/12/22 17:01 | 7440-39-3     |      |
| Beryllium  | ND              | mg/L               | 0.00050      | 0.000054                  | 1  | 02/12/22 08:26           | 02/12/22 17:01 | 7440-41-7     |      |
| Boron  | <b>0.011J</b>   | mg/L               | 0.040        | 0.0086                    | 1  | 02/12/22 08:26           | 02/12/22 17:01 | 7440-42-8     |      |
| Cadmium  | ND              | mg/L               | 0.00050      | 0.00011                   | 1  | 02/12/22 08:26           | 02/12/22 17:01 | 7440-43-9     |      |
| Chromium   | <b>0.0011J</b>  | mg/L               | 0.0050       | 0.0011                    | 1  | 02/12/22 08:26           | 02/12/22 17:01 | 7440-47-3     |      |
| Cobalt   | ND              | mg/L               | 0.0050       | 0.00039                   | 1  | 02/12/22 08:26           | 02/12/22 17:01 | 7440-48-4     |      |
| Copper   | ND              | mg/L               | 0.0050       | 0.00050                   | 1  | 02/12/22 08:26           | 02/12/22 17:01 | 7440-50-8     |      |
| Lead   | ND              | mg/L               | 0.0010       | 0.00089                   | 1  | 02/12/22 08:26           | 02/12/22 17:01 | 7439-92-1     |      |
| Nickel   | ND              | mg/L               | 0.0050       | 0.00071                   | 1  | 02/12/22 08:26           | 02/12/22 17:01 | 7440-02-0     |      |
| Selenium   | ND              | mg/L               | 0.0050       | 0.0014                    | 1  | 02/12/22 08:26           | 02/12/22 17:01 | 7782-49-2     |      |
| Silver   | ND              | mg/L               | 0.0050       | 0.00044                   | 1  | 02/12/22 08:26           | 02/12/22 17:01 | 7440-22-4     |      |
| Thallium   | ND              | mg/L               | 0.0010       | 0.00018                   | 1  | 02/12/22 08:26           | 02/14/22 15:38 | 7440-28-0     |      |
| Vanadium   | ND              | mg/L               | 0.010        | 0.0019                    | 1  | 02/12/22 08:26           | 02/12/22 17:01 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                    |              |                           |    |                          |                |               |      |
| Mercury  | ND              | mg/L               | 0.00020      | 0.00013                   | 1  | 02/09/22 12:00           | 02/09/22 17:25 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                    |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | <b>128</b>      | mg/L               | 10.0         | 10.0                      | 1  |                          | 02/03/22 16:07 |               |      |
| <b>2320B Alkalinity</b>  |                 |                    |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                 |                    |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3   | <b>140</b>      | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/08/22 23:15 |               |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>140</b>      | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/08/22 23:15 |               |      |
| Alkalinity,Carbonate (CaCO3)   | ND              | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/08/22 23:15 |               |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

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**Sample: GWA-43R**      **Lab ID: 9258555007**      Collected: 01/31/22 12:05      Received: 02/01/22 11:22      Matrix: Water

| Parameters                                | Results | Units | Report<br>Limit | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|-----------------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>            |         |       |                 |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |                 |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |                 |       |    |          |                |            |      |
| Chloride                                  | 1.7     | mg/L  | 1.0             | 0.60  | 1  |          | 02/07/22 02:42 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10            | 0.050 | 1  |          | 02/07/22 02:42 | 16984-48-8 |      |
| Sulfate                                   | 2.5     | mg/L  | 1.0             | 0.50  | 1  |          | 02/07/22 02:42 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Sample: GWC-44   |           | Lab ID: 9258555008 |              | Collected: 01/31/22 15:30 |    | Received: 02/01/22 11:22 |                | Matrix: Water |      |
|--|-----------|--------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results   | Units              | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |           |                    |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte  |           |                    |              |                           |    |                          |                |               |      |
| Performed by   | CUSTOMER  |                    |              |                           | 1  |                          | 02/06/22 11:31 |               |      |
| pH   | 4.78      | Std. Units         |              |                           | 1  |                          | 02/06/22 11:31 |               |      |
| <b>6010D ATL ICP</b>   |           |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |           |                    |              |                           |    |                          |                |               |      |
| Zinc   | ND        | mg/L               | 0.020        | 0.0085                    | 1  | 02/14/22 09:41           | 02/14/22 15:42 | 7440-66-6     |      |
| Potassium  | 1.5       | mg/L               | 0.20         | 0.15                      | 1  | 02/14/22 09:41           | 02/14/22 15:42 | 7440-09-7     |      |
| Sodium   | 2.5       | mg/L               | 1.0          | 0.58                      | 1  | 02/14/22 09:41           | 02/14/22 15:42 | 7440-23-5     |      |
| Calcium  | 11.2      | mg/L               | 1.0          | 0.12                      | 1  | 02/14/22 09:41           | 02/14/22 15:42 | 7440-70-2     |      |
| Magnesium  | 2.0       | mg/L               | 0.050        | 0.012                     | 1  | 02/14/22 09:41           | 02/14/22 15:42 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>  |           |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |           |                    |              |                           |    |                          |                |               |      |
| Antimony   | ND        | mg/L               | 0.0030       | 0.00078                   | 1  | 02/12/22 08:26           | 02/12/22 17:07 | 7440-36-0     |      |
| Arsenic  | ND        | mg/L               | 0.0050       | 0.0011                    | 1  | 02/12/22 08:26           | 02/12/22 17:07 | 7440-38-2     |      |
| Barium   | 0.047     | mg/L               | 0.0050       | 0.00067                   | 1  | 02/12/22 08:26           | 02/12/22 17:07 | 7440-39-3     |      |
| Beryllium  | 0.000065J | mg/L               | 0.00050      | 0.000054                  | 1  | 02/12/22 08:26           | 02/12/22 17:07 | 7440-41-7     |      |
| Boron  | 0.015J    | mg/L               | 0.040        | 0.0086                    | 1  | 02/12/22 08:26           | 02/12/22 17:07 | 7440-42-8     |      |
| Cadmium  | ND        | mg/L               | 0.00050      | 0.00011                   | 1  | 02/12/22 08:26           | 02/12/22 17:07 | 7440-43-9     |      |
| Chromium   | ND        | mg/L               | 0.0050       | 0.0011                    | 1  | 02/12/22 08:26           | 02/12/22 17:07 | 7440-47-3     |      |
| Cobalt   | 0.0017J   | mg/L               | 0.0050       | 0.00039                   | 1  | 02/12/22 08:26           | 02/12/22 17:07 | 7440-48-4     |      |
| Copper   | 0.00053J  | mg/L               | 0.0050       | 0.00050                   | 1  | 02/12/22 08:26           | 02/12/22 17:07 | 7440-50-8     |      |
| Lead   | ND        | mg/L               | 0.0010       | 0.00089                   | 1  | 02/12/22 08:26           | 02/12/22 17:07 | 7439-92-1     |      |
| Nickel   | ND        | mg/L               | 0.0050       | 0.00071                   | 1  | 02/12/22 08:26           | 02/12/22 17:07 | 7440-02-0     |      |
| Selenium   | 0.0018J   | mg/L               | 0.0050       | 0.0014                    | 1  | 02/12/22 08:26           | 02/12/22 17:07 | 7782-49-2     |      |
| Silver   | ND        | mg/L               | 0.0050       | 0.00044                   | 1  | 02/12/22 08:26           | 02/12/22 17:07 | 7440-22-4     |      |
| Thallium   | ND        | mg/L               | 0.0010       | 0.00018                   | 1  | 02/12/22 08:26           | 02/14/22 15:44 | 7440-28-0     |      |
| Vanadium   | ND        | mg/L               | 0.010        | 0.0019                    | 1  | 02/12/22 08:26           | 02/12/22 17:07 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |           |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |           |                    |              |                           |    |                          |                |               |      |
| Mercury  | ND        | mg/L               | 0.00020      | 0.00013                   | 1  | 02/09/22 12:00           | 02/09/22 17:28 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>  |           |                    |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |           |                    |              |                           |    |                          |                |               |      |
| Total Dissolved Solids   | 63.0      | mg/L               | 10.0         | 10.0                      | 1  |                          | 02/03/22 16:07 |               |      |
| <b>2320B Alkalinity</b>  |           |                    |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |           |                    |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3   | ND        | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/08/22 23:58 |               |      |
| Alkalinity,Bicarbonate (CaCO3)   | ND        | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/08/22 23:58 |               |      |
| Alkalinity,Carbonate (CaCO3)   | ND        | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/08/22 23:58 |               |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

**Sample: GWC-44**      **Lab ID: 92585555008**      Collected: 01/31/22 15:30      Received: 02/01/22 11:22      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 4.2     | mg/L  | 1.0    | 0.60  | 1  |          | 02/07/22 03:27 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/07/22 03:27 | 16984-48-8 |      |
| Sulfate                                   | 29.7    | mg/L  | 1.0    | 0.50  | 1  |          | 02/07/22 03:27 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Sample: <b>GWC-46R</b>   |                 | Lab ID: <b>9258555009</b> |              | Collected: 01/31/22 15:30 | Received: 02/01/22 11:22 | Matrix: Water  |                |           |      |
|--|-----------------|---------------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results         | Units                     | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                           |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |                           |              |                           | 1                        |                | 02/06/22 11:32 |           |      |
| pH   | <b>7.48</b>     | Std. Units                |              |                           | 1                        |                | 02/06/22 11:32 |           |      |
| <b>6010D ATL ICP</b>   |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                           |              |                           |                          |                |                |           |      |
| Zinc   | ND              | mg/L                      | 0.020        | 0.0085                    | 1                        | 02/14/22 09:41 | 02/14/22 15:46 | 7440-66-6 |      |
| Potassium  | <b>1.6</b>      | mg/L                      | 0.20         | 0.15                      | 1                        | 02/14/22 09:41 | 02/14/22 15:46 | 7440-09-7 |      |
| Sodium   | <b>13.0</b>     | mg/L                      | 1.0          | 0.58                      | 1                        | 02/14/22 09:41 | 02/14/22 15:46 | 7440-23-5 |      |
| Calcium  | <b>39.9</b>     | mg/L                      | 1.0          | 0.12                      | 1                        | 02/14/22 09:41 | 02/14/22 15:46 | 7440-70-2 |      |
| Magnesium  | <b>22.0</b>     | mg/L                      | 0.050        | 0.012                     | 1                        | 02/14/22 09:41 | 02/14/22 15:46 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                           |              |                           |                          |                |                |           |      |
| Antimony   | ND              | mg/L                      | 0.0030       | 0.00078                   | 1                        | 02/12/22 08:26 | 02/12/22 17:13 | 7440-36-0 |      |
| Arsenic  | ND              | mg/L                      | 0.0050       | 0.0011                    | 1                        | 02/12/22 08:26 | 02/12/22 17:13 | 7440-38-2 |      |
| Barium   | <b>0.011</b>    | mg/L                      | 0.0050       | 0.00067                   | 1                        | 02/12/22 08:26 | 02/12/22 17:13 | 7440-39-3 |      |
| Beryllium  | ND              | mg/L                      | 0.00050      | 0.000054                  | 1                        | 02/12/22 08:26 | 02/12/22 17:13 | 7440-41-7 |      |
| Boron  | ND              | mg/L                      | 0.040        | 0.0086                    | 1                        | 02/12/22 08:26 | 02/12/22 17:13 | 7440-42-8 |      |
| Cadmium  | ND              | mg/L                      | 0.00050      | 0.00011                   | 1                        | 02/12/22 08:26 | 02/12/22 17:13 | 7440-43-9 |      |
| Chromium   | <b>0.0051</b>   | mg/L                      | 0.0050       | 0.0011                    | 1                        | 02/12/22 08:26 | 02/12/22 17:13 | 7440-47-3 |      |
| Cobalt   | ND              | mg/L                      | 0.0050       | 0.00039                   | 1                        | 02/12/22 08:26 | 02/12/22 17:13 | 7440-48-4 |      |
| Copper   | ND              | mg/L                      | 0.0050       | 0.00050                   | 1                        | 02/12/22 08:26 | 02/12/22 17:13 | 7440-50-8 |      |
| Lead   | ND              | mg/L                      | 0.0010       | 0.00089                   | 1                        | 02/12/22 08:26 | 02/12/22 17:13 | 7439-92-1 |      |
| Nickel   | ND              | mg/L                      | 0.0050       | 0.00071                   | 1                        | 02/12/22 08:26 | 02/12/22 17:13 | 7440-02-0 |      |
| Selenium   | ND              | mg/L                      | 0.0050       | 0.0014                    | 1                        | 02/12/22 08:26 | 02/12/22 17:13 | 7782-49-2 |      |
| Silver   | ND              | mg/L                      | 0.0050       | 0.00044                   | 1                        | 02/12/22 08:26 | 02/12/22 17:13 | 7440-22-4 |      |
| Thallium   | ND              | mg/L                      | 0.0010       | 0.00018                   | 1                        | 02/12/22 08:26 | 02/14/22 15:50 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L                      | 0.010        | 0.0019                    | 1                        | 02/12/22 08:26 | 02/12/22 17:13 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                           |              |                           |                          |                |                |           |      |
| Mercury  | ND              | mg/L                      | 0.00020      | 0.00013                   | 1                        | 02/09/22 12:00 | 02/09/22 17:31 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                           |              |                           |                          |                |                |           |      |
| Total Dissolved Solids   | <b>197</b>      | mg/L                      | 10.0         | 10.0                      | 1                        |                | 02/03/22 16:07 |           |      |
| <b>2320B Alkalinity</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                 |                           |              |                           |                          |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>212</b>      | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/08/22 23:29 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>212</b>      | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/08/22 23:29 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND              | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/08/22 23:29 |           |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

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**Sample: GWC-46R**      **Lab ID: 9258555009**      Collected: 01/31/22 15:30      Received: 02/01/22 11:22      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 1.7     | mg/L  | 1.0    | 0.60  | 1  |          | 02/07/22 03:42 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/07/22 03:42 | 16984-48-8 |      |
| Sulfate                                   | 5.2     | mg/L  | 1.0    | 0.50  | 1  |          | 02/07/22 03:42 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Sample: <b>GWC-48</b>  |                 | Lab ID: <b>92585555010</b> |              | Collected: 01/31/22 16:14 | Received: 02/01/22 11:22 | Matrix: Water  |                |           |      |
|--|-----------------|----------------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results         | Units                      | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                            |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |                            |              |                           | 1                        |                | 02/06/22 11:32 |           |      |
| pH   | <b>4.86</b>     | Std. Units                 |              |                           | 1                        |                | 02/06/22 11:32 |           |      |
| <b>6010D ATL ICP</b>   |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                            |              |                           |                          |                |                |           |      |
| Zinc   | ND              | mg/L                       | 0.020        | 0.0085                    | 1                        | 02/14/22 09:41 | 02/14/22 15:51 | 7440-66-6 |      |
| Potassium  | <b>0.26</b>     | mg/L                       | 0.20         | 0.15                      | 1                        | 02/14/22 09:41 | 02/14/22 15:51 | 7440-09-7 |      |
| Sodium   | <b>4.2</b>      | mg/L                       | 1.0          | 0.58                      | 1                        | 02/14/22 09:41 | 02/14/22 15:51 | 7440-23-5 |      |
| Calcium  | <b>2.8</b>      | mg/L                       | 1.0          | 0.12                      | 1                        | 02/14/22 09:41 | 02/14/22 15:51 | 7440-70-2 |      |
| Magnesium  | <b>0.67</b>     | mg/L                       | 0.050        | 0.012                     | 1                        | 02/14/22 09:41 | 02/14/22 15:51 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>  |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                            |              |                           |                          |                |                |           |      |
| Antimony   | ND              | mg/L                       | 0.0030       | 0.00078                   | 1                        | 02/12/22 08:26 | 02/12/22 17:19 | 7440-36-0 |      |
| Arsenic  | ND              | mg/L                       | 0.0050       | 0.0011                    | 1                        | 02/12/22 08:26 | 02/12/22 17:19 | 7440-38-2 |      |
| Barium   | <b>0.038</b>    | mg/L                       | 0.0050       | 0.00067                   | 1                        | 02/12/22 08:26 | 02/12/22 17:19 | 7440-39-3 |      |
| Beryllium  | <b>0.00036J</b> | mg/L                       | 0.00050      | 0.000054                  | 1                        | 02/12/22 08:26 | 02/12/22 17:19 | 7440-41-7 |      |
| Boron  | ND              | mg/L                       | 0.040        | 0.0086                    | 1                        | 02/12/22 08:26 | 02/12/22 17:19 | 7440-42-8 |      |
| Cadmium  | <b>0.00020J</b> | mg/L                       | 0.00050      | 0.00011                   | 1                        | 02/12/22 08:26 | 02/12/22 17:19 | 7440-43-9 |      |
| Chromium   | <b>0.0020J</b>  | mg/L                       | 0.0050       | 0.0011                    | 1                        | 02/12/22 08:26 | 02/12/22 17:19 | 7440-47-3 |      |
| Cobalt   | <b>0.0021J</b>  | mg/L                       | 0.0050       | 0.00039                   | 1                        | 02/12/22 08:26 | 02/12/22 17:19 | 7440-48-4 |      |
| Copper   | ND              | mg/L                       | 0.0050       | 0.00050                   | 1                        | 02/12/22 08:26 | 02/12/22 17:19 | 7440-50-8 |      |
| Lead   | ND              | mg/L                       | 0.0010       | 0.00089                   | 1                        | 02/12/22 08:26 | 02/12/22 17:19 | 7439-92-1 |      |
| Nickel   | <b>0.0052</b>   | mg/L                       | 0.0050       | 0.00071                   | 1                        | 02/12/22 08:26 | 02/12/22 17:19 | 7440-02-0 |      |
| Selenium   | ND              | mg/L                       | 0.0050       | 0.0014                    | 1                        | 02/12/22 08:26 | 02/12/22 17:19 | 7782-49-2 |      |
| Silver   | ND              | mg/L                       | 0.0050       | 0.00044                   | 1                        | 02/12/22 08:26 | 02/12/22 17:19 | 7440-22-4 |      |
| Thallium   | ND              | mg/L                       | 0.0010       | 0.00018                   | 1                        | 02/12/22 08:26 | 02/14/22 15:56 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L                       | 0.010        | 0.0019                    | 1                        | 02/12/22 08:26 | 02/12/22 17:19 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                            |              |                           |                          |                |                |           |      |
| Mercury  | <b>0.00039</b>  | mg/L                       | 0.00020      | 0.00013                   | 1                        | 02/09/22 12:00 | 02/09/22 17:33 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                            |              |                           |                          |                |                |           |      |
| Total Dissolved Solids   | <b>31.0</b>     | mg/L                       | 10.0         | 10.0                      | 1                        |                | 02/03/22 16:07 |           |      |
| <b>2320B Alkalinity</b>  |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                 |                            |              |                           |                          |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>8.1</b>      | mg/L                       | 5.0          | 1.8                       | 1                        |                | 02/09/22 14:48 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>8.1</b>      | mg/L                       | 5.0          | 1.8                       | 1                        |                | 02/09/22 14:48 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND              | mg/L                       | 5.0          | 1.8                       | 1                        |                | 02/09/22 14:48 |           |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

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**Sample: GWC-48**      **Lab ID: 9258555010**      Collected: 01/31/22 16:14      Received: 02/01/22 11:22      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 4.8     | mg/L  | 1.0    | 0.60  | 1  |          | 02/07/22 03:57 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/07/22 03:57 | 16984-48-8 |      |
| Sulfate                                   | 1.2     | mg/L  | 1.0    | 0.50  | 1  |          | 02/07/22 03:57 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Sample: DUP-1                       |          | Lab ID: 9258555011   |         | Collected: 01/31/22 00:00 | Received: 02/01/22 11:22 | Matrix: Water  |                |            |      |
|-------------------------------------|----------|--|---------|---------------------------|--------------------------|----------------|----------------|------------|------|
| Parameters                          | Results  | Units  | Report  |                           |                          | Prepared       | Analyzed       | CAS No.    | Qual |
|                                     |          |  | Limit   | MDL                       | DF                       |                |                |            |      |
| <b>6010D ATL ICP</b>                |          | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |
| Zinc                                | ND       | mg/L   | 0.020   | 0.0085                    | 1                        | 02/14/22 09:41 | 02/14/22 15:56 | 7440-66-6  |      |
| Potassium                           | 2.7      | mg/L   | 0.20    | 0.15                      | 1                        | 02/14/22 09:41 | 02/14/22 15:56 | 7440-09-7  |      |
| Sodium                              | ND       | mg/L   | 1.0     | 0.58                      | 1                        | 02/14/22 09:41 | 02/14/22 15:56 | 7440-23-5  |      |
| Calcium                             | 42.7     | mg/L   | 1.0     | 0.12                      | 1                        | 02/14/22 09:41 | 02/14/22 15:56 | 7440-70-2  |      |
| Magnesium                           | 21.6     | mg/L   | 0.050   | 0.012                     | 1                        | 02/14/22 09:41 | 02/14/22 15:56 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>               |          | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |
| Antimony                            | ND       | mg/L   | 0.0030  | 0.00078                   | 1                        | 02/14/22 08:52 | 02/14/22 20:27 | 7440-36-0  |      |
| Arsenic                             | 0.0012J  | mg/L   | 0.0050  | 0.0011                    | 1                        | 02/14/22 08:52 | 02/14/22 20:27 | 7440-38-2  | B    |
| Barium                              | 0.029    | mg/L   | 0.0050  | 0.00067                   | 1                        | 02/14/22 08:52 | 02/14/22 20:27 | 7440-39-3  |      |
| Beryllium                           | ND       | mg/L   | 0.00050 | 0.000054                  | 1                        | 02/14/22 08:52 | 02/14/22 20:27 | 7440-41-7  |      |
| Boron                               | 0.020J   | mg/L   | 0.040   | 0.0086                    | 1                        | 02/14/22 08:52 | 02/14/22 20:27 | 7440-42-8  |      |
| Cadmium                             | ND       | mg/L   | 0.00050 | 0.00011                   | 1                        | 02/14/22 08:52 | 02/14/22 20:27 | 7440-43-9  |      |
| Chromium                            | ND       | mg/L   | 0.0050  | 0.0011                    | 1                        | 02/14/22 08:52 | 02/14/22 20:27 | 7440-47-3  |      |
| Cobalt                              | ND       | mg/L   | 0.0050  | 0.00039                   | 1                        | 02/14/22 08:52 | 02/14/22 20:27 | 7440-48-4  |      |
| Copper                              | 0.0028J  | mg/L   | 0.0050  | 0.00050                   | 1                        | 02/14/22 08:52 | 02/14/22 20:27 | 7440-50-8  |      |
| Lead                                | ND       | mg/L   | 0.0010  | 0.00089                   | 1                        | 02/14/22 08:52 | 02/14/22 20:27 | 7439-92-1  |      |
| Nickel                              | 0.00095J | mg/L   | 0.0050  | 0.00071                   | 1                        | 02/14/22 08:52 | 02/14/22 20:27 | 7440-02-0  |      |
| Selenium                            | ND       | mg/L   | 0.0050  | 0.0014                    | 1                        | 02/14/22 08:52 | 02/14/22 20:27 | 7782-49-2  |      |
| Silver                              | ND       | mg/L   | 0.0050  | 0.00044                   | 1                        | 02/14/22 08:52 | 02/14/22 20:27 | 7440-22-4  |      |
| Thallium                            | ND       | mg/L   | 0.0010  | 0.00018                   | 1                        | 02/14/22 08:52 | 02/14/22 20:27 | 7440-28-0  |      |
| Vanadium                            | ND       | mg/L   | 0.010   | 0.0019                    | 1                        | 02/14/22 08:52 | 02/14/22 20:27 | 7440-62-2  |      |
| <b>7470 Mercury</b>                 |          | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |
| Mercury                             | ND       | mg/L   | 0.00020 | 0.00013                   | 1                        | 02/09/22 12:00 | 02/09/22 17:36 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b> |          | Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |         |                           |                          |                |                |            |      |
| Total Dissolved Solids              | 180      | mg/L   | 10.0    | 10.0                      | 1                        |                | 02/03/22 16:08 |            |      |
| <b>2320B Alkalinity</b>             |          | Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |         |                           |                          |                |                |            |      |
| Alkalinity, Total as CaCO3          | 188      | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/09/22 14:52 |            |      |
| Alkalinity,Bicarbonate (CaCO3)      | 188      | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/09/22 14:52 |            |      |
| Alkalinity,Carbonate (CaCO3)        | ND       | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/09/22 14:52 |            |      |
| <b>300.0 IC Anions 28 Days</b>      |          | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |         |                           |                          |                |                |            |      |
| Chloride                            | 1.1      | mg/L   | 1.0     | 0.60                      | 1                        |                | 02/07/22 04:42 | 16887-00-6 |      |
| Fluoride                            | ND       | mg/L   | 0.10    | 0.050                     | 1                        |                | 02/07/22 04:42 | 16984-48-8 |      |
| Sulfate                             | 8.5      | mg/L   | 1.0     | 0.50                      | 1                        |                | 02/07/22 04:42 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Sample: FB-1                        |                | Lab ID: 9258555012   |         | Collected: 01/31/22 15:50 |    | Received: 02/01/22 11:22 |                | Matrix: Water |      |  |
|-------------------------------------|----------------|--|---------|---------------------------|----|--------------------------|----------------|---------------|------|--|
| Parameters                          | Results        | Units  | Report  |                           |    | Prepared                 | Analyzed       | CAS No.       | Qual |  |
|                                     |                |  | Limit   | MDL                       | DF |                          |                |               |      |  |
| <b>6010D ATL ICP</b>                |                | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |      |  |
| Zinc                                | ND             | mg/L   | 0.020   | 0.0085                    | 1  | 02/14/22 09:41           | 02/14/22 16:01 | 7440-66-6     |      |  |
| Potassium                           | ND             | mg/L   | 0.20    | 0.15                      | 1  | 02/14/22 09:41           | 02/14/22 16:01 | 7440-09-7     |      |  |
| Sodium                              | ND             | mg/L   | 1.0     | 0.58                      | 1  | 02/14/22 09:41           | 02/14/22 16:01 | 7440-23-5     |      |  |
| Calcium                             | ND             | mg/L   | 1.0     | 0.12                      | 1  | 02/14/22 09:41           | 02/14/22 16:01 | 7440-70-2     |      |  |
| Magnesium                           | ND             | mg/L   | 0.050   | 0.012                     | 1  | 02/14/22 09:41           | 02/14/22 16:01 | 7439-95-4     |      |  |
| <b>6020 MET ICPMS</b>               |                | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |      |  |
| Antimony                            | <b>0.0014J</b> | mg/L   | 0.0030  | 0.00078                   | 1  | 02/14/22 08:52           | 02/14/22 20:50 | 7440-36-0     |      |  |
| Arsenic                             | ND             | mg/L   | 0.0050  | 0.0011                    | 1  | 02/14/22 08:52           | 02/14/22 20:50 | 7440-38-2     |      |  |
| Barium                              | ND             | mg/L   | 0.0050  | 0.00067                   | 1  | 02/14/22 08:52           | 02/14/22 20:50 | 7440-39-3     |      |  |
| Beryllium                           | ND             | mg/L   | 0.00050 | 0.000054                  | 1  | 02/14/22 08:52           | 02/14/22 20:50 | 7440-41-7     |      |  |
| Boron                               | ND             | mg/L   | 0.040   | 0.0086                    | 1  | 02/14/22 08:52           | 02/14/22 20:50 | 7440-42-8     |      |  |
| Cadmium                             | ND             | mg/L   | 0.00050 | 0.00011                   | 1  | 02/14/22 08:52           | 02/14/22 20:50 | 7440-43-9     |      |  |
| Chromium                            | ND             | mg/L   | 0.0050  | 0.0011                    | 1  | 02/14/22 08:52           | 02/14/22 20:50 | 7440-47-3     |      |  |
| Cobalt                              | ND             | mg/L   | 0.0050  | 0.00039                   | 1  | 02/14/22 08:52           | 02/14/22 20:50 | 7440-48-4     |      |  |
| Copper                              | ND             | mg/L   | 0.0050  | 0.00050                   | 1  | 02/14/22 08:52           | 02/14/22 20:50 | 7440-50-8     |      |  |
| Lead                                | ND             | mg/L   | 0.0010  | 0.00089                   | 1  | 02/14/22 08:52           | 02/14/22 20:50 | 7439-92-1     |      |  |
| Nickel                              | ND             | mg/L   | 0.0050  | 0.00071                   | 1  | 02/14/22 08:52           | 02/14/22 20:50 | 7440-02-0     |      |  |
| Selenium                            | ND             | mg/L   | 0.0050  | 0.0014                    | 1  | 02/14/22 08:52           | 02/14/22 20:50 | 7782-49-2     |      |  |
| Silver                              | ND             | mg/L   | 0.0050  | 0.00044                   | 1  | 02/14/22 08:52           | 02/14/22 20:50 | 7440-22-4     |      |  |
| Thallium                            | ND             | mg/L   | 0.0010  | 0.00018                   | 1  | 02/14/22 08:52           | 02/14/22 20:50 | 7440-28-0     |      |  |
| Vanadium                            | ND             | mg/L   | 0.010   | 0.0019                    | 1  | 02/14/22 08:52           | 02/14/22 20:50 | 7440-62-2     |      |  |
| <b>7470 Mercury</b>                 |                | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |    |                          |                |               |      |  |
| Mercury                             | ND             | mg/L   | 0.00020 | 0.00013                   | 1  | 02/09/22 12:00           | 02/09/22 17:44 | 7439-97-6     |      |  |
| <b>2540C Total Dissolved Solids</b> |                | Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |         |                           |    |                          |                |               |      |  |
| Total Dissolved Solids              | ND             | mg/L   | 10.0    | 10.0                      | 1  |                          | 02/03/22 16:08 |               |      |  |
| <b>2320B Alkalinity</b>             |                | Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |         |                           |    |                          |                |               |      |  |
| Alkalinity, Total as CaCO3          | ND             | mg/L   | 5.0     | 1.8                       | 1  |                          | 02/09/22 14:58 |               |      |  |
| Alkalinity,Bicarbonate (CaCO3)      | ND             | mg/L   | 5.0     | 1.8                       | 1  |                          | 02/09/22 14:58 |               |      |  |
| Alkalinity,Carbonate (CaCO3)        | ND             | mg/L   | 5.0     | 1.8                       | 1  |                          | 02/09/22 14:58 |               |      |  |
| <b>300.0 IC Anions 28 Days</b>      |                | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |         |                           |    |                          |                |               |      |  |
| Chloride                            | ND             | mg/L   | 1.0     | 0.60                      | 1  |                          | 02/07/22 04:56 | 16887-00-6    |      |  |
| Fluoride                            | ND             | mg/L   | 0.10    | 0.050                     | 1  |                          | 02/07/22 04:56 | 16984-48-8    |      |  |
| Sulfate                             | ND             | mg/L   | 1.0     | 0.50                      | 1  |                          | 02/07/22 04:56 | 14808-79-8    |      |  |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

**Sample: GWC-45**      **Lab ID: 9258555013**      Collected: 02/01/22 12:55      Received: 02/04/22 11:45      Matrix: Water

| Parameters  | Results         | Units      | Report  |          |    | Prepared       | Analyzed       | CAS No.   | Qual |
|---|-----------------|------------|---------|----------|----|----------------|----------------|-----------|------|
|   |                 |            | Limit   | MDL      | DF |                |                |           |      |
| <b>Field Data</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte   |                 |            |         |          |    |                |                |           |      |
| Performed by  | <b>CUSTOMER</b> |            |         |          | 1  |                | 02/07/22 10:38 |           |      |
| pH  | <b>4.88</b>     | Std. Units |         |          | 1  |                | 02/07/22 10:38 |           |      |
| <b>6010D ATL ICP</b>  |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |         |          |    |                |                |           |      |
| Zinc  | ND              | mg/L       | 0.020   | 0.0085   | 1  | 02/14/22 09:41 | 02/14/22 16:34 | 7440-66-6 |      |
| Potassium   | <b>0.22</b>     | mg/L       | 0.20    | 0.15     | 1  | 02/14/22 09:41 | 02/14/22 16:34 | 7440-09-7 |      |
| Sodium  | <b>1.6</b>      | mg/L       | 1.0     | 0.58     | 1  | 02/14/22 09:41 | 02/14/22 16:34 | 7440-23-5 |      |
| Calcium   | <b>1.1</b>      | mg/L       | 1.0     | 0.12     | 1  | 02/14/22 09:41 | 02/14/22 16:34 | 7440-70-2 |      |
| Magnesium   | <b>0.65</b>     | mg/L       | 0.050   | 0.012    | 1  | 02/14/22 09:41 | 02/14/22 16:34 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |         |          |    |                |                |           |      |
| Antimony  | <b>0.0020J</b>  | mg/L       | 0.0030  | 0.00078  | 1  | 02/14/22 08:52 | 02/14/22 21:50 | 7440-36-0 |      |
| Arsenic   | ND              | mg/L       | 0.0050  | 0.0011   | 1  | 02/14/22 08:52 | 02/14/22 21:50 | 7440-38-2 |      |
| Barium  | <b>0.0072</b>   | mg/L       | 0.0050  | 0.00067  | 1  | 02/14/22 08:52 | 02/14/22 21:50 | 7440-39-3 |      |
| Beryllium   | ND              | mg/L       | 0.00050 | 0.000054 | 1  | 02/14/22 08:52 | 02/14/22 21:50 | 7440-41-7 |      |
| Boron   | <b>0.019J</b>   | mg/L       | 0.040   | 0.0086   | 1  | 02/14/22 08:52 | 02/14/22 21:50 | 7440-42-8 |      |
| Cadmium   | ND              | mg/L       | 0.00050 | 0.00011  | 1  | 02/14/22 08:52 | 02/14/22 21:50 | 7440-43-9 |      |
| Chromium  | ND              | mg/L       | 0.0050  | 0.0011   | 1  | 02/14/22 08:52 | 02/14/22 21:50 | 7440-47-3 |      |
| Cobalt  | <b>0.0013J</b>  | mg/L       | 0.0050  | 0.00039  | 1  | 02/14/22 08:52 | 02/14/22 21:50 | 7440-48-4 |      |
| Copper  | ND              | mg/L       | 0.0050  | 0.00050  | 1  | 02/14/22 08:52 | 02/14/22 21:50 | 7440-50-8 |      |
| Lead  | ND              | mg/L       | 0.0010  | 0.00089  | 1  | 02/14/22 08:52 | 02/14/22 21:50 | 7439-92-1 |      |
| Nickel  | <b>0.0011J</b>  | mg/L       | 0.0050  | 0.00071  | 1  | 02/14/22 08:52 | 02/14/22 21:50 | 7440-02-0 |      |
| Selenium  | ND              | mg/L       | 0.0050  | 0.0014   | 1  | 02/14/22 08:52 | 02/14/22 21:50 | 7782-49-2 |      |
| Silver  | ND              | mg/L       | 0.0050  | 0.00044  | 1  | 02/14/22 08:52 | 02/14/22 21:50 | 7440-22-4 |      |
| Thallium  | ND              | mg/L       | 0.0010  | 0.00018  | 1  | 02/14/22 08:52 | 02/14/22 21:50 | 7440-28-0 |      |
| Vanadium  | ND              | mg/L       | 0.010   | 0.0019   | 1  | 02/14/22 08:52 | 02/15/22 14:53 | 7440-62-2 |      |
| <b>7470 Mercury</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 7470A      Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |         |          |    |                |                |           |      |
| Mercury   | ND              | mg/L       | 0.00020 | 0.00013  | 1  | 02/09/22 12:00 | 02/09/22 17:46 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                                |                 |            |         |          |    |                |                |           |      |
| Total Dissolved Solids  | <b>70.0</b>     | mg/L       | 10.0    | 10.0     | 1  |                | 02/07/22 16:44 |           |      |
| <b>2320B Alkalinity</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis   |                 |            |         |          |    |                |                |           |      |
| Alkalinity, Total as CaCO3  | <b>2.7J</b>     | mg/L       | 5.0     | 1.8      | 1  |                | 02/09/22 22:15 |           |      |
| Alkalinity,Bicarbonate (CaCO3)  | <b>2.7J</b>     | mg/L       | 5.0     | 1.8      | 1  |                | 02/09/22 22:15 |           |      |
| Alkalinity,Carbonate (CaCO3)  | ND              | mg/L       | 5.0     | 1.8      | 1  |                | 02/09/22 22:15 |           |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

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**Sample: GWC-45**      **Lab ID: 92585555013**      Collected: 02/01/22 12:55      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results      | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|--------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |              |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |              |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |              |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |              |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>0.79J</b> | mg/L  | 1.0    | 0.60  | 1  |          | 02/11/22 13:42 | 16887-00-6 |      |
| Fluoride                                  | ND           | mg/L  | 0.10   | 0.050 | 1  |          | 02/11/22 13:42 | 16984-48-8 |      |
| Sulfate                                   | ND           | mg/L  | 1.0    | 0.50  | 1  |          | 02/11/22 13:42 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Sample: <b>GWC-45R</b>                                     | Lab ID: <b>92585555014</b> | Collected: 02/01/22 10:30 | Received: 02/04/22 11:45 | Matrix: Water |    |                |                |           |      |
|--|----------------------------|---------------------------|--------------------------|---------------|----|----------------|----------------|-----------|------|
| Parameters   | Results                    | Units                     | Report Limit             | MDL           | DF | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                            |                           |                          |               |    |                |                |           |      |
| Performed by   | <b>CUSTOMER</b>            |                           |                          |               | 1  |                | 02/07/22 10:38 |           |      |
| pH   | <b>7.15</b>                | Std. Units                |                          |               | 1  |                | 02/07/22 10:38 |           |      |
| <b>6010D ATL ICP</b>                                       |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                            |                           |                          |               |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                            |                           |                          |               |    |                |                |           |      |
| Zinc   | ND                         | mg/L                      | 0.020                    | 0.0085        | 1  | 02/14/22 09:41 | 02/14/22 16:39 | 7440-66-6 |      |
| Potassium  | <b>0.82</b>                | mg/L                      | 0.20                     | 0.15          | 1  | 02/14/22 09:41 | 02/14/22 16:39 | 7440-09-7 |      |
| Sodium   | <b>1.5</b>                 | mg/L                      | 1.0                      | 0.58          | 1  | 02/14/22 09:41 | 02/14/22 16:39 | 7440-23-5 |      |
| Calcium  | <b>43.9</b>                | mg/L                      | 1.0                      | 0.12          | 1  | 02/14/22 09:41 | 02/14/22 16:39 | 7440-70-2 |      |
| Magnesium  | <b>23.8</b>                | mg/L                      | 0.050                    | 0.012         | 1  | 02/14/22 09:41 | 02/14/22 16:39 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>                                      |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                            |                           |                          |               |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                            |                           |                          |               |    |                |                |           |      |
| Antimony   | ND                         | mg/L                      | 0.0030                   | 0.00078       | 1  | 02/14/22 08:52 | 02/14/22 21:56 | 7440-36-0 |      |
| Arsenic  | ND                         | mg/L                      | 0.0050                   | 0.0011        | 1  | 02/14/22 08:52 | 02/14/22 21:56 | 7440-38-2 |      |
| Barium   | <b>0.026</b>               | mg/L                      | 0.0050                   | 0.00067       | 1  | 02/14/22 08:52 | 02/14/22 21:56 | 7440-39-3 |      |
| Beryllium  | ND                         | mg/L                      | 0.00050                  | 0.000054      | 1  | 02/14/22 08:52 | 02/14/22 21:56 | 7440-41-7 |      |
| Boron  | <b>0.022J</b>              | mg/L                      | 0.040                    | 0.0086        | 1  | 02/14/22 08:52 | 02/14/22 21:56 | 7440-42-8 |      |
| Cadmium  | ND                         | mg/L                      | 0.00050                  | 0.00011       | 1  | 02/14/22 08:52 | 02/14/22 21:56 | 7440-43-9 |      |
| Chromium   | ND                         | mg/L                      | 0.0050                   | 0.0011        | 1  | 02/14/22 08:52 | 02/14/22 21:56 | 7440-47-3 |      |
| Cobalt   | ND                         | mg/L                      | 0.0050                   | 0.00039       | 1  | 02/14/22 08:52 | 02/14/22 21:56 | 7440-48-4 |      |
| Copper   | ND                         | mg/L                      | 0.0050                   | 0.00050       | 1  | 02/14/22 08:52 | 02/14/22 21:56 | 7440-50-8 |      |
| Lead   | ND                         | mg/L                      | 0.0010                   | 0.00089       | 1  | 02/14/22 08:52 | 02/14/22 21:56 | 7439-92-1 |      |
| Nickel   | ND                         | mg/L                      | 0.0050                   | 0.00071       | 1  | 02/14/22 08:52 | 02/14/22 21:56 | 7440-02-0 |      |
| Selenium   | ND                         | mg/L                      | 0.0050                   | 0.0014        | 1  | 02/14/22 08:52 | 02/14/22 21:56 | 7782-49-2 |      |
| Silver   | ND                         | mg/L                      | 0.0050                   | 0.00044       | 1  | 02/14/22 08:52 | 02/14/22 21:56 | 7440-22-4 |      |
| Thallium   | ND                         | mg/L                      | 0.0010                   | 0.00018       | 1  | 02/14/22 08:52 | 02/14/22 21:56 | 7440-28-0 |      |
| Vanadium   | ND                         | mg/L                      | 0.010                    | 0.0019        | 1  | 02/14/22 08:52 | 02/15/22 14:59 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                            |                           |                          |               |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                            |                           |                          |               |    |                |                |           |      |
| Mercury  | ND                         | mg/L                      | 0.00020                  | 0.00013       | 1  | 02/09/22 12:00 | 02/09/22 17:49 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>                        |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: SM 2540C-2015                           |                            |                           |                          |               |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                            |                           |                          |               |    |                |                |           |      |
| Total Dissolved Solids                                     | <b>201</b>                 | mg/L                      | 10.0                     | 10.0          | 1  |                | 02/07/22 16:44 |           |      |
| <b>2320B Alkalinity</b>                                    |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: SM 2320B                                |                            |                           |                          |               |    |                |                |           |      |
| Pace Analytical Services - Minneapolis                     |                            |                           |                          |               |    |                |                |           |      |
| Alkalinity, Total as CaCO3                                 | <b>188</b>                 | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/09/22 21:08 |           |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>188</b>                 | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/09/22 21:08 |           |      |
| Alkalinity,Carbonate (CaCO3)                               | ND                         | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/09/22 21:08 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

**Sample: GWC-45R**      **Lab ID: 9258555014**      Collected: 02/01/22 10:30      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 4.3     | mg/L  | 1.0    | 0.60  | 1  |          | 02/12/22 16:39 | 16887-00-6 | M1   |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/12/22 16:39 | 16984-48-8 | M1   |
| Sulfate                                   | 6.1     | mg/L  | 1.0    | 0.50  | 1  |          | 02/12/22 16:39 | 14808-79-8 | M1   |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Sample: <b>GWC-47</b>  |                 | Lab ID: <b>9258555015</b> |              | Collected: 02/01/22 12:03 | Received: 02/04/22 11:45 | Matrix: Water  |                |           |      |
|--|-----------------|---------------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results         | Units                     | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                           |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |                           |              |                           | 1                        |                | 02/07/22 10:38 |           |      |
| pH   | <b>7.55</b>     | Std. Units                |              |                           | 1                        |                | 02/07/22 10:38 |           |      |
| <b>6010D ATL ICP</b>   |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                           |              |                           |                          |                |                |           |      |
| Zinc   | <b>0.038</b>    | mg/L                      | 0.020        | 0.0085                    | 1                        | 02/14/22 09:41 | 02/14/22 16:44 | 7440-66-6 |      |
| Potassium  | <b>0.55</b>     | mg/L                      | 0.20         | 0.15                      | 1                        | 02/14/22 09:41 | 02/14/22 16:44 | 7440-09-7 |      |
| Sodium   | <b>3.4</b>      | mg/L                      | 1.0          | 0.58                      | 1                        | 02/14/22 09:41 | 02/14/22 16:44 | 7440-23-5 |      |
| Calcium  | <b>21.3</b>     | mg/L                      | 1.0          | 0.12                      | 1                        | 02/14/22 09:41 | 02/14/22 16:44 | 7440-70-2 |      |
| Magnesium  | <b>12.0</b>     | mg/L                      | 0.050        | 0.012                     | 1                        | 02/14/22 09:41 | 02/14/22 16:44 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                           |              |                           |                          |                |                |           |      |
| Antimony   | ND              | mg/L                      | 0.0030       | 0.00078                   | 1                        | 02/14/22 08:52 | 02/14/22 22:02 | 7440-36-0 |      |
| Arsenic  | ND              | mg/L                      | 0.0050       | 0.0011                    | 1                        | 02/14/22 08:52 | 02/14/22 22:02 | 7440-38-2 |      |
| Barium   | <b>0.0081</b>   | mg/L                      | 0.0050       | 0.00067                   | 1                        | 02/14/22 08:52 | 02/14/22 22:02 | 7440-39-3 |      |
| Beryllium  | ND              | mg/L                      | 0.00050      | 0.000054                  | 1                        | 02/14/22 08:52 | 02/14/22 22:02 | 7440-41-7 |      |
| Boron  | <b>0.011J</b>   | mg/L                      | 0.040        | 0.0086                    | 1                        | 02/14/22 08:52 | 02/14/22 22:02 | 7440-42-8 |      |
| Cadmium  | <b>0.00014J</b> | mg/L                      | 0.00050      | 0.00011                   | 1                        | 02/14/22 08:52 | 02/14/22 22:02 | 7440-43-9 |      |
| Chromium   | <b>0.0015J</b>  | mg/L                      | 0.0050       | 0.0011                    | 1                        | 02/14/22 08:52 | 02/14/22 22:02 | 7440-47-3 |      |
| Cobalt   | ND              | mg/L                      | 0.0050       | 0.00039                   | 1                        | 02/14/22 08:52 | 02/14/22 22:02 | 7440-48-4 |      |
| Copper   | ND              | mg/L                      | 0.0050       | 0.00050                   | 1                        | 02/14/22 08:52 | 02/14/22 22:02 | 7440-50-8 |      |
| Lead   | ND              | mg/L                      | 0.0010       | 0.00089                   | 1                        | 02/14/22 08:52 | 02/14/22 22:02 | 7439-92-1 |      |
| Nickel   | ND              | mg/L                      | 0.0050       | 0.00071                   | 1                        | 02/14/22 08:52 | 02/14/22 22:02 | 7440-02-0 |      |
| Selenium   | ND              | mg/L                      | 0.0050       | 0.0014                    | 1                        | 02/14/22 08:52 | 02/14/22 22:02 | 7782-49-2 |      |
| Silver   | ND              | mg/L                      | 0.0050       | 0.00044                   | 1                        | 02/14/22 08:52 | 02/14/22 22:02 | 7440-22-4 |      |
| Thallium   | ND              | mg/L                      | 0.0010       | 0.00018                   | 1                        | 02/14/22 08:52 | 02/14/22 22:02 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L                      | 0.010        | 0.0019                    | 1                        | 02/14/22 08:52 | 02/15/22 15:05 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                           |              |                           |                          |                |                |           |      |
| Mercury  | ND              | mg/L                      | 0.00020      | 0.00013                   | 1                        | 02/09/22 12:00 | 02/09/22 17:52 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                           |              |                           |                          |                |                |           |      |
| Total Dissolved Solids   | <b>107</b>      | mg/L                      | 10.0         | 10.0                      | 1                        |                | 02/07/22 16:45 |           |      |
| <b>2320B Alkalinity</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                 |                           |              |                           |                          |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>100</b>      | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/09/22 21:14 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>100</b>      | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/09/22 21:14 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND              | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/09/22 21:14 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

**Sample: GWC-47**      **Lab ID: 92585555015**      Collected: 02/01/22 12:03      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 2.0     | mg/L  | 1.0    | 0.60  | 1  |          | 02/12/22 17:21 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/12/22 17:21 | 16984-48-8 |      |
| Sulfate                                   | 4.3     | mg/L  | 1.0    | 0.50  | 1  |          | 02/12/22 17:21 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Sample: <b>GWC-47R</b>   |                 | Lab ID: <b>9258555016</b> |              | Collected: 02/01/22 10:40 | Received: 02/04/22 11:45 | Matrix: Water  |                |           |      |
|--|-----------------|---------------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results         | Units                     | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                           |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |                           |              |                           | 1                        |                | 02/07/22 10:38 |           |      |
| pH   | <b>7.54</b>     | Std. Units                |              |                           | 1                        |                | 02/07/22 10:38 |           |      |
| <b>6010D ATL ICP</b>   |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                           |              |                           |                          |                |                |           |      |
| Zinc   | <b>0.029</b>    | mg/L                      | 0.020        | 0.0085                    | 1                        | 02/14/22 13:18 | 02/14/22 22:17 | 7440-66-6 |      |
| Potassium  | <b>1.7</b>      | mg/L                      | 0.20         | 0.15                      | 1                        | 02/14/22 13:18 | 02/14/22 22:17 | 7440-09-7 |      |
| Sodium   | <b>3.6</b>      | mg/L                      | 1.0          | 0.58                      | 1                        | 02/14/22 13:18 | 02/14/22 22:17 | 7440-23-5 |      |
| Calcium  | <b>29.4</b>     | mg/L                      | 1.0          | 0.12                      | 1                        | 02/14/22 13:18 | 02/14/22 22:17 | 7440-70-2 |      |
| Magnesium  | <b>14.6</b>     | mg/L                      | 0.050        | 0.012                     | 1                        | 02/14/22 13:18 | 02/14/22 22:17 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                           |              |                           |                          |                |                |           |      |
| Antimony   | <b>0.0024J</b>  | mg/L                      | 0.0030       | 0.00078                   | 1                        | 02/14/22 08:52 | 02/14/22 22:08 | 7440-36-0 |      |
| Arsenic  | ND              | mg/L                      | 0.0050       | 0.0011                    | 1                        | 02/14/22 08:52 | 02/14/22 22:08 | 7440-38-2 |      |
| Barium   | <b>0.0077</b>   | mg/L                      | 0.0050       | 0.00067                   | 1                        | 02/14/22 08:52 | 02/14/22 22:08 | 7440-39-3 |      |
| Beryllium  | ND              | mg/L                      | 0.00050      | 0.000054                  | 1                        | 02/14/22 08:52 | 02/14/22 22:08 | 7440-41-7 |      |
| Boron  | <b>0.010J</b>   | mg/L                      | 0.040        | 0.0086                    | 1                        | 02/14/22 08:52 | 02/14/22 22:08 | 7440-42-8 |      |
| Cadmium  | ND              | mg/L                      | 0.00050      | 0.00011                   | 1                        | 02/14/22 08:52 | 02/14/22 22:08 | 7440-43-9 |      |
| Chromium   | <b>0.0022J</b>  | mg/L                      | 0.0050       | 0.0011                    | 1                        | 02/14/22 08:52 | 02/14/22 22:08 | 7440-47-3 |      |
| Cobalt   | ND              | mg/L                      | 0.0050       | 0.00039                   | 1                        | 02/14/22 08:52 | 02/14/22 22:08 | 7440-48-4 |      |
| Copper   | ND              | mg/L                      | 0.0050       | 0.00050                   | 1                        | 02/14/22 08:52 | 02/14/22 22:08 | 7440-50-8 |      |
| Lead   | ND              | mg/L                      | 0.0010       | 0.00089                   | 1                        | 02/14/22 08:52 | 02/14/22 22:08 | 7439-92-1 |      |
| Nickel   | ND              | mg/L                      | 0.0050       | 0.00071                   | 1                        | 02/14/22 08:52 | 02/14/22 22:08 | 7440-02-0 |      |
| Selenium   | ND              | mg/L                      | 0.0050       | 0.0014                    | 1                        | 02/14/22 08:52 | 02/14/22 22:08 | 7782-49-2 |      |
| Silver   | ND              | mg/L                      | 0.0050       | 0.00044                   | 1                        | 02/14/22 08:52 | 02/14/22 22:08 | 7440-22-4 |      |
| Thallium   | ND              | mg/L                      | 0.0010       | 0.00018                   | 1                        | 02/14/22 08:52 | 02/14/22 22:08 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L                      | 0.010        | 0.0019                    | 1                        | 02/14/22 08:52 | 02/15/22 15:11 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                           |              |                           |                          |                |                |           |      |
| Mercury  | ND              | mg/L                      | 0.00020      | 0.00013                   | 1                        | 02/09/22 12:00 | 02/09/22 17:54 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                           |              |                           |                          |                |                |           |      |
| Total Dissolved Solids   | <b>157</b>      | mg/L                      | 10.0         | 10.0                      | 1                        |                | 02/07/22 16:45 |           |      |
| <b>2320B Alkalinity</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                 |                           |              |                           |                          |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>132</b>      | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/09/22 21:18 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>132</b>      | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/09/22 21:18 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND              | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/09/22 21:18 |           |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

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**Sample: GWC-47R**      **Lab ID: 9258555016**      Collected: 02/01/22 10:40      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results    | Units | Report<br>Limit | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|---|------------|-------|-----------------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>            |            |       |                 |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |            |       |                 |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |            |       |                 |       |    |          |                |            |      |
| Chloride                                  | <b>2.3</b> | mg/L  | 1.0             | 0.60  | 1  |          | 02/12/22 17:35 | 16887-00-6 |      |
| Fluoride                                  | ND         | mg/L  | 0.10            | 0.050 | 1  |          | 02/12/22 17:35 | 16984-48-8 |      |
| Sulfate                                   | <b>9.4</b> | mg/L  | 1.0             | 0.50  | 1  |          | 02/12/22 17:35 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Sample: <b>GWC-49Z</b>   |                 | Lab ID: <b>9258555017</b> |              | Collected: 02/01/22 12:23 | Received: 02/04/22 11:45 | Matrix: Water  |                |           |      |
|--|-----------------|---------------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results         | Units                     | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                           |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |                           |              |                           | 1                        |                | 02/07/22 10:39 |           |      |
| pH   | <b>5.00</b>     | Std. Units                |              |                           | 1                        |                | 02/07/22 10:39 |           |      |
| <b>6010D ATL ICP</b>   |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                           |              |                           |                          |                |                |           |      |
| Zinc   | ND              | mg/L                      | 0.020        | 0.0085                    | 1                        | 02/14/22 13:18 | 02/14/22 22:22 | 7440-66-6 |      |
| Potassium  | <b>0.38</b>     | mg/L                      | 0.20         | 0.15                      | 1                        | 02/14/22 13:18 | 02/14/22 22:22 | 7440-09-7 |      |
| Sodium   | <b>2.5</b>      | mg/L                      | 1.0          | 0.58                      | 1                        | 02/14/22 13:18 | 02/14/22 22:22 | 7440-23-5 |      |
| Calcium  | <b>0.62J</b>    | mg/L                      | 1.0          | 0.12                      | 1                        | 02/14/22 13:18 | 02/14/22 22:22 | 7440-70-2 |      |
| Magnesium  | <b>0.29</b>     | mg/L                      | 0.050        | 0.012                     | 1                        | 02/14/22 13:18 | 02/14/22 22:22 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                           |              |                           |                          |                |                |           |      |
| Antimony   | <b>0.00097J</b> | mg/L                      | 0.0030       | 0.00078                   | 1                        | 02/14/22 08:52 | 02/14/22 22:14 | 7440-36-0 |      |
| Arsenic  | ND              | mg/L                      | 0.0050       | 0.0011                    | 1                        | 02/14/22 08:52 | 02/14/22 22:14 | 7440-38-2 |      |
| Barium   | <b>0.0030J</b>  | mg/L                      | 0.0050       | 0.00067                   | 1                        | 02/14/22 08:52 | 02/14/22 22:14 | 7440-39-3 |      |
| Beryllium  | ND              | mg/L                      | 0.00050      | 0.000054                  | 1                        | 02/14/22 08:52 | 02/14/22 22:14 | 7440-41-7 |      |
| Boron  | <b>0.0087J</b>  | mg/L                      | 0.040        | 0.0086                    | 1                        | 02/14/22 08:52 | 02/14/22 22:14 | 7440-42-8 |      |
| Cadmium  | ND              | mg/L                      | 0.00050      | 0.00011                   | 1                        | 02/14/22 08:52 | 02/14/22 22:14 | 7440-43-9 |      |
| Chromium   | ND              | mg/L                      | 0.0050       | 0.0011                    | 1                        | 02/14/22 08:52 | 02/14/22 22:14 | 7440-47-3 |      |
| Cobalt   | <b>0.00066J</b> | mg/L                      | 0.0050       | 0.00039                   | 1                        | 02/14/22 08:52 | 02/14/22 22:14 | 7440-48-4 |      |
| Copper   | ND              | mg/L                      | 0.0050       | 0.00050                   | 1                        | 02/14/22 08:52 | 02/14/22 22:14 | 7440-50-8 |      |
| Lead   | ND              | mg/L                      | 0.0010       | 0.00089                   | 1                        | 02/14/22 08:52 | 02/14/22 22:14 | 7439-92-1 |      |
| Nickel   | <b>0.0014J</b>  | mg/L                      | 0.0050       | 0.00071                   | 1                        | 02/14/22 08:52 | 02/14/22 22:14 | 7440-02-0 |      |
| Selenium   | ND              | mg/L                      | 0.0050       | 0.0014                    | 1                        | 02/14/22 08:52 | 02/14/22 22:14 | 7782-49-2 |      |
| Silver   | ND              | mg/L                      | 0.0050       | 0.00044                   | 1                        | 02/14/22 08:52 | 02/14/22 22:14 | 7440-22-4 |      |
| Thallium   | ND              | mg/L                      | 0.0010       | 0.00018                   | 1                        | 02/14/22 08:52 | 02/14/22 22:14 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L                      | 0.010        | 0.0019                    | 1                        | 02/14/22 08:52 | 02/15/22 15:17 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                           |              |                           |                          |                |                |           |      |
| Mercury  | ND              | mg/L                      | 0.00020      | 0.00013                   | 1                        | 02/09/22 12:00 | 02/09/22 17:57 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                           |              |                           |                          |                |                |           |      |
| Total Dissolved Solids   | <b>27.0</b>     | mg/L                      | 10.0         | 10.0                      | 1                        |                | 02/07/22 16:45 |           |      |
| <b>2320B Alkalinity</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                 |                           |              |                           |                          |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>3.4J</b>     | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/09/22 22:18 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>3.4J</b>     | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/09/22 22:18 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND              | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/09/22 22:18 |           |      |

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

**Sample: GWC-49Z**      **Lab ID: 92585555017**      Collected: 02/01/22 12:23      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results      | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|--------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |              |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |              |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |              |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |              |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>0.93J</b> | mg/L  | 1.0    | 0.60  | 1  |          | 02/12/22 18:17 | 16887-00-6 |      |
| Fluoride                                  | ND           | mg/L  | 0.10   | 0.050 | 1  |          | 02/12/22 18:17 | 16984-48-8 |      |
| Sulfate                                   | <b>0.93J</b> | mg/L  | 1.0    | 0.50  | 1  |          | 02/12/22 18:17 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Sample: <b>GWC-49R</b>                                     |                 | Lab ID: <b>9258555018</b> |              | Collected: 02/01/22 10:34 | Received: 02/04/22 11:45 | Matrix: Water  |                |           |      |
|--|-----------------|---------------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results         | Units                     | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                 |                           |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |                           |              |                           | 1                        |                | 02/07/22 10:39 |           |      |
| pH   | <b>7.63</b>     | Std. Units                |              |                           | 1                        |                | 02/07/22 10:39 |           |      |
| <b>6010D ATL ICP</b>                                       |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                 |                           |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                           |              |                           |                          |                |                |           |      |
| Zinc   | ND              | mg/L                      | 0.020        | 0.0085                    | 1                        | 02/14/22 13:18 | 02/14/22 22:27 | 7440-66-6 |      |
| Potassium  | <b>0.78</b>     | mg/L                      | 0.20         | 0.15                      | 1                        | 02/14/22 13:18 | 02/14/22 22:27 | 7440-09-7 |      |
| Sodium   | <b>2.3</b>      | mg/L                      | 1.0          | 0.58                      | 1                        | 02/14/22 13:18 | 02/14/22 22:27 | 7440-23-5 |      |
| Calcium  | <b>26.0</b>     | mg/L                      | 1.0          | 0.12                      | 1                        | 02/14/22 13:18 | 02/14/22 22:27 | 7440-70-2 |      |
| Magnesium  | <b>14.5</b>     | mg/L                      | 0.050        | 0.012                     | 1                        | 02/14/22 13:18 | 02/14/22 22:27 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>                                      |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                 |                           |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                           |              |                           |                          |                |                |           |      |
| Antimony   | ND              | mg/L                      | 0.0030       | 0.00078                   | 1                        | 02/14/22 08:52 | 02/14/22 22:20 | 7440-36-0 |      |
| Arsenic  | ND              | mg/L                      | 0.0050       | 0.0011                    | 1                        | 02/14/22 08:52 | 02/14/22 22:20 | 7440-38-2 |      |
| Barium   | <b>0.011</b>    | mg/L                      | 0.0050       | 0.00067                   | 1                        | 02/14/22 08:52 | 02/14/22 22:20 | 7440-39-3 |      |
| Beryllium  | ND              | mg/L                      | 0.00050      | 0.000054                  | 1                        | 02/14/22 08:52 | 02/14/22 22:20 | 7440-41-7 |      |
| Boron  | ND              | mg/L                      | 0.040        | 0.0086                    | 1                        | 02/14/22 08:52 | 02/14/22 22:20 | 7440-42-8 |      |
| Cadmium  | ND              | mg/L                      | 0.00050      | 0.00011                   | 1                        | 02/14/22 08:52 | 02/14/22 22:20 | 7440-43-9 |      |
| Chromium   | ND              | mg/L                      | 0.0050       | 0.0011                    | 1                        | 02/14/22 08:52 | 02/14/22 22:20 | 7440-47-3 |      |
| Cobalt   | ND              | mg/L                      | 0.0050       | 0.00039                   | 1                        | 02/14/22 08:52 | 02/14/22 22:20 | 7440-48-4 |      |
| Copper   | ND              | mg/L                      | 0.0050       | 0.00050                   | 1                        | 02/14/22 08:52 | 02/14/22 22:20 | 7440-50-8 |      |
| Lead   | ND              | mg/L                      | 0.0010       | 0.00089                   | 1                        | 02/14/22 08:52 | 02/14/22 22:20 | 7439-92-1 |      |
| Nickel   | ND              | mg/L                      | 0.0050       | 0.00071                   | 1                        | 02/14/22 08:52 | 02/14/22 22:20 | 7440-02-0 |      |
| Selenium   | ND              | mg/L                      | 0.0050       | 0.0014                    | 1                        | 02/14/22 08:52 | 02/14/22 22:20 | 7782-49-2 |      |
| Silver   | ND              | mg/L                      | 0.0050       | 0.00044                   | 1                        | 02/14/22 08:52 | 02/14/22 22:20 | 7440-22-4 |      |
| Thallium   | ND              | mg/L                      | 0.0010       | 0.00018                   | 1                        | 02/14/22 08:52 | 02/14/22 22:20 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L                      | 0.010        | 0.0019                    | 1                        | 02/14/22 08:52 | 02/15/22 15:23 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                 |                           |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                           |              |                           |                          |                |                |           |      |
| Mercury  | ND              | mg/L                      | 0.00020      | 0.00013                   | 1                        | 02/09/22 12:00 | 02/09/22 17:59 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>                        |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2540C-2015                           |                 |                           |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                           |              |                           |                          |                |                |           |      |
| Total Dissolved Solids                                     | <b>125</b>      | mg/L                      | 10.0         | 10.0                      | 1                        |                | 02/07/22 16:45 |           |      |
| <b>2320B Alkalinity</b>                                    |                 |                           |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2320B                                |                 |                           |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Minneapolis                     |                 |                           |              |                           |                          |                |                |           |      |
| Alkalinity, Total as CaCO3                                 | <b>121</b>      | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/09/22 21:36 |           |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>121</b>      | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/09/22 21:36 |           |      |
| Alkalinity,Carbonate (CaCO3)                               | ND              | mg/L                      | 5.0          | 1.8                       | 1                        |                | 02/09/22 21:36 |           |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

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**Sample: GWC-49R**      **Lab ID: 9258555018**      Collected: 02/01/22 10:34      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 1.1     | mg/L  | 1.0    | 0.60  | 1  |          | 02/12/22 18:31 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/12/22 18:31 | 16984-48-8 |      |
| Sulfate                                   | 2.5     | mg/L  | 1.0    | 0.50  | 1  |          | 02/12/22 18:31 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Sample: DUP-2                       |         | Lab ID: 9258555019   |         | Collected: 02/01/22 00:00 | Received: 02/04/22 11:45 | Matrix: Water  |                |            |      |
|-------------------------------------|---------|--|---------|---------------------------|--------------------------|----------------|----------------|------------|------|
| Parameters                          | Results | Units  | Report  |                           |                          | Prepared       | Analyzed       | CAS No.    | Qual |
|                                     |         |  | Limit   | MDL                       | DF                       |                |                |            |      |
| <b>6010D ATL ICP</b>                |         | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |
| Zinc                                | ND      | mg/L   | 0.020   | 0.0085                    | 1                        | 02/14/22 13:18 | 02/14/22 22:32 | 7440-66-6  |      |
| Potassium                           | 0.73    | mg/L   | 0.20    | 0.15                      | 1                        | 02/14/22 13:18 | 02/14/22 22:32 | 7440-09-7  |      |
| Sodium                              | 1.3     | mg/L   | 1.0     | 0.58                      | 1                        | 02/14/22 13:18 | 02/14/22 22:32 | 7440-23-5  |      |
| Calcium                             | 38.8    | mg/L   | 1.0     | 0.12                      | 1                        | 02/14/22 13:18 | 02/14/22 22:32 | 7440-70-2  |      |
| Magnesium                           | 21.2    | mg/L   | 0.050   | 0.012                     | 1                        | 02/14/22 13:18 | 02/14/22 22:32 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>               |         | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |
| Antimony                            | ND      | mg/L   | 0.0030  | 0.00078                   | 1                        | 02/14/22 08:52 | 02/14/22 22:38 | 7440-36-0  |      |
| Arsenic                             | ND      | mg/L   | 0.0050  | 0.0011                    | 1                        | 02/14/22 08:52 | 02/14/22 22:38 | 7440-38-2  |      |
| Barium                              | 0.026   | mg/L   | 0.0050  | 0.00067                   | 1                        | 02/14/22 08:52 | 02/14/22 22:38 | 7440-39-3  |      |
| Beryllium                           | ND      | mg/L   | 0.00050 | 0.000054                  | 1                        | 02/14/22 08:52 | 02/14/22 22:38 | 7440-41-7  |      |
| Boron                               | 0.013J  | mg/L   | 0.040   | 0.0086                    | 1                        | 02/14/22 08:52 | 02/14/22 22:38 | 7440-42-8  |      |
| Cadmium                             | ND      | mg/L   | 0.00050 | 0.00011                   | 1                        | 02/14/22 08:52 | 02/14/22 22:38 | 7440-43-9  |      |
| Chromium                            | ND      | mg/L   | 0.0050  | 0.0011                    | 1                        | 02/14/22 08:52 | 02/14/22 22:38 | 7440-47-3  |      |
| Cobalt                              | ND      | mg/L   | 0.0050  | 0.00039                   | 1                        | 02/14/22 08:52 | 02/14/22 22:38 | 7440-48-4  |      |
| Copper                              | ND      | mg/L   | 0.0050  | 0.00050                   | 1                        | 02/14/22 08:52 | 02/14/22 22:38 | 7440-50-8  |      |
| Lead                                | ND      | mg/L   | 0.0010  | 0.00089                   | 1                        | 02/14/22 08:52 | 02/14/22 22:38 | 7439-92-1  |      |
| Nickel                              | ND      | mg/L   | 0.0050  | 0.00071                   | 1                        | 02/14/22 08:52 | 02/14/22 22:38 | 7440-02-0  |      |
| Selenium                            | ND      | mg/L   | 0.0050  | 0.0014                    | 1                        | 02/14/22 08:52 | 02/14/22 22:38 | 7782-49-2  |      |
| Silver                              | ND      | mg/L   | 0.0050  | 0.00044                   | 1                        | 02/14/22 08:52 | 02/14/22 22:38 | 7440-22-4  |      |
| Thallium                            | ND      | mg/L   | 0.0010  | 0.00018                   | 1                        | 02/14/22 08:52 | 02/14/22 22:38 | 7440-28-0  |      |
| Vanadium                            | ND      | mg/L   | 0.010   | 0.0019                    | 1                        | 02/14/22 08:52 | 02/15/22 15:29 | 7440-62-2  |      |
| <b>7470 Mercury</b>                 |         | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |
| Mercury                             | ND      | mg/L   | 0.00020 | 0.00013                   | 1                        | 02/09/22 12:00 | 02/09/22 18:02 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b> |         | Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |         |                           |                          |                |                |            |      |
| Total Dissolved Solids              | 180     | mg/L   | 10.0    | 10.0                      | 1                        |                | 02/07/22 17:20 |            |      |
| <b>2320B Alkalinity</b>             |         | Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |         |                           |                          |                |                |            |      |
| Alkalinity, Total as CaCO3          | 190     | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/09/22 21:42 |            |      |
| Alkalinity,Bicarbonate (CaCO3)      | 190     | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/09/22 21:42 |            |      |
| Alkalinity,Carbonate (CaCO3)        | ND      | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/09/22 21:42 |            |      |
| <b>300.0 IC Anions 28 Days</b>      |         | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |         |                           |                          |                |                |            |      |
| Chloride                            | 4.2     | mg/L   | 1.0     | 0.60                      | 1                        |                | 02/12/22 18:45 | 16887-00-6 |      |
| Fluoride                            | ND      | mg/L   | 0.10    | 0.050                     | 1                        |                | 02/12/22 18:45 | 16984-48-8 |      |
| Sulfate                             | 6.1     | mg/L   | 1.0     | 0.50                      | 1                        |                | 02/12/22 18:45 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Sample: <b>FB-2</b>                 |         | Lab ID: <b>9258555020</b>  |              | Collected: 02/01/22 15:45 | Received: 02/04/22 11:45 | Matrix: Water  |                |            |      |
|-------------------------------------|---------|--|--------------|---------------------------|--------------------------|----------------|----------------|------------|------|
| Parameters                          | Results | Units  | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.    | Qual |
| <b>6010D ATL ICP</b>                |         | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Zinc                                | ND      | mg/L   | 0.020        | 0.0085                    | 1                        | 02/14/22 13:18 | 02/14/22 22:36 | 7440-66-6  |      |
| Potassium                           | ND      | mg/L   | 0.20         | 0.15                      | 1                        | 02/14/22 13:18 | 02/14/22 22:36 | 7440-09-7  |      |
| Sodium                              | ND      | mg/L   | 1.0          | 0.58                      | 1                        | 02/14/22 13:18 | 02/14/22 22:36 | 7440-23-5  |      |
| Calcium                             | ND      | mg/L   | 1.0          | 0.12                      | 1                        | 02/14/22 13:18 | 02/14/22 22:36 | 7440-70-2  |      |
| Magnesium                           | ND      | mg/L   | 0.050        | 0.012                     | 1                        | 02/14/22 13:18 | 02/14/22 22:36 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>               |         | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Antimony                            | ND      | mg/L   | 0.0030       | 0.00078                   | 1                        | 02/14/22 08:52 | 02/14/22 22:44 | 7440-36-0  |      |
| Arsenic                             | ND      | mg/L   | 0.0050       | 0.0011                    | 1                        | 02/14/22 08:52 | 02/14/22 22:44 | 7440-38-2  |      |
| Barium                              | ND      | mg/L   | 0.0050       | 0.00067                   | 1                        | 02/14/22 08:52 | 02/14/22 22:44 | 7440-39-3  |      |
| Beryllium                           | ND      | mg/L   | 0.00050      | 0.000054                  | 1                        | 02/14/22 08:52 | 02/14/22 22:44 | 7440-41-7  |      |
| Boron                               | ND      | mg/L   | 0.040        | 0.0086                    | 1                        | 02/14/22 08:52 | 02/14/22 22:44 | 7440-42-8  |      |
| Cadmium                             | ND      | mg/L   | 0.00050      | 0.00011                   | 1                        | 02/14/22 08:52 | 02/14/22 22:44 | 7440-43-9  |      |
| Chromium                            | ND      | mg/L   | 0.0050       | 0.0011                    | 1                        | 02/14/22 08:52 | 02/14/22 22:44 | 7440-47-3  |      |
| Cobalt                              | ND      | mg/L   | 0.0050       | 0.00039                   | 1                        | 02/14/22 08:52 | 02/14/22 22:44 | 7440-48-4  |      |
| Copper                              | ND      | mg/L   | 0.0050       | 0.00050                   | 1                        | 02/14/22 08:52 | 02/14/22 22:44 | 7440-50-8  |      |
| Lead                                | ND      | mg/L   | 0.0010       | 0.00089                   | 1                        | 02/14/22 08:52 | 02/14/22 22:44 | 7439-92-1  |      |
| Nickel                              | ND      | mg/L   | 0.0050       | 0.00071                   | 1                        | 02/14/22 08:52 | 02/14/22 22:44 | 7440-02-0  |      |
| Selenium                            | ND      | mg/L   | 0.0050       | 0.0014                    | 1                        | 02/14/22 08:52 | 02/14/22 22:44 | 7782-49-2  |      |
| Silver                              | ND      | mg/L   | 0.0050       | 0.00044                   | 1                        | 02/14/22 08:52 | 02/14/22 22:44 | 7440-22-4  |      |
| Thallium                            | ND      | mg/L   | 0.0010       | 0.00018                   | 1                        | 02/14/22 08:52 | 02/14/22 22:44 | 7440-28-0  |      |
| Vanadium                            | ND      | mg/L   | 0.010        | 0.0019                    | 1                        | 02/14/22 08:52 | 02/15/22 15:35 | 7440-62-2  |      |
| <b>7470 Mercury</b>                 |         | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Mercury                             | ND      | mg/L   | 0.00020      | 0.00013                   | 1                        | 02/09/22 12:00 | 02/09/22 18:05 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b> |         | Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |              |                           |                          |                |                |            |      |
| Total Dissolved Solids              | ND      | mg/L   | 10.0         | 10.0                      | 1                        |                | 02/07/22 17:20 |            |      |
| <b>2320B Alkalinity</b>             |         | Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |              |                           |                          |                |                |            |      |
| Alkalinity, Total as CaCO3          | ND      | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/09/22 21:48 |            |      |
| Alkalinity,Bicarbonate (CaCO3)      | ND      | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/09/22 21:48 |            |      |
| Alkalinity,Carbonate (CaCO3)        | ND      | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/09/22 21:48 |            |      |
| <b>300.0 IC Anions 28 Days</b>      |         | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |              |                           |                          |                |                |            |      |
| Chloride                            | ND      | mg/L   | 1.0          | 0.60                      | 1                        |                | 02/12/22 18:59 | 16887-00-6 |      |
| Fluoride                            | ND      | mg/L   | 0.10         | 0.050                     | 1                        |                | 02/12/22 18:59 | 16984-48-8 |      |
| Sulfate                             | ND      | mg/L   | 1.0          | 0.50                      | 1                        |                | 02/12/22 18:59 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Sample: GWA-39RZ   |          | Lab ID: 9258555021 |              | Collected: 02/02/22 10:16 |    | Received: 02/04/22 11:45 |                | Matrix: Water |      |
|--|----------|--------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results  | Units              | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |          |                    |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |          |                    |              |                           |    |                          |                |               |      |
| Performed by   | CUSTOMER |                    |              |                           | 1  |                          | 02/07/22 10:39 |               |      |
| pH   | 6.89     | Std. Units         |              |                           | 1  |                          | 02/07/22 10:39 |               |      |
| <b>6010D ATL ICP</b>                                       |          |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |          |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                    |              |                           |    |                          |                |               |      |
| Zinc   | ND       | mg/L               | 0.020        | 0.0085                    | 1  | 02/14/22 13:18           | 02/14/22 22:41 | 7440-66-6     |      |
| Potassium  | 0.95     | mg/L               | 0.20         | 0.15                      | 1  | 02/14/22 13:18           | 02/14/22 22:41 | 7440-09-7     |      |
| Sodium   | 1.4      | mg/L               | 1.0          | 0.58                      | 1  | 02/14/22 13:18           | 02/14/22 22:41 | 7440-23-5     |      |
| Calcium  | 32.6     | mg/L               | 1.0          | 0.12                      | 1  | 02/14/22 13:18           | 02/14/22 22:41 | 7440-70-2     |      |
| Magnesium  | 17.1     | mg/L               | 0.050        | 0.012                     | 1  | 02/14/22 13:18           | 02/14/22 22:41 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>                                      |          |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |          |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                    |              |                           |    |                          |                |               |      |
| Antimony   | ND       | mg/L               | 0.0030       | 0.00078                   | 1  | 02/14/22 08:52           | 02/14/22 22:50 | 7440-36-0     |      |
| Arsenic  | ND       | mg/L               | 0.0050       | 0.0011                    | 1  | 02/14/22 08:52           | 02/14/22 22:50 | 7440-38-2     |      |
| Barium   | 0.013    | mg/L               | 0.0050       | 0.00067                   | 1  | 02/14/22 08:52           | 02/14/22 22:50 | 7440-39-3     |      |
| Beryllium  | ND       | mg/L               | 0.00050      | 0.000054                  | 1  | 02/14/22 08:52           | 02/14/22 22:50 | 7440-41-7     |      |
| Boron  | ND       | mg/L               | 0.040        | 0.0086                    | 1  | 02/14/22 08:52           | 02/14/22 22:50 | 7440-42-8     |      |
| Cadmium  | ND       | mg/L               | 0.00050      | 0.00011                   | 1  | 02/14/22 08:52           | 02/14/22 22:50 | 7440-43-9     |      |
| Chromium   | 0.0012J  | mg/L               | 0.0050       | 0.0011                    | 1  | 02/14/22 08:52           | 02/14/22 22:50 | 7440-47-3     |      |
| Cobalt   | ND       | mg/L               | 0.0050       | 0.00039                   | 1  | 02/14/22 08:52           | 02/14/22 22:50 | 7440-48-4     |      |
| Copper   | ND       | mg/L               | 0.0050       | 0.00050                   | 1  | 02/14/22 08:52           | 02/14/22 22:50 | 7440-50-8     |      |
| Lead   | ND       | mg/L               | 0.0010       | 0.00089                   | 1  | 02/14/22 08:52           | 02/14/22 22:50 | 7439-92-1     |      |
| Nickel   | ND       | mg/L               | 0.0050       | 0.00071                   | 1  | 02/14/22 08:52           | 02/14/22 22:50 | 7440-02-0     |      |
| Selenium   | ND       | mg/L               | 0.0050       | 0.0014                    | 1  | 02/14/22 08:52           | 02/14/22 22:50 | 7782-49-2     |      |
| Silver   | ND       | mg/L               | 0.0050       | 0.00044                   | 1  | 02/14/22 08:52           | 02/14/22 22:50 | 7440-22-4     |      |
| Thallium   | ND       | mg/L               | 0.0010       | 0.00018                   | 1  | 02/14/22 08:52           | 02/14/22 22:50 | 7440-28-0     |      |
| Vanadium   | ND       | mg/L               | 0.010        | 0.0019                    | 1  | 02/14/22 08:52           | 02/15/22 16:04 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |          |                    |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |          |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                    |              |                           |    |                          |                |               |      |
| Mercury  | ND       | mg/L               | 0.00020      | 0.00013                   | 1  | 02/09/22 13:30           | 02/09/22 19:21 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |          |                    |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015                           |          |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                    |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | 143      | mg/L               | 10.0         | 10.0                      | 1  |                          | 02/08/22 11:12 |               |      |
| <b>2320B Alkalinity</b>                                    |          |                    |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B                                |          |                    |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Minneapolis                     |          |                    |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3                                 | 146      | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/09/22 21:57 |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | 146      | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/09/22 21:57 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND       | mg/L               | 5.0          | 1.8                       | 1  |                          | 02/09/22 21:57 |               |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

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**Sample: GWA-39RZ**      **Lab ID: 9258555021**      Collected: 02/02/22 10:16      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 1.5     | mg/L  | 1.0    | 0.60  | 1  |          | 02/12/22 19:12 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/12/22 19:12 | 16984-48-8 |      |
| Sulfate                                   | 4.5     | mg/L  | 1.0    | 0.50  | 1  |          | 02/12/22 19:12 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

**Sample: FB-3**      **Lab ID: 9258555022**      Collected: 02/02/22 16:04      Received: 02/04/22 11:45      Matrix: Water

| Parameters  | Results        | Units | Report  |          |    | Prepared       | Analyzed       | CAS No.    | Qual |
|---|----------------|-------|---------|----------|----|----------------|----------------|------------|------|
|   |                |       | Limit   | MDL      | DF |                |                |            |      |
| <b>6010D ATL ICP</b>  |                |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 6010D    Preparation Method: EPA 3010A |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |                |       |         |          |    |                |                |            |      |
| Zinc  | ND             | mg/L  | 0.020   | 0.0085   | 1  | 02/14/22 13:18 | 02/14/22 22:55 | 7440-66-6  |      |
| Potassium   | ND             | mg/L  | 0.20    | 0.15     | 1  | 02/14/22 13:18 | 02/14/22 22:55 | 7440-09-7  |      |
| Sodium  | ND             | mg/L  | 1.0     | 0.58     | 1  | 02/14/22 13:18 | 02/14/22 22:55 | 7440-23-5  |      |
| Calcium   | ND             | mg/L  | 1.0     | 0.12     | 1  | 02/14/22 13:18 | 02/14/22 22:55 | 7440-70-2  |      |
| Magnesium   | ND             | mg/L  | 0.050   | 0.012    | 1  | 02/14/22 13:18 | 02/14/22 22:55 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>   |                |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 6020B    Preparation Method: EPA 3005A |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |                |       |         |          |    |                |                |            |      |
| Antimony  | ND             | mg/L  | 0.0030  | 0.00078  | 1  | 02/14/22 08:52 | 02/14/22 23:02 | 7440-36-0  |      |
| Arsenic   | ND             | mg/L  | 0.0050  | 0.0011   | 1  | 02/14/22 08:52 | 02/14/22 23:02 | 7440-38-2  |      |
| Barium  | ND             | mg/L  | 0.0050  | 0.00067  | 1  | 02/14/22 08:52 | 02/14/22 23:02 | 7440-39-3  |      |
| Beryllium   | ND             | mg/L  | 0.00050 | 0.000054 | 1  | 02/14/22 08:52 | 02/14/22 23:02 | 7440-41-7  |      |
| Boron   | ND             | mg/L  | 0.040   | 0.0086   | 1  | 02/14/22 08:52 | 02/14/22 23:02 | 7440-42-8  |      |
| Cadmium   | ND             | mg/L  | 0.00050 | 0.00011  | 1  | 02/14/22 08:52 | 02/14/22 23:02 | 7440-43-9  |      |
| Chromium  | <b>0.0011J</b> | mg/L  | 0.0050  | 0.0011   | 1  | 02/14/22 08:52 | 02/14/22 23:02 | 7440-47-3  |      |
| Cobalt  | ND             | mg/L  | 0.0050  | 0.00039  | 1  | 02/14/22 08:52 | 02/14/22 23:02 | 7440-48-4  |      |
| Copper  | ND             | mg/L  | 0.0050  | 0.00050  | 1  | 02/14/22 08:52 | 02/14/22 23:02 | 7440-50-8  |      |
| Lead  | ND             | mg/L  | 0.0010  | 0.00089  | 1  | 02/14/22 08:52 | 02/14/22 23:02 | 7439-92-1  |      |
| Nickel  | ND             | mg/L  | 0.0050  | 0.00071  | 1  | 02/14/22 08:52 | 02/14/22 23:02 | 7440-02-0  |      |
| Selenium  | ND             | mg/L  | 0.0050  | 0.0014   | 1  | 02/14/22 08:52 | 02/14/22 23:02 | 7782-49-2  |      |
| Silver  | ND             | mg/L  | 0.0050  | 0.00044  | 1  | 02/14/22 08:52 | 02/14/22 23:02 | 7440-22-4  |      |
| Thallium  | ND             | mg/L  | 0.0010  | 0.00018  | 1  | 02/14/22 08:52 | 02/14/22 23:02 | 7440-28-0  |      |
| Vanadium  | ND             | mg/L  | 0.010   | 0.0019   | 1  | 02/14/22 08:52 | 02/15/22 16:10 | 7440-62-2  |      |
| <b>7470 Mercury</b>   |                |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 7470A    Preparation Method: EPA 7470A |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |                |       |         |          |    |                |                |            |      |
| Mercury   | ND             | mg/L  | 0.00020 | 0.00013  | 1  | 02/09/22 13:30 | 02/09/22 19:23 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b>                           |                |       |         |          |    |                |                |            |      |
| Analytical Method: SM 2540C-2015                              |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |                |       |         |          |    |                |                |            |      |
| Total Dissolved Solids  | ND             | mg/L  | 10.0    | 10.0     | 1  |                | 02/08/22 11:12 |            |      |
| <b>2320B Alkalinity</b>                                       |                |       |         |          |    |                |                |            |      |
| Analytical Method: SM 2320B                                   |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Minneapolis                        |                |       |         |          |    |                |                |            |      |
| Alkalinity, Total as CaCO3                                    | ND             | mg/L  | 5.0     | 1.8      | 1  |                | 02/09/22 22:03 |            |      |
| Alkalinity,Bicarbonate (CaCO3)                                | ND             | mg/L  | 5.0     | 1.8      | 1  |                | 02/09/22 22:03 |            |      |
| Alkalinity,Carbonate (CaCO3)                                  | ND             | mg/L  | 5.0     | 1.8      | 1  |                | 02/09/22 22:03 |            |      |
| <b>300.0 IC Anions 28 Days</b>                                |                |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                     |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Asheville                          |                |       |         |          |    |                |                |            |      |
| Chloride  | ND             | mg/L  | 1.0     | 0.60     | 1  |                | 02/12/22 19:26 | 16887-00-6 |      |
| Fluoride  | ND             | mg/L  | 0.10    | 0.050    | 1  |                | 02/12/22 19:26 | 16984-48-8 |      |
| Sulfate   | ND             | mg/L  | 1.0     | 0.50     | 1  |                | 02/12/22 19:26 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Sample: EB-1                        |         | Lab ID: 9258555023   |         | Collected: 02/02/22 16:08 | Received: 02/04/22 11:45 | Matrix: Water  |                |            |      |
|-------------------------------------|---------|--|---------|---------------------------|--------------------------|----------------|----------------|------------|------|
| Parameters                          | Results | Units  | Report  |                           |                          | Prepared       | Analyzed       | CAS No.    | Qual |
|                                     |         |  | Limit   | MDL                       | DF                       |                |                |            |      |
| <b>6010D ATL ICP</b>                |         | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |
| Zinc                                | ND      | mg/L   | 0.020   | 0.0085                    | 1                        | 02/14/22 13:18 | 02/14/22 23:00 | 7440-66-6  |      |
| Potassium                           | ND      | mg/L   | 0.20    | 0.15                      | 1                        | 02/14/22 13:18 | 02/14/22 23:00 | 7440-09-7  |      |
| Sodium                              | ND      | mg/L   | 1.0     | 0.58                      | 1                        | 02/14/22 13:18 | 02/14/22 23:00 | 7440-23-5  |      |
| Calcium                             | ND      | mg/L   | 1.0     | 0.12                      | 1                        | 02/14/22 13:18 | 02/14/22 23:00 | 7440-70-2  |      |
| Magnesium                           | ND      | mg/L   | 0.050   | 0.012                     | 1                        | 02/14/22 13:18 | 02/14/22 23:00 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>               |         | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |
| Antimony                            | ND      | mg/L   | 0.0030  | 0.00078                   | 1                        | 02/14/22 08:52 | 02/14/22 23:08 | 7440-36-0  |      |
| Arsenic                             | ND      | mg/L   | 0.0050  | 0.0011                    | 1                        | 02/14/22 08:52 | 02/14/22 23:08 | 7440-38-2  |      |
| Barium                              | ND      | mg/L   | 0.0050  | 0.00067                   | 1                        | 02/14/22 08:52 | 02/14/22 23:08 | 7440-39-3  |      |
| Beryllium                           | ND      | mg/L   | 0.00050 | 0.000054                  | 1                        | 02/14/22 08:52 | 02/14/22 23:08 | 7440-41-7  |      |
| Boron                               | ND      | mg/L   | 0.040   | 0.0086                    | 1                        | 02/14/22 08:52 | 02/14/22 23:08 | 7440-42-8  |      |
| Cadmium                             | ND      | mg/L   | 0.00050 | 0.00011                   | 1                        | 02/14/22 08:52 | 02/14/22 23:08 | 7440-43-9  |      |
| Chromium                            | ND      | mg/L   | 0.0050  | 0.0011                    | 1                        | 02/14/22 08:52 | 02/14/22 23:08 | 7440-47-3  |      |
| Cobalt                              | ND      | mg/L   | 0.0050  | 0.00039                   | 1                        | 02/14/22 08:52 | 02/14/22 23:08 | 7440-48-4  |      |
| Copper                              | ND      | mg/L   | 0.0050  | 0.00050                   | 1                        | 02/14/22 08:52 | 02/14/22 23:08 | 7440-50-8  |      |
| Lead                                | ND      | mg/L   | 0.0010  | 0.00089                   | 1                        | 02/14/22 08:52 | 02/14/22 23:08 | 7439-92-1  |      |
| Nickel                              | ND      | mg/L   | 0.0050  | 0.00071                   | 1                        | 02/14/22 08:52 | 02/14/22 23:08 | 7440-02-0  |      |
| Selenium                            | ND      | mg/L   | 0.0050  | 0.0014                    | 1                        | 02/14/22 08:52 | 02/14/22 23:08 | 7782-49-2  |      |
| Silver                              | ND      | mg/L   | 0.0050  | 0.00044                   | 1                        | 02/14/22 08:52 | 02/14/22 23:08 | 7440-22-4  |      |
| Thallium                            | ND      | mg/L   | 0.0010  | 0.00018                   | 1                        | 02/14/22 08:52 | 02/14/22 23:08 | 7440-28-0  |      |
| Vanadium                            | ND      | mg/L   | 0.010   | 0.0019                    | 1                        | 02/14/22 08:52 | 02/15/22 16:16 | 7440-62-2  |      |
| <b>7470 Mercury</b>                 |         | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |
| Mercury                             | ND      | mg/L   | 0.00020 | 0.00013                   | 1                        | 02/09/22 13:30 | 02/09/22 19:26 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b> |         | Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |         |                           |                          |                |                |            |      |
| Total Dissolved Solids              | ND      | mg/L   | 10.0    | 10.0                      | 1                        |                | 02/08/22 11:12 |            |      |
| <b>2320B Alkalinity</b>             |         | Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |         |                           |                          |                |                |            |      |
| Alkalinity, Total as CaCO3          | ND      | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/09/22 22:07 |            |      |
| Alkalinity,Bicarbonate (CaCO3)      | ND      | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/09/22 22:07 |            |      |
| Alkalinity,Carbonate (CaCO3)        | ND      | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/09/22 22:07 |            |      |
| <b>300.0 IC Anions 28 Days</b>      |         | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |         |                           |                          |                |                |            |      |
| Chloride                            | ND      | mg/L   | 1.0     | 0.60                      | 1                        |                | 02/12/22 19:40 | 16887-00-6 |      |
| Fluoride                            | ND      | mg/L   | 0.10    | 0.050                     | 1                        |                | 02/12/22 19:40 | 16984-48-8 |      |
| Sulfate                             | ND      | mg/L   | 1.0     | 0.50                      | 1                        |                | 02/12/22 19:40 | 14808-79-8 |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

QC Batch: 678031 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010, 92585555011, 92585555012, 92585555013, 92585555014, 92585555015

METHOD BLANK: 3548482 Matrix: Water  
Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010, 92585555011, 92585555012, 92585555013, 92585555014, 92585555015

| Parameter | Units | Blank Result | Reporting Limit | MDL    | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|--------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 0.12   | 02/14/22 14:33 |            |
| Magnesium | mg/L  | ND           | 0.050           | 0.012  | 02/14/22 14:33 |            |
| Potassium | mg/L  | ND           | 0.20            | 0.15   | 02/14/22 14:33 |            |
| Sodium    | mg/L  | ND           | 1.0             | 0.58   | 02/14/22 14:33 |            |
| Zinc      | mg/L  | ND           | 0.020           | 0.0085 | 02/14/22 14:33 |            |

LABORATORY CONTROL SAMPLE: 3548483

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 1.0        | 103       | 80-120       |            |
| Magnesium | mg/L  | 1           | 1.1        | 107       | 80-120       |            |
| Potassium | mg/L  | 1           | 0.98       | 98        | 80-120       |            |
| Sodium    | mg/L  | 1           | 1.0        | 101       | 80-120       |            |
| Zinc      | mg/L  | 1           | 1.1        | 106       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3548484 3548485

| Parameter | Units | MS           |             | MSD         |        | MS     |       | MSD   |        | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------|-------------|-------------|--------|--------|-------|-------|--------|--------------|-----|---------|------|
|           |       | 292585555002 | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec |        |              |     |         |      |
| Calcium   | mg/L  | 18.5         | 1           | 1           | 18.5   | 18.3   | 1     | -16   | 75-125 | 1            | 20  | M1      |      |
| Magnesium | mg/L  | 10.3         | 1           | 1           | 10.9   | 10.8   | 62    | 52    | 75-125 | 1            | 20  | M1      |      |
| Potassium | mg/L  | 0.97         | 1           | 1           | 2.0    | 2.0    | 101   | 104   | 75-125 | 1            | 20  |         |      |
| Sodium    | mg/L  | 1.4          | 1           | 1           | 2.4    | 2.4    | 101   | 99    | 75-125 | 1            | 20  |         |      |
| Zinc      | mg/L  | ND           | 1           | 1           | 1.0    | 1.0    | 104   | 104   | 75-125 | 0            | 20  |         |      |

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### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

QC Batch: 678103 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92585555016, 92585555017, 92585555018, 92585555019, 92585555020, 92585555021, 92585555022, 92585555023

METHOD BLANK: 3548893 Matrix: Water  
Associated Lab Samples: 92585555016, 92585555017, 92585555018, 92585555019, 92585555020, 92585555021, 92585555022, 92585555023

| Parameter | Units | Blank Result | Reporting Limit | MDL    | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|--------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 0.12   | 02/14/22 20:41 |            |
| Magnesium | mg/L  | ND           | 0.050           | 0.012  | 02/14/22 20:41 |            |
| Potassium | mg/L  | ND           | 0.20            | 0.15   | 02/14/22 20:41 |            |
| Sodium    | mg/L  | ND           | 1.0             | 0.58   | 02/14/22 20:41 |            |
| Zinc      | mg/L  | ND           | 0.020           | 0.0085 | 02/14/22 20:41 |            |

LABORATORY CONTROL SAMPLE: 3548894

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 0.92J      | 92        | 80-120       |            |
| Magnesium | mg/L  | 1           | 0.97       | 97        | 80-120       |            |
| Potassium | mg/L  | 1           | 0.94       | 94        | 80-120       |            |
| Sodium    | mg/L  | 1           | 0.90J      | 90        | 80-120       |            |
| Zinc      | mg/L  | 1           | 0.95       | 95        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3548895 3548896

| Parameter | Units | MS                 |             | MSD         |        | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual  |
|-----------|-------|--------------------|-------------|-------------|--------|----------|-----------|--------------|--------|---------|-------|
|           |       | 92585920002 Result | Spike Conc. | Spike Conc. | Result |          |           |              |        |         |       |
| Calcium   | mg/L  | 17.2               | 1           | 1           | 17.4   | 18.9     | 28        | 177          | 75-125 | 8       | 20 M1 |
| Magnesium | mg/L  | 3.1                | 1           | 1           | 3.9    | 4.2      | 80        | 111          | 75-125 | 8       | 20    |
| Potassium | mg/L  | 2.5                | 1           | 1           | 3.3    | 3.6      | 82        | 113          | 75-125 | 9       | 20    |
| Sodium    | mg/L  | 14.4               | 1           | 1           | 14.7   | 16.0     | 33        | 163          | 75-125 | 8       | 20 M1 |
| Zinc      | mg/L  | ND                 | 1           | 1           | 0.96   | 0.98     | 96        | 98           | 75-125 | 2       | 20    |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

QC Batch: 677804 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010

METHOD BLANK: 3547662 Matrix: Water  
Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony  | mg/L  | ND           | 0.0030          | 0.00078  | 02/12/22 15:37 |            |
| Arsenic   | mg/L  | ND           | 0.0050          | 0.0011   | 02/12/22 15:37 |            |
| Barium    | mg/L  | ND           | 0.0050          | 0.00067  | 02/12/22 15:37 |            |
| Beryllium | mg/L  | ND           | 0.00050         | 0.000054 | 02/12/22 15:37 |            |
| Boron     | mg/L  | ND           | 0.040           | 0.0086   | 02/12/22 15:37 |            |
| Cadmium   | mg/L  | ND           | 0.00050         | 0.00011  | 02/12/22 15:37 |            |
| Chromium  | mg/L  | ND           | 0.0050          | 0.0011   | 02/12/22 15:37 |            |
| Cobalt    | mg/L  | ND           | 0.0050          | 0.00039  | 02/12/22 15:37 |            |
| Copper    | mg/L  | ND           | 0.0050          | 0.00050  | 02/12/22 15:37 |            |
| Lead      | mg/L  | ND           | 0.0010          | 0.00089  | 02/12/22 15:37 |            |
| Nickel    | mg/L  | ND           | 0.0050          | 0.00071  | 02/12/22 15:37 |            |
| Selenium  | mg/L  | ND           | 0.0050          | 0.0014   | 02/12/22 15:37 |            |
| Silver    | mg/L  | ND           | 0.0050          | 0.00044  | 02/12/22 15:37 |            |
| Thallium  | mg/L  | ND           | 0.0010          | 0.00018  | 02/14/22 13:53 |            |
| Vanadium  | mg/L  | ND           | 0.010           | 0.0019   | 02/12/22 15:37 |            |

LABORATORY CONTROL SAMPLE: 3547663

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony  | mg/L  | 0.1         | 0.11       | 112       | 80-120       |            |
| Arsenic   | mg/L  | 0.1         | 0.11       | 106       | 80-120       |            |
| Barium    | mg/L  | 0.1         | 0.10       | 105       | 80-120       |            |
| Beryllium | mg/L  | 0.1         | 0.11       | 109       | 80-120       |            |
| Boron     | mg/L  | 1           | 1.1        | 113       | 80-120       |            |
| Cadmium   | mg/L  | 0.1         | 0.10       | 103       | 80-120       |            |
| Chromium  | mg/L  | 0.1         | 0.10       | 103       | 80-120       |            |
| Cobalt    | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Copper    | mg/L  | 0.1         | 0.10       | 101       | 80-120       |            |
| Lead      | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Nickel    | mg/L  | 0.1         | 0.10       | 104       | 80-120       |            |
| Selenium  | mg/L  | 0.1         | 0.10       | 103       | 80-120       |            |
| Silver    | mg/L  | 0.1         | 0.11       | 107       | 80-120       |            |
| Thallium  | mg/L  | 0.1         | 0.10       | 105       | 80-120       |            |
| Vanadium  | mg/L  | 0.1         | 0.10       | 103       | 80-120       |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3547664 3547665 |       |             |       |             |             |        |        |       |        |              |         |      |
|--|-------|-------------|-------|-------------|-------------|--------|--------|-------|--------|--------------|---------|------|
| Parameter  | Units | 92585555001 |       | MS          | MSD         | MS     |        | MSD   |        | % Rec Limits | Max RPD | Qual |
|  |       | Result      | Conc. | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec  |              |         |      |
| Antimony   | mg/L  | ND          | 0.1   | 0.1         | 0.11        | 0.11   | 112    | 106   | 75-125 | 6            | 20      |      |
| Arsenic  | mg/L  | 0.0021J     | 0.1   | 0.1         | 0.11        | 0.10   | 104    | 100   | 75-125 | 3            | 20      |      |
| Barium   | mg/L  | 0.013       | 0.1   | 0.1         | 0.12        | 0.12   | 109    | 102   | 75-125 | 6            | 20      |      |
| Beryllium  | mg/L  | ND          | 0.1   | 0.1         | 0.11        | 0.11   | 111    | 109   | 75-125 | 2            | 20      |      |
| Boron  | mg/L  | ND          | 1     | 1           | 1.1         | 1.1    | 109    | 111   | 75-125 | 2            | 20      |      |
| Cadmium  | mg/L  | ND          | 0.1   | 0.1         | 0.10        | 0.094  | 101    | 94    | 75-125 | 7            | 20      |      |
| Chromium   | mg/L  | ND          | 0.1   | 0.1         | 0.10        | 0.10   | 104    | 101   | 75-125 | 3            | 20      |      |
| Cobalt   | mg/L  | ND          | 0.1   | 0.1         | 0.099       | 0.097  | 99     | 97    | 75-125 | 2            | 20      |      |
| Copper   | mg/L  | ND          | 0.1   | 0.1         | 0.10        | 0.097  | 101    | 97    | 75-125 | 4            | 20      |      |
| Lead   | mg/L  | ND          | 0.1   | 0.1         | 0.11        | 0.10   | 107    | 100   | 75-125 | 6            | 20      |      |
| Nickel   | mg/L  | ND          | 0.1   | 0.1         | 0.10        | 0.10   | 104    | 102   | 75-125 | 3            | 20      |      |
| Selenium   | mg/L  | ND          | 0.1   | 0.1         | 0.099       | 0.098  | 99     | 98    | 75-125 | 2            | 20      |      |
| Silver   | mg/L  | ND          | 0.1   | 0.1         | 0.11        | 0.10   | 108    | 103   | 75-125 | 5            | 20      |      |
| Thallium   | mg/L  | ND          | 0.1   | 0.1         | 0.10        | 0.10   | 103    | 104   | 75-125 | 2            | 20      |      |
| Vanadium   | mg/L  | ND          | 0.1   | 0.1         | 0.11        | 0.10   | 105    | 102   | 75-125 | 4            | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

QC Batch: 678016 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92585555011, 92585555012, 92585555013, 92585555014, 92585555015, 92585555016, 92585555017, 92585555018, 92585555019, 92585555020, 92585555021, 92585555022, 92585555023

METHOD BLANK: 3548415 Matrix: Water  
Associated Lab Samples: 92585555011, 92585555012, 92585555013, 92585555014, 92585555015, 92585555016, 92585555017, 92585555018, 92585555019, 92585555020, 92585555021, 92585555022, 92585555023

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony  | mg/L  | ND           | 0.0030          | 0.00078  | 02/14/22 20:15 |            |
| Arsenic   | mg/L  | 0.0018J      | 0.0050          | 0.0011   | 02/14/22 20:15 |            |
| Barium    | mg/L  | ND           | 0.0050          | 0.00067  | 02/14/22 20:15 |            |
| Beryllium | mg/L  | ND           | 0.00050         | 0.000054 | 02/14/22 20:15 |            |
| Boron     | mg/L  | ND           | 0.040           | 0.0086   | 02/14/22 20:15 |            |
| Cadmium   | mg/L  | ND           | 0.00050         | 0.00011  | 02/14/22 20:15 |            |
| Chromium  | mg/L  | ND           | 0.0050          | 0.0011   | 02/14/22 20:15 |            |
| Cobalt    | mg/L  | ND           | 0.0050          | 0.00039  | 02/14/22 20:15 |            |
| Copper    | mg/L  | ND           | 0.0050          | 0.00050  | 02/14/22 20:15 |            |
| Lead      | mg/L  | ND           | 0.0010          | 0.00089  | 02/14/22 20:15 |            |
| Nickel    | mg/L  | ND           | 0.0050          | 0.00071  | 02/14/22 20:15 |            |
| Selenium  | mg/L  | ND           | 0.0050          | 0.0014   | 02/14/22 20:15 |            |
| Silver    | mg/L  | ND           | 0.0050          | 0.00044  | 02/14/22 20:15 |            |
| Thallium  | mg/L  | ND           | 0.0010          | 0.00018  | 02/14/22 20:15 |            |
| Vanadium  | mg/L  | ND           | 0.010           | 0.0019   | 02/14/22 20:15 |            |

LABORATORY CONTROL SAMPLE: 3548416

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony  | mg/L  | 0.1         | 0.11       | 110       | 80-120       |            |
| Arsenic   | mg/L  | 0.1         | 0.10       | 102       | 80-120       |            |
| Barium    | mg/L  | 0.1         | 0.10       | 104       | 80-120       |            |
| Beryllium | mg/L  | 0.1         | 0.10       | 102       | 80-120       |            |
| Boron     | mg/L  | 1           | 1.0        | 100       | 80-120       |            |
| Cadmium   | mg/L  | 0.1         | 0.11       | 105       | 80-120       |            |
| Chromium  | mg/L  | 0.1         | 0.10       | 101       | 80-120       |            |
| Cobalt    | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |
| Copper    | mg/L  | 0.1         | 0.094      | 94        | 80-120       |            |
| Lead      | mg/L  | 0.1         | 0.10       | 101       | 80-120       |            |
| Nickel    | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Selenium  | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Silver    | mg/L  | 0.1         | 0.10       | 102       | 80-120       |            |
| Thallium  | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Vanadium  | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Parameter | Units | 3548417              |                      | 3548418               |              | MS<br>Result | MSD<br>Result | MS<br>% Rec | MSD<br>% Rec | % Rec<br>Limits | RPD | Max<br>RPD | Qual |
|-----------|-------|----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|-----|------------|------|
|           |       | 9258555011<br>Result | MS<br>Spike<br>Conc. | MSD<br>Spike<br>Conc. | MS<br>Result |              |               |             |              |                 |     |            |      |
| Antimony  | mg/L  | ND                   | 0.1                  | 0.1                   | 0.11         | 0.11         | 107           | 111         | 75-125       | 3               | 20  |            |      |
| Arsenic   | mg/L  | 0.0012J              | 0.1                  | 0.1                   | 0.10         | 0.10         | 99            | 99          | 75-125       | 0               | 20  |            |      |
| Barium    | mg/L  | 0.029                | 0.1                  | 0.1                   | 0.14         | 0.15         | 112           | 117         | 75-125       | 4               | 20  |            |      |
| Beryllium | mg/L  | ND                   | 0.1                  | 0.1                   | 0.096        | 0.10         | 96            | 100         | 75-125       | 4               | 20  |            |      |
| Boron     | mg/L  | 0.020J               | 1                    | 1                     | 0.97         | 1.0          | 95            | 98          | 75-125       | 4               | 20  |            |      |
| Cadmium   | mg/L  | ND                   | 0.1                  | 0.1                   | 0.10         | 0.11         | 102           | 105         | 75-125       | 3               | 20  |            |      |
| Chromium  | mg/L  | ND                   | 0.1                  | 0.1                   | 0.099        | 0.10         | 98            | 99          | 75-125       | 1               | 20  |            |      |
| Cobalt    | mg/L  | ND                   | 0.1                  | 0.1                   | 0.096        | 0.098        | 95            | 97          | 75-125       | 2               | 20  |            |      |
| Copper    | mg/L  | 0.0028J              | 0.1                  | 0.1                   | 0.096        | 0.099        | 93            | 96          | 75-125       | 3               | 20  |            |      |
| Lead      | mg/L  | ND                   | 0.1                  | 0.1                   | 0.097        | 0.10         | 97            | 100         | 75-125       | 3               | 20  |            |      |
| Nickel    | mg/L  | 0.00095J             | 0.1                  | 0.1                   | 0.096        | 0.10         | 95            | 100         | 75-125       | 4               | 20  |            |      |
| Selenium  | mg/L  | ND                   | 0.1                  | 0.1                   | 0.098        | 0.097        | 98            | 97          | 75-125       | 0               | 20  |            |      |
| Silver    | mg/L  | ND                   | 0.1                  | 0.1                   | 0.098        | 0.10         | 98            | 101         | 75-125       | 2               | 20  |            |      |
| Thallium  | mg/L  | ND                   | 0.1                  | 0.1                   | 0.097        | 0.10         | 97            | 100         | 75-125       | 3               | 20  |            |      |
| Vanadium  | mg/L  | ND                   | 0.1                  | 0.1                   | 0.10         | 0.10         | 99            | 100         | 75-125       | 1               | 20  |            |      |

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**QUALITY CONTROL DATA**

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

|                  |           |                       |  |
|------------------|-----------|-----------------------|--|
| QC Batch:        | 677026    | Analysis Method:      | EPA 7470A  |
| QC Batch Method: | EPA 7470A | Analysis Description: | 7470 Mercury                                     |
|                  |           | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010, 92585555011, 92585555012, 92585555013, 92585555014, 92585555015, 92585555016, 92585555017, 92585555018, 92585555019, 92585555020

METHOD BLANK: 3543220 Matrix: Water

Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010, 92585555011, 92585555012, 92585555013, 92585555014, 92585555015, 92585555016, 92585555017, 92585555018, 92585555019, 92585555020

| Parameter | Units | Blank Result | Reporting Limit | MDL     | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|---------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00020         | 0.00013 | 02/09/22 16:51 |            |

LABORATORY CONTROL SAMPLE: 3543221

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0023     | 92        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3543222 3543223

| Parameter | Units | 92585555001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Mercury   | mg/L  | ND                 | 0.0025         | 0.0025          | 0.0024    | 0.0024     | 96       | 95        | 75-125       | 1   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

QC Batch: 677028

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92585555021, 92585555022, 92585555023

METHOD BLANK: 3543231

Matrix: Water

Associated Lab Samples: 92585555021, 92585555022, 92585555023

| Parameter | Units | Blank Result | Reporting Limit | MDL     | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|---------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00020         | 0.00013 | 02/09/22 18:07 |            |

LABORATORY CONTROL SAMPLE: 3543232

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0022     | 87        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3543233 3543234

| Parameter | Units | 92585920002    |                 | 3543234   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |  |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|--|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |        |         |      |  |
| Mercury   | mg/L  | ND             | 0.0025          | 0.0025    | 0.0020     | 0.0021   | 79        | 83           | 75-125 | 6       | 20   |  |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

QC Batch: 675815 Analysis Method: SM 2540C-2015  
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010, 92585555011, 92585555012

METHOD BLANK: 3537021 Matrix: Water  
Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010, 92585555011, 92585555012

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 02/03/22 16:05 |            |

LABORATORY CONTROL SAMPLE: 3537022

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 377        | 94        | 80-120       |            |

SAMPLE DUPLICATE: 3537023

| Parameter              | Units | 92585881002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 62.0               | 62.0       | 0   | 25      |            |

SAMPLE DUPLICATE: 3537024

| Parameter              | Units | 92585555008 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 63.0               | 62.0       | 2   | 25      |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

QC Batch: 676438 Analysis Method: SM 2540C-2015  
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92585555013, 92585555014, 92585555015, 92585555016, 92585555017, 92585555018

METHOD BLANK: 3540515 Matrix: Water  
Associated Lab Samples: 92585555013, 92585555014, 92585555015, 92585555016, 92585555017, 92585555018

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 02/07/22 16:40 |            |

LABORATORY CONTROL SAMPLE: 3540516

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 375        | 94        | 80-120       |            |

SAMPLE DUPLICATE: 3540517

| Parameter              | Units | 92585561006 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 256                | 265        | 3   | 25      |            |

SAMPLE DUPLICATE: 3540518

| Parameter              | Units | 92586342009 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 156                | 171        | 9   | 25      |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

|                                |  |
|--------------------------------|--|
| QC Batch: 676439               | Analysis Method: SM 2540C-2015                               |
| QC Batch Method: SM 2540C-2015 | Analysis Description: 2540C Total Dissolved Solids           |
|                                | Laboratory: Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92585555019, 92585555020

METHOD BLANK: 3540519 Matrix: Water

Associated Lab Samples: 92585555019, 92585555020

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 02/07/22 17:19 |            |

LABORATORY CONTROL SAMPLE: 3540520

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 374        | 94        | 80-120       |            |

SAMPLE DUPLICATE: 3540521

| Parameter              | Units | 92585555019 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 180                | 181        | 1   | 25      |            |

SAMPLE DUPLICATE: 3540522

| Parameter              | Units | 92585920011 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 96.0               | 94.0       | 2   | 25      |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

QC Batch: 676566 Analysis Method: SM 2540C-2015  
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92585555021, 92585555022, 92585555023

METHOD BLANK: 3541419 Matrix: Water  
Associated Lab Samples: 92585555021, 92585555022, 92585555023

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 02/08/22 11:11 |            |

LABORATORY CONTROL SAMPLE: 3541420

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 390        | 98        | 80-120       |            |

SAMPLE DUPLICATE: 3541421

| Parameter              | Units | 92585920025 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 65.0               | 46.0       | 34  | 25      | D6         |

SAMPLE DUPLICATE: 3541422

| Parameter              | Units | 92586436013 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 102                | 103        | 1   | 25      |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

|                  |          |                       |  |
|------------------|----------|-----------------------|--|
| QC Batch:        | 797866   | Analysis Method:      | SM 2320B                               |
| QC Batch Method: | SM 2320B | Analysis Description: | 2320B Alkalinity                       |
|                  |          | Laboratory:           | Pace Analytical Services - Minneapolis |

Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009

METHOD BLANK: 4239372 Matrix: Water

Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009

| Parameter                      | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|--------------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO3     | mg/L  | ND           | 5.0             | 1.8 | 02/08/22 21:36 |            |
| Alkalinity,Bicarbonate (CaCO3) | mg/L  | ND           | 5.0             | 1.8 | 02/08/22 21:36 |            |
| Alkalinity,Carbonate (CaCO3)   | mg/L  | ND           | 5.0             | 1.8 | 02/08/22 21:36 |            |

LABORATORY CONTROL SAMPLE & LCSD: 4239373 4239374

| Parameter                  | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|----------------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| Alkalinity, Total as CaCO3 | mg/L  | 40          | 41.8       | 41.3        | 104       | 103        | 90-110       | 1   | 20      |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4239375 4239376

| Parameter                  | Units | 10596751001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 22.6               | 40             | 40              | 53.6      | 59.6       | 78       | 93        | 80-120       | 10  | 20      | M1   |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4239377 4239378

| Parameter                  | Units | 92585555002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 84.2               | 40             | 40              | 121       | 124        | 92       | 100       | 80-120       | 2   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

QC Batch: 798025      Analysis Method: SM 2320B  
QC Batch Method: SM 2320B      Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Minneapolis  
Associated Lab Samples: 92585555010, 92585555011, 92585555012

METHOD BLANK: 4240244      Matrix: Water  
Associated Lab Samples: 92585555010, 92585555011, 92585555012

| Parameter                      | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|--------------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO3     | mg/L  | ND           | 5.0             | 1.8 | 02/09/22 14:38 |            |
| Alkalinity,Bicarbonate (CaCO3) | mg/L  | ND           | 5.0             | 1.8 | 02/09/22 14:38 |            |
| Alkalinity,Carbonate (CaCO3)   | mg/L  | ND           | 5.0             | 1.8 | 02/09/22 14:38 |            |

LABORATORY CONTROL SAMPLE & LCSD: 4240245      4240246

| Parameter                  | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|----------------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| Alkalinity, Total as CaCO3 | mg/L  | 40          | 41.9       | 41.9        | 105       | 105        | 90-110       | 0   | 20      |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4240247      4240248

| Parameter                  | Units | 92585555010 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 8.1                | 40             | 40              | 50.3      | 51.8       | 106      | 109       | 80-120       | 3   | 20      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4240249      4240250

| Parameter                  | Units | 10596970001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 21.0               | 40             | 40              | 60.5      | 60.8       | 99       | 99        | 80-120       | 0   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

QC Batch: 798068 Analysis Method: SM 2320B  
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Minneapolis  
Associated Lab Samples: 92585555013, 92585555014, 92585555015, 92585555016, 92585555017, 92585555018, 92585555019, 92585555020, 92585555021, 92585555022, 92585555023

METHOD BLANK: 4240572 Matrix: Water  
Associated Lab Samples: 92585555013, 92585555014, 92585555015, 92585555016, 92585555017, 92585555018, 92585555019, 92585555020, 92585555021, 92585555022, 92585555023

| Parameter                      | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|--------------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO3     | mg/L  | ND           | 5.0             | 1.8 | 02/09/22 16:51 |            |
| Alkalinity,Bicarbonate (CaCO3) | mg/L  | ND           | 5.0             | 1.8 | 02/09/22 16:51 |            |
| Alkalinity,Carbonate (CaCO3)   | mg/L  | ND           | 5.0             | 1.8 | 02/09/22 16:51 |            |

LABORATORY CONTROL SAMPLE & LCSD: 4240573 4240574

| Parameter                  | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|----------------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| Alkalinity, Total as CaCO3 | mg/L  | 40          | 42.2       | 42.1        | 105       | 105        | 90-110       | 0   | 20      |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4240575 4240576

| Parameter                  | Units | 10596353002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 127                | 40             | 40              | 167       | 167        | 100      | 100       | 80-120       | 0   | 20      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4240827 4240828

| Parameter                  | Units | 92585555016 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 132                | 40             | 40              | 172       | 171        | 100      | 97        | 80-120       | 1   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

|                  |                        |                       |                                      |
|------------------|------------------------|-----------------------|--------------------------------------|
| QC Batch:        | 676332                 | Analysis Method:      | EPA 300.0 Rev 2.1 1993               |
| QC Batch Method: | EPA 300.0 Rev 2.1 1993 | Analysis Description: | 300.0 IC Anions                      |
|                  |                        | Laboratory:           | Pace Analytical Services - Asheville |

Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010, 92585555011, 92585555012

METHOD BLANK: 3540061 Matrix: Water  
Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010, 92585555011, 92585555012

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 02/06/22 23:27 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 02/06/22 23:27 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 02/06/22 23:27 |            |

LABORATORY CONTROL SAMPLE: 3540062

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 47.3       | 95        | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.3        | 92        | 90-110       |            |
| Sulfate   | mg/L  | 50          | 45.8       | 92        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3540063 3540064

| Parameter | Units | 92585058030    |                 | 3540064   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |        |         |      |
| Chloride  | mg/L  | ND             | 50              | 50        | 48.9       | 49.4     | 98        | 99           | 90-110 | 1       | 10   |
| Fluoride  | mg/L  | ND             | 2.5             | 2.5       | 2.3        | 2.3      | 92        | 93           | 90-110 | 1       | 10   |
| Sulfate   | mg/L  | ND             | 50              | 50        | 48.2       | 48.7     | 96        | 97           | 90-110 | 1       | 10   |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3540065 3540066

| Parameter | Units | 92585555010    |                 | 3540066   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |        |         |      |
| Chloride  | mg/L  | 4.8            | 50              | 50        | 55.6       | 55.1     | 102       | 101          | 90-110 | 1       | 10   |
| Fluoride  | mg/L  | ND             | 2.5             | 2.5       | 2.5        | 2.5      | 100       | 100          | 90-110 | 0       | 10   |
| Sulfate   | mg/L  | 1.2            | 50              | 50        | 51.6       | 51.1     | 101       | 100          | 90-110 | 1       | 10   |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

|   |  |
|---|--|
| QC Batch: 677497                        | Analysis Method: EPA 300.0 Rev 2.1 1993          |
| QC Batch Method: EPA 300.0 Rev 2.1 1993 | Analysis Description: 300.0 IC Anions            |
|   | Laboratory: Pace Analytical Services - Asheville |

Associated Lab Samples: 92585555013

METHOD BLANK: 3545965 Matrix: Water  
Associated Lab Samples: 92585555013

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 02/11/22 07:04 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 02/11/22 07:04 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 02/11/22 07:04 |            |

LABORATORY CONTROL SAMPLE: 3545966

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 52.1       | 104       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.5        | 100       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 50.2       | 100       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3545967 3545968

| Parameter | Units | MS                 |             | MSD         |        | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|--------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92587247021 Result | Spike Conc. | Spike Conc. | Result |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 53.3               | 50          | 50          | 90.2   | 88.9      | 74         | 71       | 90-110    | 1            | 10  | M1      |      |
| Fluoride  | mg/L  | 0.41               | 2.5         | 2.5         | 3.1    | 3.1       | 106        | 106      | 90-110    | 0            | 10  |         |      |
| Sulfate   | mg/L  | 95.9               | 50          | 50          | 140    | 139       | 89         | 86       | 90-110    | 1            | 10  | M1      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3545969 3545970

| Parameter | Units | MS                 |             | MSD         |        | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|--------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92587247031 Result | Spike Conc. | Spike Conc. | Result |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 73.8               | 50          | 50          | 106    | 107       | 65         | 67       | 90-110    | 1            | 10  | M1      |      |
| Fluoride  | mg/L  | 1.1                | 2.5         | 2.5         | 3.7    | 3.8       | 106        | 108      | 90-110    | 2            | 10  |         |      |
| Sulfate   | mg/L  | 141                | 50          | 50          | 179    | 180       | 77         | 79       | 90-110    | 1            | 10  | M1      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

|                  |                        |                       |                                      |
|------------------|------------------------|-----------------------|--------------------------------------|
| QC Batch:        | 677743                 | Analysis Method:      | EPA 300.0 Rev 2.1 1993               |
| QC Batch Method: | EPA 300.0 Rev 2.1 1993 | Analysis Description: | 300.0 IC Anions                      |
|                  |                        | Laboratory:           | Pace Analytical Services - Asheville |

Associated Lab Samples: 92585555014, 92585555015, 92585555016, 92585555017, 92585555018, 92585555019, 92585555020, 92585555021, 92585555022, 92585555023

METHOD BLANK: 3547238 Matrix: Water  
Associated Lab Samples: 92585555014, 92585555015, 92585555016, 92585555017, 92585555018, 92585555019, 92585555020, 92585555021, 92585555022, 92585555023

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 02/12/22 16:11 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 02/12/22 16:11 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 02/12/22 16:11 |            |

LABORATORY CONTROL SAMPLE: 3547239

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 51.1       | 102       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.5        | 99        | 90-110       |            |
| Sulfate   | mg/L  | 50          | 50.2       | 100       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3547240 3547241

| Parameter | Units | 92585555014    |                 | 3547241   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual  |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|-------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |        |         |       |
| Chloride  | mg/L  | 4.3            | 50              | 50        | 60.1       | 60.2     | 112       | 112          | 90-110 | 0       | 10 M1 |
| Fluoride  | mg/L  | ND             | 2.5             | 2.5       | 2.8        | 2.8      | 110       | 111          | 90-110 | 1       | 10 M1 |
| Sulfate   | mg/L  | 6.1            | 50              | 50        | 62.6       | 62.4     | 113       | 113          | 90-110 | 0       | 10 M1 |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3547242 3547243

| Parameter | Units | 92586436001    |                 | 3547243   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual  |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|-------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |        |         |       |
| Chloride  | mg/L  | 1.2            | 50              | 50        | 57.3       | 57.5     | 112       | 113          | 90-110 | 0       | 10 M1 |
| Fluoride  | mg/L  | ND             | 2.5             | 2.5       | 2.8        | 2.8      | 110       | 111          | 90-110 | 1       | 10 M1 |
| Sulfate   | mg/L  | 0.93J          | 50              | 50        | 57.2       | 57.7     | 113       | 114          | 90-110 | 1       | 10 M1 |

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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 - 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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Lab ID     | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|------------|-----------|-----------------|----------|-------------------|------------------|
| 9258555001 | GWA-39Z   |                 |          |                   |                  |
| 9258555002 | GWA-40    |                 |          |                   |                  |
| 9258555003 | GWA-41    |                 |          |                   |                  |
| 9258555004 | GWA-41R   |                 |          |                   |                  |
| 9258555005 | GWA-42    |                 |          |                   |                  |
| 9258555006 | GWA-43    |                 |          |                   |                  |
| 9258555007 | GWA-43R   |                 |          |                   |                  |
| 9258555008 | GWC-44    |                 |          |                   |                  |
| 9258555009 | GWC-46R   |                 |          |                   |                  |
| 9258555010 | GWC-48    |                 |          |                   |                  |
| 9258555013 | GWC-45    |                 |          |                   |                  |
| 9258555014 | GWC-45R   |                 |          |                   |                  |
| 9258555015 | GWC-47    |                 |          |                   |                  |
| 9258555016 | GWC-47R   |                 |          |                   |                  |
| 9258555017 | GWC-49Z   |                 |          |                   |                  |
| 9258555018 | GWC-49R   |                 |          |                   |                  |
| 9258555021 | GWA-39RZ  |                 |          |                   |                  |
| 9258555001 | GWA-39Z   | EPA 3010A       | 678031   | EPA 6010D         | 678095           |
| 9258555002 | GWA-40    | EPA 3010A       | 678031   | EPA 6010D         | 678095           |
| 9258555003 | GWA-41    | EPA 3010A       | 678031   | EPA 6010D         | 678095           |
| 9258555004 | GWA-41R   | EPA 3010A       | 678031   | EPA 6010D         | 678095           |
| 9258555005 | GWA-42    | EPA 3010A       | 678031   | EPA 6010D         | 678095           |
| 9258555006 | GWA-43    | EPA 3010A       | 678031   | EPA 6010D         | 678095           |
| 9258555007 | GWA-43R   | EPA 3010A       | 678031   | EPA 6010D         | 678095           |
| 9258555008 | GWC-44    | EPA 3010A       | 678031   | EPA 6010D         | 678095           |
| 9258555009 | GWC-46R   | EPA 3010A       | 678031   | EPA 6010D         | 678095           |
| 9258555010 | GWC-48    | EPA 3010A       | 678031   | EPA 6010D         | 678095           |
| 9258555011 | DUP-1     | EPA 3010A       | 678031   | EPA 6010D         | 678095           |
| 9258555012 | FB-1      | EPA 3010A       | 678031   | EPA 6010D         | 678095           |
| 9258555013 | GWC-45    | EPA 3010A       | 678031   | EPA 6010D         | 678095           |
| 9258555014 | GWC-45R   | EPA 3010A       | 678031   | EPA 6010D         | 678095           |
| 9258555015 | GWC-47    | EPA 3010A       | 678031   | EPA 6010D         | 678095           |
| 9258555016 | GWC-47R   | EPA 3010A       | 678103   | EPA 6010D         | 678189           |
| 9258555017 | GWC-49Z   | EPA 3010A       | 678103   | EPA 6010D         | 678189           |
| 9258555018 | GWC-49R   | EPA 3010A       | 678103   | EPA 6010D         | 678189           |
| 9258555019 | DUP-2     | EPA 3010A       | 678103   | EPA 6010D         | 678189           |
| 9258555020 | FB-2      | EPA 3010A       | 678103   | EPA 6010D         | 678189           |
| 9258555021 | GWA-39RZ  | EPA 3010A       | 678103   | EPA 6010D         | 678189           |
| 9258555022 | FB-3      | EPA 3010A       | 678103   | EPA 6010D         | 678189           |
| 9258555023 | EB-1      | EPA 3010A       | 678103   | EPA 6010D         | 678189           |
| 9258555001 | GWA-39Z   | EPA 3005A       | 677804   | EPA 6020B         | 677940           |
| 9258555002 | GWA-40    | EPA 3005A       | 677804   | EPA 6020B         | 677940           |
| 9258555003 | GWA-41    | EPA 3005A       | 677804   | EPA 6020B         | 677940           |
| 9258555004 | GWA-41R   | EPA 3005A       | 677804   | EPA 6020B         | 677940           |
| 9258555005 | GWA-42    | EPA 3005A       | 677804   | EPA 6020B         | 677940           |
| 9258555006 | GWA-43    | EPA 3005A       | 677804   | EPA 6020B         | 677940           |
| 9258555007 | GWA-43R   | EPA 3005A       | 677804   | EPA 6020B         | 677940           |

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Lab ID      | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|-----------------|----------|-------------------|------------------|
| 92585555008 | GWC-44    | EPA 3005A       | 677804   | EPA 6020B         | 677940           |
| 92585555009 | GWC-46R   | EPA 3005A       | 677804   | EPA 6020B         | 677940           |
| 92585555010 | GWC-48    | EPA 3005A       | 677804   | EPA 6020B         | 677940           |
| 92585555011 | DUP-1     | EPA 3005A       | 678016   | EPA 6020B         | 678130           |
| 92585555012 | FB-1      | EPA 3005A       | 678016   | EPA 6020B         | 678130           |
| 92585555013 | GWC-45    | EPA 3005A       | 678016   | EPA 6020B         | 678130           |
| 92585555014 | GWC-45R   | EPA 3005A       | 678016   | EPA 6020B         | 678130           |
| 92585555015 | GWC-47    | EPA 3005A       | 678016   | EPA 6020B         | 678130           |
| 92585555016 | GWC-47R   | EPA 3005A       | 678016   | EPA 6020B         | 678130           |
| 92585555017 | GWC-49Z   | EPA 3005A       | 678016   | EPA 6020B         | 678130           |
| 92585555018 | GWC-49R   | EPA 3005A       | 678016   | EPA 6020B         | 678130           |
| 92585555019 | DUP-2     | EPA 3005A       | 678016   | EPA 6020B         | 678130           |
| 92585555020 | FB-2      | EPA 3005A       | 678016   | EPA 6020B         | 678130           |
| 92585555021 | GWA-39RZ  | EPA 3005A       | 678016   | EPA 6020B         | 678130           |
| 92585555022 | FB-3      | EPA 3005A       | 678016   | EPA 6020B         | 678130           |
| 92585555023 | EB-1      | EPA 3005A       | 678016   | EPA 6020B         | 678130           |
| 92585555001 | GWA-39Z   | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555002 | GWA-40    | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555003 | GWA-41    | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555004 | GWA-41R   | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555005 | GWA-42    | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555006 | GWA-43    | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555007 | GWA-43R   | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555008 | GWC-44    | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555009 | GWC-46R   | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555010 | GWC-48    | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555011 | DUP-1     | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555012 | FB-1      | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555013 | GWC-45    | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555014 | GWC-45R   | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555015 | GWC-47    | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555016 | GWC-47R   | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555017 | GWC-49Z   | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555018 | GWC-49R   | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555019 | DUP-2     | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555020 | FB-2      | EPA 7470A       | 677026   | EPA 7470A         | 677148           |
| 92585555021 | GWA-39RZ  | EPA 7470A       | 677028   | EPA 7470A         | 677150           |
| 92585555022 | FB-3      | EPA 7470A       | 677028   | EPA 7470A         | 677150           |
| 92585555023 | EB-1      | EPA 7470A       | 677028   | EPA 7470A         | 677150           |
| 92585555001 | GWA-39Z   | SM 2540C-2015   | 675815   |                   |                  |
| 92585555002 | GWA-40    | SM 2540C-2015   | 675815   |                   |                  |
| 92585555003 | GWA-41    | SM 2540C-2015   | 675815   |                   |                  |
| 92585555004 | GWA-41R   | SM 2540C-2015   | 675815   |                   |                  |
| 92585555005 | GWA-42    | SM 2540C-2015   | 675815   |                   |                  |
| 92585555006 | GWA-43    | SM 2540C-2015   | 675815   |                   |                  |
| 92585555007 | GWA-43R   | SM 2540C-2015   | 675815   |                   |                  |
| 92585555008 | GWC-44    | SM 2540C-2015   | 675815   |                   |                  |

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 9&10  
Pace Project No.: 92585555

| Lab ID     | Sample ID | QC Batch Method        | QC Batch | Analytical Method | Analytical Batch |
|------------|-----------|------------------------|----------|-------------------|------------------|
| 9258555009 | GWC-46R   | SM 2540C-2015          | 675815   |                   |                  |
| 9258555010 | GWC-48    | SM 2540C-2015          | 675815   |                   |                  |
| 9258555011 | DUP-1     | SM 2540C-2015          | 675815   |                   |                  |
| 9258555012 | FB-1      | SM 2540C-2015          | 675815   |                   |                  |
| 9258555013 | GWC-45    | SM 2540C-2015          | 676438   |                   |                  |
| 9258555014 | GWC-45R   | SM 2540C-2015          | 676438   |                   |                  |
| 9258555015 | GWC-47    | SM 2540C-2015          | 676438   |                   |                  |
| 9258555016 | GWC-47R   | SM 2540C-2015          | 676438   |                   |                  |
| 9258555017 | GWC-49Z   | SM 2540C-2015          | 676438   |                   |                  |
| 9258555018 | GWC-49R   | SM 2540C-2015          | 676438   |                   |                  |
| 9258555019 | DUP-2     | SM 2540C-2015          | 676439   |                   |                  |
| 9258555020 | FB-2      | SM 2540C-2015          | 676439   |                   |                  |
| 9258555021 | GWA-39RZ  | SM 2540C-2015          | 676566   |                   |                  |
| 9258555022 | FB-3      | SM 2540C-2015          | 676566   |                   |                  |
| 9258555023 | EB-1      | SM 2540C-2015          | 676566   |                   |                  |
| 9258555001 | GWA-39Z   | SM 2320B               | 797866   |                   |                  |
| 9258555002 | GWA-40    | SM 2320B               | 797866   |                   |                  |
| 9258555003 | GWA-41    | SM 2320B               | 797866   |                   |                  |
| 9258555004 | GWA-41R   | SM 2320B               | 797866   |                   |                  |
| 9258555005 | GWA-42    | SM 2320B               | 797866   |                   |                  |
| 9258555006 | GWA-43    | SM 2320B               | 797866   |                   |                  |
| 9258555007 | GWA-43R   | SM 2320B               | 797866   |                   |                  |
| 9258555008 | GWC-44    | SM 2320B               | 797866   |                   |                  |
| 9258555009 | GWC-46R   | SM 2320B               | 797866   |                   |                  |
| 9258555010 | GWC-48    | SM 2320B               | 798025   |                   |                  |
| 9258555011 | DUP-1     | SM 2320B               | 798025   |                   |                  |
| 9258555012 | FB-1      | SM 2320B               | 798025   |                   |                  |
| 9258555013 | GWC-45    | SM 2320B               | 798068   |                   |                  |
| 9258555014 | GWC-45R   | SM 2320B               | 798068   |                   |                  |
| 9258555015 | GWC-47    | SM 2320B               | 798068   |                   |                  |
| 9258555016 | GWC-47R   | SM 2320B               | 798068   |                   |                  |
| 9258555017 | GWC-49Z   | SM 2320B               | 798068   |                   |                  |
| 9258555018 | GWC-49R   | SM 2320B               | 798068   |                   |                  |
| 9258555019 | DUP-2     | SM 2320B               | 798068   |                   |                  |
| 9258555020 | FB-2      | SM 2320B               | 798068   |                   |                  |
| 9258555021 | GWA-39RZ  | SM 2320B               | 798068   |                   |                  |
| 9258555022 | FB-3      | SM 2320B               | 798068   |                   |                  |
| 9258555023 | EB-1      | SM 2320B               | 798068   |                   |                  |
| 9258555001 | GWA-39Z   | EPA 300.0 Rev 2.1 1993 | 676332   |                   |                  |
| 9258555002 | GWA-40    | EPA 300.0 Rev 2.1 1993 | 676332   |                   |                  |
| 9258555003 | GWA-41    | EPA 300.0 Rev 2.1 1993 | 676332   |                   |                  |
| 9258555004 | GWA-41R   | EPA 300.0 Rev 2.1 1993 | 676332   |                   |                  |
| 9258555005 | GWA-42    | EPA 300.0 Rev 2.1 1993 | 676332   |                   |                  |
| 9258555006 | GWA-43    | EPA 300.0 Rev 2.1 1993 | 676332   |                   |                  |
| 9258555007 | GWA-43R   | EPA 300.0 Rev 2.1 1993 | 676332   |                   |                  |

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

| Lab ID      | Sample ID | QC Batch Method        | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|------------------------|----------|-------------------|------------------|
| 92585555008 | GWC-44    | EPA 300.0 Rev 2.1 1993 | 676332   |                   |                  |
| 92585555009 | GWC-46R   | EPA 300.0 Rev 2.1 1993 | 676332   |                   |                  |
| 92585555010 | GWC-48    | EPA 300.0 Rev 2.1 1993 | 676332   |                   |                  |
| 92585555011 | DUP-1     | EPA 300.0 Rev 2.1 1993 | 676332   |                   |                  |
| 92585555012 | FB-1      | EPA 300.0 Rev 2.1 1993 | 676332   |                   |                  |
| 92585555013 | GWC-45    | EPA 300.0 Rev 2.1 1993 | 677497   |                   |                  |
| 92585555014 | GWC-45R   | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92585555015 | GWC-47    | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92585555016 | GWC-47R   | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92585555017 | GWC-49Z   | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92585555018 | GWC-49R   | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92585555019 | DUP-2     | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92585555020 | FB-2      | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92585555021 | GWA-39RZ  | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92585555022 | FB-3      | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92585555023 | EB-1      | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |

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Document Name:  
**Sample Condition Upon Receipt (SCUR)**  
 Document No.:  
**F-CAR-CS-033-Rev.08**

Document Revised: November 15, 2021  
 Page 1 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

**Sample Condition Upon Receipt**

Client Name:

G-A Power

Project #:

**WO# : 92585555**



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

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 2/1/22  
lcr

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?  Yes  No  N/A

Thermometer:  IR Gun ID: 230 Type of Ice:  Wet  Blue  None

Cooler Temp: 4.8 Correction Factor: Add/Subtract (°C) +0.2

Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 5.0

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

|  |  |  | Comments/Discrepancy: |
|--|--|--|-----------------------|
| Chain of Custody Present?                        | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  | 1.                    |
| Samples Arrived within Hold Time?                | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            |  | 2.                    |
| Short Hold Time Analysis (<72 hr.)?              | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A |  | 3.                    |
| Rush Turn Around Time Requested?                 | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A |  | 4.                    |
| Sufficient Volume?                               | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            |  | 5.                    |
| Correct Containers Used?                         | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  | 6.                    |
| -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 |  | 7.                    |
| Dissolved analysis: Samples field filtered?      | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  | 8.                    |
| Sample Labels Match COC?                         | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  | 9.                    |
| -Includes Date/Time/ID/Analysis Matrix: <u>W</u> |  |  |                       |
| Headspace in VOA Vials (>5-6mm)?                 | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  | 10.                   |
| Trip Blank Present?                              | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  | 11.                   |
| Trip Blank Custody Seals Present?                | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  |                       |

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_ Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_ Date: \_\_\_\_\_



Document Name:  
Bottle Identification Form (BIF)

Document No.:  
F-CAR-CS-043-Rev.01

Document Issued: November 15, 2021  
Page 1 of 1

Issuing Authority:  
Pace Carolinas Quality Office

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

\*\*Bottom half of box is to list number of bottles

Project #

**WO# : 92585555**

PM: NMG

Due Date: 02/15/22

CLIENT: GA-GA Power

| Matrix | Item# | BP4U-125 mL Plastic Unpreserved (N/A) (Cl-) | BP3U-250 mL Plastic Unpreserved (N/A) | BP2U-500 mL Plastic Unpreserved (N/A) | BP1U-1 liter Plastic Unpreserved (N/A) | BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-) | BP3N-250 mL plastic HNO3 (pH < 2) | BP4Z-125 mL Plastic Zn Acetate & NaOH (>9) | BP4B-125 mL Plastic NaOH (pH > 12) (Cl-) | WGFU-Wide-mouthed Glass jar Unpreserved | AG1U-1 liter Amber Unpreserved (N/A) (Cl-) | AG1H-1 liter Amber HCl (pH < 2) | AG3U-250 mL Amber Unpreserved (N/A) (Cl-) | AG1S-1 liter Amber H2SO4 (pH < 2) | AG3S-250 mL Amber H2SO4 (pH < 2) | AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-) | DG9H-40 mL VOA HCl (N/A) | VG9T-40 mL VOA Na2S2O3 (N/A) | VG9U-40 mL VOA Unpreserved (N/A) | DG9P-40 mL VOA H3PO4 (N/A) | VOAK (3 vials per kit)-5035 kit (N/A) | V/GK (3 vials per kit)-VPH/Gas kit (N/A) | SP5T-125 mL Sterile Plastic (N/A - lab) | SP2T-250 mL Sterile Plastic (N/A - lab) | BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7) | AG0U-100 mL Amber Unpreserved vials (N/A) | V5GU-20 mL Scintillation vials (N/A) | DG9U-40 mL Amber Unpreserved vials (N/A) |  |  |
|--------|-------|---|---------------------------------------|---------------------------------------|--|--|-----------------------------------|--|--|---|--|---------------------------------|---|-----------------------------------|----------------------------------|--|--------------------------|------------------------------|----------------------------------|----------------------------|---------------------------------------|--|---|---|---|---|--------------------------------------|--|--|--|
| 1      |       | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 2      |       | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 3      |       | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 4      |       | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 5      |       | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 6      |       | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 7      |       | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 8      |       | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 9      |       | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 10     |       | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 11     |       | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 12     |       | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |

**pH Adjustment Log for Preserved Samples**

| Sample ID | Type of Preservative | pH upon receipt | Date preservation adjusted | Time preservation adjusted | Amount of Preservative added | Lot # |
|-----------|----------------------|-----------------|----------------------------|----------------------------|------------------------------|-------|
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |

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.

|   |  |  |  |  |  |
|---|--|--|--|--|--|
| <b>Section A</b><br>Required Client Information:<br>Company: GA Power<br>Address: 1003 Weatherstone Parkway<br>Woodstock, Ga 30188<br>Email To: Kevin.Stephenson@Resoluteenv.com<br>Phone: (678)5489415<br>Requested Due Date/TAT: 30 Day |  | <b>Section B</b><br>Required Project Information:<br>Report To: Kristen Junko<br>Copy To: Rhonda Quinn<br>Purchase Order No.<br>Project Name: Plant Bowen Landfill Cells 9 and 10<br>Project Number: |  | <b>Section C</b><br>Invoice Information:<br>Attention: Southern Co<br>Company Name:<br>Address:<br>State: GA<br>Site Location: GA<br>State: GA   |  |
| <b>Section D</b><br>Required Client Information:<br>Valid Matrix Codes<br>MATRIX CODE<br>DRINKING WATER DW<br>WATER WT<br>WASTE WATER WW<br>PRODUCT P<br>SOLID/SOLID SL<br>WIFE CL<br>AIR WIP<br>OTHER AR<br>TISSUE OT<br>TS              |  | <b>Section C</b><br>Invoice Information:<br>Attention: Southern Co<br>Company Name:<br>Address:<br>State: GA<br>Site Location: GA<br>State: GA   |  | <b>REGULATORY AGENCY</b><br>NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/><br>UST <input type="checkbox"/> RCRA <input type="checkbox"/><br>OTHER <input type="checkbox"/> |  |

| ITEM # | Section D<br>Required Client Information<br>Valid Matrix Codes<br>MATRIX CODE<br>DRINKING WATER DW<br>WATER WT<br>WASTE WATER WW<br>PRODUCT P<br>SOLID/SOLID SL<br>WIFE CL<br>AIR WIP<br>OTHER AR<br>TISSUE OT<br>TS | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | DATE    | TIME | DATE | TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Unpreserved<br>H <sub>2</sub> SO <sub>4</sub><br>HNO <sub>3</sub><br>HCl<br>NaOH<br>Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub><br>Methanol<br>Other | Preservatives | Y/N | Requested Analysis Filtered (Y/N) |            |                       | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|--------|--|---------------------------------------|-----------------------------|---------|------|------|------|---------------------------|-----------------|--|---------------|-----|-----------------------------------|------------|-----------------------|-------------------------|----------------------------|
|        |  |                                       |                             |         |      |      |      |                           |                 |  |               |     | Metals + State Metals             | Cl, F, SO4 | Total/Carb/Bicarb Alk |                         |                            |
| 1      |  | GWA-39Z                               |                             | 1/31/22 | 1350 |      |      |                           | 4               | 3  | 1             |     | X                                 | X          | X                     | X                       | 6 41                       |
| 2      |  | <del>GWA-39RZ</del>                   |                             |         |      |      |      |                           |                 |  |               |     |                                   |            |                       |                         |                            |
| 3      |  | GWA-40                                |                             | 1/31/22 | 1425 |      |      |                           | 4               | 3  | 1             |     | X                                 | X          | X                     | X                       | 6 85                       |
| 4      |  | GWA-41                                |                             | 1/31/22 | 1255 |      |      |                           | 4               | 3  | 1             |     | X                                 | X          | X                     | X                       | 6 02                       |
| 5      |  | GWA-41R                               |                             | 1/31/22 | 1045 |      |      |                           | 4               | 3  | 1             |     | X                                 | X          | X                     | X                       | 6 63                       |
| 6      |  | GWA-42                                |                             | 1/31/22 | 1448 |      |      |                           | 4               | 3  | 1             |     | X                                 | X          | X                     | X                       | 7 17                       |
| 7      |  | GWA-43                                |                             | 1/31/22 | 1315 |      |      |                           | 4               | 3  | 1             |     | X                                 | X          | X                     | X                       | 5 71                       |
| 8      |  | GWA-43R                               |                             | 1/31/22 | 1205 |      |      |                           | 4               | 3  | 1             |     | X                                 | X          | X                     | X                       | 8 04                       |
| 9      |  | GWC-44                                |                             | 1/31/22 | 1530 |      |      |                           | 4               | 3  | 1             |     | X                                 | X          | X                     | X                       | 4 78                       |
| 10     |  | <del>GWC-45</del>                     |                             |         |      |      |      |                           |                 |  |               |     |                                   |            |                       |                         |                            |
| 11     |  | <del>GWC-45R</del>                    |                             |         |      |      |      |                           |                 |  |               |     |                                   |            |                       |                         |                            |
| 12     |  | GWC-46R                               |                             | 1/31/22 | 1530 |      |      |                           | 4               | 3  | 1             |     | X                                 | X          | X                     | X                       | 7 48                       |

State Metals include Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Hg, V, Zn, Co

RELINQUISHED BY / AFFILIATION: William Locker

DATE: 2/1/22 TIME: 0800

ACCEPTED BY / AFFILIATION: Ateya Garner

DATE: 2/1/22 TIME: 0800

SAMPLER NAME AND SIGNATURE: Ateya Garner

PRINT Name of SAMPLER: William Locker

SIGNATURE OF SAMPLER: Robert Mull, Meredith Duncan

DATE Signed (MM/DD/YY): 1/31/22

Temp in °C: \_\_\_\_\_

Received on Ice (Y/N): \_\_\_\_\_

Custody Sealed Cooler (Y/N): \_\_\_\_\_

Samples Intact (Y/N): \_\_\_\_\_

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev 07.15-Feb-2007



**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: **2** of **2**

|   |   |   |  |   |                           |
|---|---|---|--|---|---------------------------|
| <b>Section A</b><br>Required Client Information |   | <b>Section B</b><br>Required Project Information: |  | <b>Section C</b><br>Invoice Information:    |                           |
| Company: GA Power                               | Address: 1003 Weatherstone Parkway<br>Woodstock, Ga 30188 | Report To: Kristen Juritko                        | Copy To: Rhonda Quinn                    | Attention: Southern Co                      | Company Name: Southern Co |
| Purchase Order No: _____                        |   | Project Name: Plant Bowen Landfill                |  | Address: _____                              |                           |
| Phone: (678)5489415                             |   | Project Number: _____                             |  | Fax: _____                                  |                           |
| Requested Due Date/TAT: 10 Day                  |   | Cells 9 and 10                                    |  | Price Quote Reference Manager: Nicole Dolio |                           |
| Requested Due Date/TAT: 10 Day                  |   | Project Number: _____                             |  | Price Profile #: 2928                       |                           |
| <b>REGULATORY AGENCY</b>                        |   |   | <b>Requested Analysis Filtered (Y/N)</b> |   |                           |
| <input type="checkbox"/> NPDES                  | <input type="checkbox"/> GROUND WATER                     | <input type="checkbox"/> DRINKING WATER           |  |   |                           |
| <input type="checkbox"/> UST                    | <input type="checkbox"/> RCRA                             | <input type="checkbox"/> OTHER                    |  |   |                           |
| Site Location: _____                            |   | State: GA   |  |   |                           |

| ITEM # | Section D<br>Required Client Information | Valid Matrix Codes<br>MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives |      |             |                                |                  |     |      | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |   |          |       |                       |                        |
|--------|--|---|-----------------------------|-----------|------|---------------------------|-----------------|---------------|------|-------------|--------------------------------|------------------|-----|------|---------------|-----------------------------------|-------------------------|----------------------------|---|----------|-------|-----------------------|------------------------|
|        |  |   |                             | DATE      | TIME |                           |                 | DATE          | TIME | Unpreserved | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HCl | NaOH |               |                                   |                         |                            | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | Methanol | Other | Metals + State Metals | Cl, F, SO <sub>4</sub> |
| 1      | -GWC-47                                  |   |                             |           |      |                           | 4               |               |      |             |                                |                  |     |      |               | X                                 | X                       | X                          | X   |          |       |                       |                        |
| 2      | -GWC-48                                  |   |                             |           |      |                           | 4               |               |      |             |                                |                  |     |      |               | X                                 | X                       | X                          | X   |          |       |                       |                        |
| 3      | -GWC-49                                  |   |                             |           |      |                           | 4               |               |      |             |                                |                  |     |      |               | X                                 | X                       | X                          | X   |          |       |                       |                        |
| 4      | -GWC-49R                                 |   |                             |           |      |                           | 4               |               |      |             |                                |                  |     |      |               | X                                 | X                       | X                          | X   |          |       |                       |                        |
| 5      | Dup-1                                    |   |                             |           |      |                           | 4               |               |      |             |                                |                  |     |      |               | X                                 | X                       | X                          | X   |          |       |                       |                        |
| 6      | -Dup-2                                   |   |                             |           |      |                           | 4               |               |      |             |                                |                  |     |      |               | X                                 | X                       | X                          | X   |          |       |                       |                        |
| 7      | -FBI F B -1                              |   |                             |           |      |                           | 4               |               |      |             |                                |                  |     |      |               | X                                 | X                       | X                          | X   |          |       |                       |                        |
| 8      | -FBI                                     |   |                             |           |      |                           | 4               |               |      |             |                                |                  |     |      |               | X                                 | X                       | X                          | X   |          |       |                       |                        |
| 9      | -FBI                                     |   |                             |           |      |                           | 4               |               |      |             |                                |                  |     |      |               | X                                 | X                       | X                          | X   |          |       |                       |                        |
| 10     | -FBI                                     |   |                             |           |      |                           | 4               |               |      |             |                                |                  |     |      |               | X                                 | X                       | X                          | X   |          |       |                       |                        |
| 11     | -FBI                                     |   |                             |           |      |                           | 4               |               |      |             |                                |                  |     |      |               | X                                 | X                       | X                          | X   |          |       |                       |                        |
| 12     |  |   |                             |           |      |                           | 4               |               |      |             |                                |                  |     |      |               | X                                 | X                       | X                          | X   |          |       |                       |                        |

|   |  |                                      |  |             |  |             |  |                                  |  |             |  |             |  |                          |  |
|---|--|--------------------------------------|--|-------------|--|-------------|--|----------------------------------|--|-------------|--|-------------|--|--------------------------|--|
| <b>ADDITIONAL COMMENTS</b>  |  | <b>RELINQUISHED BY / AFFILIATION</b> |  | <b>DATE</b> |  | <b>TIME</b> |  | <b>ACCEPTED BY / AFFILIATION</b> |  | <b>DATE</b> |  | <b>TIME</b> |  | <b>SAMPLE CONDITIONS</b> |  |
| Note Metals include Sp, As, Ba, Be, Cd, Ca, Cr, Cu, Pb, Ni, Se, Zn, V, Zn, Co |  | William Laker                        |  | 2/1/22      |  | 0800        |  | Atoya Garner                     |  | 2/1/22      |  | 0800        |  |                          |  |
|   |  | Atoya Garner                         |  | 2/1/22      |  | 11:22       |  | Ryan Williams / Pace             |  | 2/1/22      |  | 1122        |  |                          |  |
|   |  | Ryan Williams / Pace                 |  | 2/1/22      |  | 1700        |  | Ryan Williams / Pace             |  | 2/1/22      |  | 1700        |  |                          |  |

|   |  |                                |  |                              |  |
|---|--|--------------------------------|--|------------------------------|--|
| <b>SAMPLER NAME AND SIGNATURE</b>   |  | <b>DATE SIGNED (MM/DD/YY):</b> |  | <b>Temp in °C</b>            |  |
| PRINT Name of SAMPLER: Will Laker, Kevin Stephenson, Robert Mull, Meredith Duncan |  | 1/31/22                        |  |                              |  |
| SIGNATURE of SAMPLER: <i>[Signature]</i>  |  |                                |  | Received on Ice (Y/N):       |  |
|   |  |                                |  | Custody Sealed Cooler (Y/N): |  |
|   |  |                                |  | Samples intact (Y/N):        |  |

March 09, 2022

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

Dear Joju Abraham:

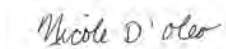
Enclosed are the analytical results for sample(s) received by the laboratory between February 04, 2022 and February 18, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Minneapolis

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

Sincerely,



Nicole D'Oleo  
nicole.d'oleo@pacelabs.com  
(704)875-9092  
Project Manager

Enclosures

cc: Michelle Barker, WOOD E&I  
Anna Bottum, ERM  
Andrea Brazell, ERM  
Kristen Jurinko  
Ms. Lauren Petty, Southern Company  
Rhonda Quinn, WOOD E&I  
Lacy Smith, ERM  
Caitlin Tillema, ERM  
Christine Weaver, ERM

Greg Wrenn, WOOD E&I



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

### **Pace Analytical Services, LLC - Minneapolis MN**

1700 Elm Street SE, Minneapolis, MN 55414  
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab  
A2LA Certification #: 2926.01\*  
Alabama Certification #: 40770  
Alaska Contaminated Sites Certification #: 17-009\*  
Alaska DW Certification #: MN00064  
Arizona Certification #: AZ0014\*  
Arkansas DW Certification #: MN00064  
Arkansas WW Certification #: 88-0680  
California Certification #: 2929  
Colorado Certification #: MN00064  
Connecticut Certification #: PH-0256  
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137  
Florida Certification #: E87605\*  
Georgia Certification #: 959  
Hawaii Certification #: MN00064  
Idaho Certification #: MN00064  
Illinois Certification #: 200011  
Indiana Certification #: C-MN-01  
Iowa Certification #: 368  
Kansas Certification #: E-10167  
Kentucky DW Certification #: 90062  
Kentucky WW Certification #: 90062  
Louisiana DEQ Certification #: AI-03086\*  
Louisiana DW Certification #: MN00064  
Maine Certification #: MN00064\*  
Maryland Certification #: 322  
Michigan Certification #: 9909  
Minnesota Certification #: 027-053-137\*  
Minnesota Dept of Ag Approval: via MN 027-053-137  
Minnesota Petrofund Registration #: 1240\*  
Mississippi Certification #: MN00064

Missouri Certification #: 10100  
Montana Certification #: CERT0092  
Nebraska Certification #: NE-OS-18-06  
Nevada Certification #: MN00064  
New Hampshire Certification #: 2081\*  
New Jersey Certification #: MN002  
New York Certification #: 11647\*  
North Carolina DW Certification #: 27700  
North Carolina WW Certification #: 530  
North Dakota Certification #: R-036  
Ohio DW Certification #: 41244  
Ohio VAP Certification (1700) #: CL101  
Ohio VAP Certification (1800) #: CL110\*  
Oklahoma Certification #: 9507\*  
Oregon Primary Certification #: MN300001  
Oregon Secondary Certification #: MN200001\*  
Pennsylvania Certification #: 68-00563\*  
Puerto Rico Certification #: MN00064  
South Carolina Certification #:74003001  
Tennessee Certification #: TN02818  
Texas Certification #: T104704192\*  
Utah Certification #: MN00064\*  
Vermont Certification #: VT-027053137  
Virginia Certification #: 460163\*  
Washington Certification #: C486\*  
West Virginia DEP Certification #: 382  
West Virginia DW Certification #: 9952 C  
Wisconsin Certification #: 999407970  
Wyoming UST Certification #: via A2LA 2926.01  
USDA Permit #: P330-19-00208  
\*Please Note: Applicable air certifications are denoted with an asterisk (\*).

### **Pace Analytical Services Charlotte**

South Carolina Laboratory ID: 99006  
9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001  
South Carolina Drinking Water Cert. #: 99006003  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Louisiana DoH Drinking Water #: LA029  
Virginia/VELAP Certification #: 460221

### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712  
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812  
North Carolina Certification #: 381

## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

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**Pace Analytical Services Peachtree Corners**

South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Lab ID      | Sample ID | Matrix | Date Collected | Date Received  |
|-------------|-----------|--------|----------------|----------------|
| 92586436001 | GWA-1     | Water  | 02/01/22 14:50 | 02/04/22 11:45 |
| 92586436002 | GWA-2     | Water  | 02/01/22 14:44 | 02/04/22 11:45 |
| 92586436003 | GWA-2R    | Water  | 02/01/22 15:45 | 02/04/22 11:45 |
| 92586436004 | GWA-50    | Water  | 02/01/22 15:40 | 02/04/22 11:45 |
| 92586436005 | DUP-1     | Water  | 02/01/22 00:00 | 02/04/22 11:45 |
| 92586436006 | FB-1      | Water  | 02/01/22 16:00 | 02/04/22 11:45 |
| 92586436007 | GWA-3A    | Water  | 02/02/22 12:08 | 02/04/22 11:45 |
| 92586436008 | GWC-5     | Water  | 02/02/22 11:34 | 02/04/22 11:45 |
| 92586436009 | GWC-6     | Water  | 02/02/22 15:22 | 02/04/22 11:45 |
| 92586436010 | GWC-6RZ   | Water  | 02/02/22 14:00 | 02/04/22 11:45 |
| 92586436011 | GWC-7Z    | Water  | 02/02/22 12:15 | 02/04/22 11:45 |
| 92586436012 | GWC-8Z    | Water  | 02/02/22 14:24 | 02/04/22 11:45 |
| 92586436013 | GWC-8RR   | Water  | 02/02/22 16:16 | 02/04/22 11:45 |
| 92586436014 | GWC-9     | Water  | 02/02/22 15:02 | 02/04/22 11:45 |
| 92586436015 | GWC-12    | Water  | 02/02/22 15:55 | 02/04/22 11:45 |
| 92586436016 | GWA-50R   | Water  | 02/02/22 10:12 | 02/04/22 11:45 |
| 92586436017 | DUP-2     | Water  | 02/02/22 00:00 | 02/04/22 11:45 |
| 92586436018 | FB-2      | Water  | 02/02/22 16:14 | 02/04/22 11:45 |
| 92586436019 | GWA-4RZ   | Water  | 02/03/22 10:55 | 02/04/22 11:45 |
| 92586436020 | FB-3      | Water  | 02/03/22 12:00 | 02/04/22 11:45 |
| 92586436021 | GWC-10    | Water  | 02/04/22 11:15 | 02/08/22 08:10 |
| 92586436022 | GWC-10R   | Water  | 02/04/22 12:40 | 02/08/22 08:10 |
| 92586436023 | GWC-11    | Water  | 02/04/22 12:33 | 02/08/22 08:10 |
| 92586436024 | GWC-11R   | Water  | 02/04/22 10:45 | 02/08/22 08:10 |
| 92586436025 | GWC-13RZ  | Water  | 02/04/22 09:44 | 02/08/22 08:10 |
| 92586436026 | GWC-14Z   | Water  | 02/04/22 11:30 | 02/08/22 08:10 |
| 92586436027 | GWC-15R   | Water  | 02/04/22 13:14 | 02/08/22 08:10 |
| 92586436028 | DUP-3     | Water  | 02/04/22 00:00 | 02/08/22 08:10 |
| 92586436029 | FB-4      | Water  | 02/04/22 13:15 | 02/08/22 08:10 |
| 92586436030 | GWC-15Z   | Water  | 02/07/22 10:13 | 02/08/22 08:10 |
| 92586436031 | FB-5      | Water  | 02/07/22 11:30 | 02/08/22 08:10 |
| 92586436032 | GWC-13    | Water  | 02/17/22 13:06 | 02/18/22 09:52 |
| 92586436033 | FB-6      | Water  | 02/17/22 13:40 | 02/18/22 09:52 |

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|------------------------|----------|-------------------|------------|
| 92586436001 | GWA-1     | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
| 92586436002 | GWA-2     | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92586436003 | GWA-2R    | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
| 92586436004 | GWA-50    | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
| 92586436005 | DUP-1     | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
| 92586436006 | FB-1      | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
| 92586436007 | GWA-3A    | EPA 6010D              | DRB      | 5                 | PASI-GA    |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|------------------------|----------|-------------------|------------|
| 92586436008 | GWC-5     | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
| 92586436009 | GWC-6     | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
| 92586436010 | GWC-6RZ   | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
| 92586436011 | GWC-7Z    | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
| 92586436012 | GWC-8Z    | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
| 92586436013 | GWC-8RR   | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|------------------------|----------|-------------------|------------|
| 92586436014 | GWC-9     | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92586436015 | GWC-12    | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
| 92586436016 | GWA-50R   | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
| 92586436017 | DUP-2     | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92586436018 | FB-2      | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
| 92586436019 | GWA-4RZ   | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           |                        |          |                   |            |

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### SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|------------------------|----------|-------------------|------------|
| 92586436020 | FB-3      | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92586436021 | GWC-10    | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
| 92586436022 | GWC-10R   | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
| 92586436023 | GWC-11    | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
| 92586436024 | GWC-11R   | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
| 92586436025 | GWC-13RZ  | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|------------------------|----------|-------------------|------------|
| 92586436026 | GWC-14Z   | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92586436027 | GWC-15R   | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92586436028 | DUP-3     | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92586436029 | FB-4      | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92586436030 | GWC-15Z   | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
| 92586436031 | FB-5      | SM 2320B               | AR3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | DRB      | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AR3      | 3                 | PASI-M     |

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### SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|------------------------|----------|-------------------|------------|
| 92586436032 | GWC-13    | EPA 300.0 Rev 2.1 1993 | JCM      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AB3      | 3                 | PASI-M     |
| 92586436033 | FB-6      | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
|             |           | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2540C-2015          | ALW      | 1                 | PASI-GA    |
|             |           | SM 2320B               | AB3      | 3                 | PASI-M     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |

PASI-A = Pace Analytical Services - Asheville

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### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Lab Sample ID          | Client Sample ID               | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |          |            |              |                |            |
| <b>92586436001</b>     | <b>GWA-1</b>                   |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/07/22 10:49 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 7.52     | Std. Units |              | 02/07/22 10:49 |            |
| EPA 6010D              | Potassium                      | 1.3      | mg/L       | 0.20         | 02/18/22 15:52 |            |
| EPA 6010D              | Sodium                         | 6.5      | mg/L       | 1.0          | 02/18/22 15:52 |            |
| EPA 6010D              | Calcium                        | 34.1     | mg/L       | 1.0          | 02/18/22 15:52 |            |
| EPA 6010D              | Magnesium                      | 16.4     | mg/L       | 0.050        | 02/18/22 15:52 |            |
| EPA 6020B              | Antimony                       | 0.0028J  | mg/L       | 0.0030       | 02/18/22 14:39 |            |
| EPA 6020B              | Barium                         | 0.015    | mg/L       | 0.0050       | 02/18/22 14:39 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 143      | mg/L       | 10.0         | 02/07/22 17:20 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 161      | mg/L       | 5.0          | 02/10/22 16:44 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 161      | mg/L       | 5.0          | 02/10/22 16:44 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.2      | mg/L       | 1.0          | 02/12/22 19:54 | M1         |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 0.93J    | mg/L       | 1.0          | 02/12/22 19:54 | M1         |
| <b>92586436002</b>     | <b>GWA-2</b>                   |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/07/22 10:50 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 6.30     | Std. Units |              | 02/07/22 10:50 |            |
| EPA 6010D              | Potassium                      | 0.88     | mg/L       | 0.20         | 02/18/22 15:56 |            |
| EPA 6010D              | Sodium                         | 1.9      | mg/L       | 1.0          | 02/18/22 15:56 |            |
| EPA 6010D              | Calcium                        | 48.0     | mg/L       | 1.0          | 02/18/22 15:56 | M1         |
| EPA 6010D              | Magnesium                      | 14.0     | mg/L       | 0.050        | 02/18/22 15:56 |            |
| EPA 6020B              | Arsenic                        | 0.0019J  | mg/L       | 0.0050       | 02/18/22 14:45 |            |
| EPA 6020B              | Barium                         | 0.026    | mg/L       | 0.0050       | 02/18/22 14:45 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 202      | mg/L       | 10.0         | 02/07/22 17:21 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 80.9     | mg/L       | 5.0          | 02/10/22 17:00 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 80.9     | mg/L       | 5.0          | 02/10/22 17:00 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.4      | mg/L       | 1.0          | 02/12/22 21:04 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 86.1     | mg/L       | 1.0          | 02/12/22 21:04 |            |
| <b>92586436003</b>     | <b>GWA-2R</b>                  |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/07/22 10:50 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 6.62     | Std. Units |              | 02/07/22 10:50 |            |
| EPA 6010D              | Potassium                      | 0.67     | mg/L       | 0.20         | 02/18/22 16:16 |            |
| EPA 6010D              | Sodium                         | 1.1      | mg/L       | 1.0          | 02/18/22 16:16 |            |
| EPA 6010D              | Calcium                        | 34.1     | mg/L       | 1.0          | 02/18/22 16:16 |            |
| EPA 6010D              | Magnesium                      | 11.1     | mg/L       | 0.050        | 02/18/22 16:16 |            |
| EPA 6020B              | Antimony                       | 0.0029J  | mg/L       | 0.0030       | 02/18/22 14:51 |            |
| EPA 6020B              | Arsenic                        | 0.0053   | mg/L       | 0.0050       | 02/18/22 14:51 |            |
| EPA 6020B              | Barium                         | 0.024    | mg/L       | 0.0050       | 02/18/22 14:51 |            |
| EPA 6020B              | Cobalt                         | 0.00093J | mg/L       | 0.0050       | 02/18/22 14:51 |            |
| EPA 6020B              | Copper                         | 0.00096J | mg/L       | 0.0050       | 02/18/22 14:51 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 114      | mg/L       | 10.0         | 02/07/22 17:21 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 122      | mg/L       | 5.0          | 02/10/22 17:06 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 122      | mg/L       | 5.0          | 02/10/22 17:06 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 0.77J    | mg/L       | 1.0          | 02/12/22 21:18 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.5      | mg/L       | 1.0          | 02/12/22 21:18 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Lab Sample ID          | Client Sample ID               | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |          |            |              |                |            |
| <b>92586436004</b>     | <b>GWA-50</b>                  |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/07/22 10:50 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 5.61     | Std. Units |              | 02/07/22 10:50 |            |
| EPA 6010D              | Potassium                      | 0.25     | mg/L       | 0.20         | 02/18/22 16:20 |            |
| EPA 6010D              | Sodium                         | 1.7      | mg/L       | 1.0          | 02/18/22 16:20 |            |
| EPA 6010D              | Calcium                        | 1.5      | mg/L       | 1.0          | 02/18/22 16:20 |            |
| EPA 6010D              | Magnesium                      | 0.31     | mg/L       | 0.050        | 02/18/22 16:20 |            |
| EPA 6020B              | Antimony                       | 0.0015J  | mg/L       | 0.0030       | 02/18/22 15:15 |            |
| EPA 6020B              | Barium                         | 0.0065   | mg/L       | 0.0050       | 02/18/22 15:15 |            |
| EPA 6020B              | Copper                         | 0.0017J  | mg/L       | 0.0050       | 02/18/22 15:15 |            |
| EPA 6020B              | Nickel                         | 0.00080J | mg/L       | 0.0050       | 02/18/22 15:15 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 21.0     | mg/L       | 10.0         | 02/07/22 17:21 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 4.7J     | mg/L       | 5.0          | 02/10/22 19:19 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 4.7J     | mg/L       | 5.0          | 02/10/22 19:19 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 0.91J    | mg/L       | 1.0          | 02/12/22 21:32 |            |
| <b>92586436005</b>     | <b>DUP-1</b>                   |          |            |              |                |            |
| EPA 6010D              | Potassium                      | 0.71     | mg/L       | 0.20         | 02/18/22 16:25 |            |
| EPA 6010D              | Sodium                         | 1.1      | mg/L       | 1.0          | 02/18/22 16:25 |            |
| EPA 6010D              | Calcium                        | 33.8     | mg/L       | 1.0          | 02/18/22 16:25 |            |
| EPA 6010D              | Magnesium                      | 11.0     | mg/L       | 0.050        | 02/18/22 16:25 |            |
| EPA 6020B              | Antimony                       | 0.0033   | mg/L       | 0.0030       | 02/18/22 15:21 |            |
| EPA 6020B              | Arsenic                        | 0.0037J  | mg/L       | 0.0050       | 02/18/22 15:21 |            |
| EPA 6020B              | Barium                         | 0.024    | mg/L       | 0.0050       | 02/18/22 15:21 |            |
| EPA 6020B              | Cobalt                         | 0.00090J | mg/L       | 0.0050       | 02/18/22 15:21 |            |
| EPA 6020B              | Copper                         | 0.00078J | mg/L       | 0.0050       | 02/18/22 15:21 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 118      | mg/L       | 10.0         | 02/07/22 17:21 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 120      | mg/L       | 5.0          | 02/10/22 17:15 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 120      | mg/L       | 5.0          | 02/10/22 17:15 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 0.77J    | mg/L       | 1.0          | 02/12/22 21:46 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.5      | mg/L       | 1.0          | 02/12/22 21:46 |            |
| <b>92586436007</b>     | <b>GWA-3A</b>                  |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/07/22 10:50 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 7.94     | Std. Units |              | 02/07/22 10:50 |            |
| EPA 6010D              | Potassium                      | 1.2      | mg/L       | 0.20         | 02/18/22 16:44 |            |
| EPA 6010D              | Sodium                         | 3.5      | mg/L       | 1.0          | 02/18/22 16:44 |            |
| EPA 6010D              | Calcium                        | 22.6     | mg/L       | 1.0          | 02/18/22 16:44 |            |
| EPA 6010D              | Magnesium                      | 11.3     | mg/L       | 0.050        | 02/18/22 16:44 |            |
| EPA 6020B              | Barium                         | 0.0064   | mg/L       | 0.0050       | 02/18/22 15:50 |            |
| EPA 6020B              | Chromium                       | 0.0069   | mg/L       | 0.0050       | 02/18/22 15:50 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 104      | mg/L       | 10.0         | 02/08/22 11:13 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 97.5     | mg/L       | 5.0          | 02/10/22 20:33 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 97.5     | mg/L       | 5.0          | 02/10/22 20:33 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.9      | mg/L       | 1.0          | 02/12/22 22:14 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 3.4      | mg/L       | 1.0          | 02/12/22 22:14 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Lab Sample ID          | Client Sample ID               | Result    | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|-----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |           |            |              |                |            |
| <b>92586436008</b>     | <b>GWC-5</b>                   |           |            |              |                |            |
|                        | Performed by                   | CUSTOME   |            |              | 02/07/22 10:50 |            |
|                        |                                | R         |            |              |                |            |
|                        | pH                             | 5.90      | Std. Units |              | 02/07/22 10:50 |            |
| EPA 6010D              | Zinc                           | 0.034     | mg/L       | 0.020        | 02/18/22 16:49 |            |
| EPA 6010D              | Potassium                      | 1.8       | mg/L       | 0.20         | 02/18/22 16:49 |            |
| EPA 6010D              | Sodium                         | 1.7       | mg/L       | 1.0          | 02/18/22 16:49 |            |
| EPA 6010D              | Calcium                        | 3.7       | mg/L       | 1.0          | 02/18/22 16:49 |            |
| EPA 6010D              | Magnesium                      | 0.27      | mg/L       | 0.050        | 02/18/22 16:49 |            |
| EPA 6020B              | Barium                         | 0.012     | mg/L       | 0.0050       | 02/18/22 15:56 |            |
| EPA 6020B              | Beryllium                      | 0.00075   | mg/L       | 0.00050      | 02/18/22 15:56 |            |
| EPA 6020B              | Copper                         | 0.024     | mg/L       | 0.0050       | 02/18/22 15:56 |            |
| EPA 6020B              | Nickel                         | 0.0088    | mg/L       | 0.0050       | 02/18/22 15:56 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 32.0      | mg/L       | 10.0         | 02/08/22 11:13 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 11.9      | mg/L       | 5.0          | 02/10/22 21:53 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 11.9      | mg/L       | 5.0          | 02/10/22 21:53 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 0.66J     | mg/L       | 1.0          | 02/12/22 22:27 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.0       | mg/L       | 1.0          | 02/12/22 22:27 |            |
| <b>92586436009</b>     | <b>GWC-6</b>                   |           |            |              |                |            |
|                        | Performed by                   | CUSTOME   |            |              | 02/07/22 10:51 |            |
|                        |                                | R         |            |              |                |            |
|                        | pH                             | 7.40      | Std. Units |              | 02/07/22 10:51 |            |
| EPA 6010D              | Potassium                      | 1.1       | mg/L       | 0.20         | 02/18/22 16:54 |            |
| EPA 6010D              | Sodium                         | 1.0       | mg/L       | 1.0          | 02/18/22 16:54 |            |
| EPA 6010D              | Calcium                        | 15.5      | mg/L       | 1.0          | 02/18/22 16:54 |            |
| EPA 6010D              | Magnesium                      | 7.6       | mg/L       | 0.050        | 02/18/22 16:54 |            |
| EPA 6020B              | Barium                         | 0.0064    | mg/L       | 0.0050       | 02/18/22 16:02 |            |
| EPA 6020B              | Chromium                       | 0.0026J   | mg/L       | 0.0050       | 02/18/22 16:02 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 73.0      | mg/L       | 10.0         | 02/08/22 11:13 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 63.7      | mg/L       | 5.0          | 02/10/22 20:40 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 63.7      | mg/L       | 5.0          | 02/10/22 20:40 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.1       | mg/L       | 1.0          | 02/12/22 22:41 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.7       | mg/L       | 1.0          | 02/12/22 22:41 |            |
| <b>92586436010</b>     | <b>GWC-6RZ</b>                 |           |            |              |                |            |
|                        | Performed by                   | CUSTOME   |            |              | 02/07/22 10:51 |            |
|                        |                                | R         |            |              |                |            |
|                        | pH                             | 6.80      | Std. Units |              | 02/07/22 10:51 |            |
| EPA 6010D              | Potassium                      | 0.79      | mg/L       | 0.20         | 02/18/22 16:58 |            |
| EPA 6010D              | Sodium                         | 1.6       | mg/L       | 1.0          | 02/18/22 16:58 |            |
| EPA 6010D              | Calcium                        | 10.5      | mg/L       | 1.0          | 02/18/22 16:58 |            |
| EPA 6010D              | Magnesium                      | 5.4       | mg/L       | 0.050        | 02/18/22 16:58 |            |
| EPA 6020B              | Arsenic                        | 0.0012J   | mg/L       | 0.0050       | 02/18/22 16:08 |            |
| EPA 6020B              | Barium                         | 0.0066    | mg/L       | 0.0050       | 02/18/22 16:08 |            |
| EPA 6020B              | Beryllium                      | 0.000070J | mg/L       | 0.00050      | 02/18/22 16:08 |            |
| EPA 6020B              | Chromium                       | 0.0024J   | mg/L       | 0.0050       | 02/18/22 16:08 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 51.0      | mg/L       | 10.0         | 02/08/22 11:13 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 43.6      | mg/L       | 5.0          | 02/10/22 20:44 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 43.6      | mg/L       | 5.0          | 02/10/22 20:44 |            |

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Lab Sample ID          | Client Sample ID               | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |          |            |              |                |            |
| <b>92586436010</b>     | <b>GWC-6RZ</b>                 |          |            |              |                |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.3      | mg/L       | 1.0          | 02/12/22 22:55 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.5      | mg/L       | 1.0          | 02/12/22 22:55 |            |
| <b>92586436011</b>     | <b>GWC-7Z</b>                  |          |            |              |                |            |
|                        | Performed by                   | CUSTOMER |            |              | 02/07/22 10:51 |            |
|                        | pH                             | 7.54     | Std. Units |              | 02/07/22 10:51 |            |
| EPA 6010D              | Potassium                      | 0.97     | mg/L       | 0.20         | 02/18/22 17:03 |            |
| EPA 6010D              | Sodium                         | 2.7      | mg/L       | 1.0          | 02/18/22 17:03 |            |
| EPA 6010D              | Calcium                        | 26.9     | mg/L       | 1.0          | 02/18/22 17:03 |            |
| EPA 6010D              | Magnesium                      | 13.4     | mg/L       | 0.050        | 02/18/22 17:03 |            |
| EPA 6020B              | Antimony                       | 0.00093J | mg/L       | 0.0030       | 02/18/22 16:14 |            |
| EPA 6020B              | Arsenic                        | 0.0020J  | mg/L       | 0.0050       | 02/18/22 16:14 |            |
| EPA 6020B              | Barium                         | 0.015    | mg/L       | 0.0050       | 02/18/22 16:14 |            |
| EPA 6020B              | Cobalt                         | 0.00042J | mg/L       | 0.0050       | 02/18/22 16:14 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 115      | mg/L       | 10.0         | 02/08/22 11:14 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 123      | mg/L       | 5.0          | 02/10/22 20:48 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 123      | mg/L       | 5.0          | 02/10/22 20:48 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 0.76J    | mg/L       | 1.0          | 02/13/22 00:05 | M1         |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.3      | mg/L       | 1.0          | 02/13/22 00:05 | M1         |
| <b>92586436012</b>     | <b>GWC-8Z</b>                  |          |            |              |                |            |
|                        | Performed by                   | CUSTOMER |            |              | 02/07/22 10:51 |            |
|                        | pH                             | 8.92     | Std. Units |              | 02/07/22 10:51 |            |
| EPA 6010D              | Potassium                      | 1.8      | mg/L       | 0.20         | 02/18/22 17:08 |            |
| EPA 6010D              | Sodium                         | 2.1      | mg/L       | 1.0          | 02/18/22 17:08 |            |
| EPA 6010D              | Calcium                        | 20.8     | mg/L       | 1.0          | 02/18/22 17:08 |            |
| EPA 6010D              | Magnesium                      | 7.0      | mg/L       | 0.050        | 02/18/22 17:08 |            |
| EPA 6020B              | Arsenic                        | 0.0011J  | mg/L       | 0.0050       | 02/18/22 16:20 |            |
| EPA 6020B              | Barium                         | 0.024    | mg/L       | 0.0050       | 02/18/22 16:20 |            |
| EPA 6020B              | Beryllium                      | 0.00064J | mg/L       | 0.00050      | 02/18/22 16:20 |            |
| EPA 6020B              | Chromium                       | 0.0021J  | mg/L       | 0.0050       | 02/18/22 16:20 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 85.0     | mg/L       | 10.0         | 02/08/22 11:14 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 76.7     | mg/L       | 5.0          | 02/10/22 20:52 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 76.7     | mg/L       | 5.0          | 02/10/22 20:52 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.4      | mg/L       | 1.0          | 02/13/22 00:47 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 0.72J    | mg/L       | 1.0          | 02/13/22 00:47 |            |
| <b>92586436013</b>     | <b>GWC-8RR</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOMER |            |              | 02/07/22 10:51 |            |
|                        | pH                             | 8.13     | Std. Units |              | 02/07/22 10:51 |            |
| EPA 6010D              | Potassium                      | 1.3      | mg/L       | 0.20         | 02/18/22 17:13 |            |
| EPA 6010D              | Sodium                         | 0.81J    | mg/L       | 1.0          | 02/18/22 17:13 |            |
| EPA 6010D              | Calcium                        | 23.9     | mg/L       | 1.0          | 02/18/22 17:13 |            |
| EPA 6010D              | Magnesium                      | 11.0     | mg/L       | 0.050        | 02/18/22 17:13 |            |
| EPA 6020B              | Antimony                       | 0.0015J  | mg/L       | 0.0030       | 02/18/22 16:26 |            |
| EPA 6020B              | Arsenic                        | 0.0013J  | mg/L       | 0.0050       | 02/18/22 16:26 |            |

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Lab Sample ID          | Client Sample ID               | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |          |            |              |                |            |
| <b>92586436013</b>     | <b>GWC-8RR</b>                 |          |            |              |                |            |
| EPA 6020B              | Barium                         | 0.013    | mg/L       | 0.0050       | 02/18/22 16:26 |            |
| EPA 6020B              | Chromium                       | 0.0015J  | mg/L       | 0.0050       | 02/18/22 16:26 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 102      | mg/L       | 10.0         | 02/08/22 11:14 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 102      | mg/L       | 5.0          | 02/10/22 21:12 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 102      | mg/L       | 5.0          | 02/10/22 21:12 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 0.77J    | mg/L       | 1.0          | 02/13/22 01:01 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 0.72J    | mg/L       | 1.0          | 02/13/22 01:01 |            |
| <b>92586436014</b>     | <b>GWC-9</b>                   |          |            |              |                |            |
|                        | Performed by                   | CUSTOMER |            |              | 02/07/22 10:51 |            |
|                        | pH                             | 4.81     | Std. Units |              | 02/07/22 10:51 |            |
| EPA 6010D              | Potassium                      | 0.92     | mg/L       | 0.20         | 02/18/22 17:17 |            |
| EPA 6010D              | Sodium                         | 1.2      | mg/L       | 1.0          | 02/18/22 17:17 |            |
| EPA 6010D              | Calcium                        | 2.2      | mg/L       | 1.0          | 02/18/22 17:17 |            |
| EPA 6010D              | Magnesium                      | 1.2      | mg/L       | 0.050        | 02/18/22 17:17 |            |
| EPA 6020B              | Arsenic                        | 0.0013J  | mg/L       | 0.0050       | 02/18/22 16:32 |            |
| EPA 6020B              | Barium                         | 0.044    | mg/L       | 0.0050       | 02/18/22 16:32 |            |
| EPA 6020B              | Beryllium                      | 0.00018J | mg/L       | 0.00050      | 02/18/22 16:32 |            |
| EPA 6020B              | Cobalt                         | 0.00043J | mg/L       | 0.0050       | 02/18/22 16:32 |            |
| EPA 6020B              | Nickel                         | 0.0011J  | mg/L       | 0.0050       | 02/18/22 16:32 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 21.0     | mg/L       | 10.0         | 02/08/22 11:14 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 2.5J     | mg/L       | 5.0          | 02/10/22 21:57 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 2.5J     | mg/L       | 5.0          | 02/10/22 21:57 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.1      | mg/L       | 1.0          | 02/13/22 01:15 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 2.5      | mg/L       | 1.0          | 02/13/22 01:15 |            |
| <b>92586436015</b>     | <b>GWC-12</b>                  |          |            |              |                |            |
|                        | Performed by                   | CUSTOMER |            |              | 02/07/22 10:52 |            |
|                        | pH                             | 6.35     | Std. Units |              | 02/07/22 10:52 |            |
| EPA 6010D              | Zinc                           | 0.019J   | mg/L       | 0.020        | 02/18/22 17:22 |            |
| EPA 6010D              | Potassium                      | 1.1      | mg/L       | 0.20         | 02/18/22 17:22 |            |
| EPA 6010D              | Sodium                         | 2.1      | mg/L       | 1.0          | 02/18/22 17:22 |            |
| EPA 6010D              | Calcium                        | 8.4      | mg/L       | 1.0          | 02/18/22 17:22 |            |
| EPA 6010D              | Magnesium                      | 4.4      | mg/L       | 0.050        | 02/18/22 17:22 |            |
| EPA 6020B              | Arsenic                        | 0.0027J  | mg/L       | 0.0050       | 02/18/22 16:38 |            |
| EPA 6020B              | Barium                         | 0.023    | mg/L       | 0.0050       | 02/18/22 16:38 |            |
| EPA 6020B              | Cadmium                        | 0.0012   | mg/L       | 0.00050      | 02/18/22 16:38 |            |
| EPA 6020B              | Cobalt                         | 0.0034J  | mg/L       | 0.0050       | 02/18/22 16:38 |            |
| EPA 6020B              | Nickel                         | 0.0025J  | mg/L       | 0.0050       | 02/18/22 16:38 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 54.0     | mg/L       | 10.0         | 02/08/22 11:14 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 55.9     | mg/L       | 5.0          | 02/10/22 21:19 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 55.9     | mg/L       | 5.0          | 02/10/22 21:19 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 0.79J    | mg/L       | 1.0          | 02/13/22 01:28 |            |
| <b>92586436016</b>     | <b>GWA-50R</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOMER |            |              | 02/07/22 10:52 |            |

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Lab Sample ID          | Client Sample ID               | Result    | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|-----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |           |            |              |                |            |
| <b>92586436016</b>     | <b>GWA-50R</b>                 |           |            |              |                |            |
|                        | pH                             | 5.17      | Std. Units |              | 02/07/22 10:52 |            |
| EPA 6010D              | Potassium                      | 0.20      | mg/L       | 0.20         | 02/18/22 17:36 |            |
| EPA 6010D              | Sodium                         | 0.94J     | mg/L       | 1.0          | 02/18/22 17:36 |            |
| EPA 6010D              | Calcium                        | 0.93J     | mg/L       | 1.0          | 02/18/22 17:36 |            |
| EPA 6010D              | Magnesium                      | 0.34      | mg/L       | 0.050        | 02/18/22 17:36 |            |
| EPA 6020B              | Barium                         | 0.0090    | mg/L       | 0.0050       | 02/18/22 17:13 |            |
| EPA 6020B              | Beryllium                      | 0.000055J | mg/L       | 0.00050      | 02/18/22 17:13 |            |
| EPA 6020B              | Copper                         | 0.0033J   | mg/L       | 0.0050       | 02/18/22 17:13 |            |
| EPA 6020B              | Nickel                         | 0.00089J  | mg/L       | 0.0050       | 02/18/22 17:13 |            |
| EPA 6020B              | Silver                         | 0.0012J   | mg/L       | 0.0050       | 02/18/22 17:13 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 15.0      | mg/L       | 10.0         | 02/08/22 11:15 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 2.9J      | mg/L       | 5.0          | 02/10/22 22:00 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 2.9J      | mg/L       | 5.0          | 02/10/22 22:00 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 0.70J     | mg/L       | 1.0          | 02/13/22 01:42 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 0.53J     | mg/L       | 1.0          | 02/13/22 01:42 |            |
| <b>92586436017</b>     | <b>DUP-2</b>                   |           |            |              |                |            |
| EPA 6010D              | Potassium                      | 0.97      | mg/L       | 0.20         | 02/18/22 17:41 |            |
| EPA 6010D              | Sodium                         | 1.2       | mg/L       | 1.0          | 02/18/22 17:41 |            |
| EPA 6010D              | Calcium                        | 2.3       | mg/L       | 1.0          | 02/18/22 17:41 |            |
| EPA 6010D              | Magnesium                      | 1.2       | mg/L       | 0.050        | 02/18/22 17:41 |            |
| EPA 6020B              | Barium                         | 0.045     | mg/L       | 0.0050       | 02/18/22 17:19 |            |
| EPA 6020B              | Beryllium                      | 0.00018J  | mg/L       | 0.00050      | 02/18/22 17:19 |            |
| EPA 6020B              | Cobalt                         | 0.00042J  | mg/L       | 0.0050       | 02/18/22 17:19 |            |
| EPA 6020B              | Nickel                         | 0.0011J   | mg/L       | 0.0050       | 02/18/22 17:19 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 27.0      | mg/L       | 10.0         | 02/08/22 11:15 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 2.6J      | mg/L       | 5.0          | 02/10/22 22:03 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 2.6J      | mg/L       | 5.0          | 02/10/22 22:03 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.1       | mg/L       | 1.0          | 02/13/22 01:56 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 2.5       | mg/L       | 1.0          | 02/13/22 01:56 |            |
| <b>92586436019</b>     | <b>GWA-4RZ</b>                 |           |            |              |                |            |
|                        | Performed by                   | CUSTOMER  |            |              | 02/07/22 10:52 |            |
|                        | pH                             | 7.20      | Std. Units |              | 02/07/22 10:52 |            |
| EPA 6010D              | Potassium                      | 0.88      | mg/L       | 0.20         | 02/18/22 18:15 |            |
| EPA 6010D              | Sodium                         | 3.8       | mg/L       | 1.0          | 02/18/22 18:15 |            |
| EPA 6010D              | Calcium                        | 57.7      | mg/L       | 1.0          | 02/18/22 18:15 | M1         |
| EPA 6010D              | Magnesium                      | 24.6      | mg/L       | 0.050        | 02/18/22 18:15 | M1         |
| EPA 6020B              | Arsenic                        | 0.0034J   | mg/L       | 0.0050       | 02/18/22 17:31 |            |
| EPA 6020B              | Barium                         | 0.063     | mg/L       | 0.0050       | 02/18/22 17:31 |            |
| EPA 6020B              | Cobalt                         | 0.0059    | mg/L       | 0.0050       | 02/18/22 17:31 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 243       | mg/L       | 10.0         | 02/09/22 10:14 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 221       | mg/L       | 5.0          | 02/15/22 17:21 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 221       | mg/L       | 5.0          | 02/15/22 17:21 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.6       | mg/L       | 1.0          | 02/13/22 02:52 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.15      | mg/L       | 0.10         | 02/13/22 02:52 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 20.7      | mg/L       | 1.0          | 02/13/22 02:52 |            |

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Lab Sample ID          | Client Sample ID               | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |          |            |              |                |            |
| <b>92586436020</b>     | <b>FB-3</b>                    |          |            |              |                |            |
| SM 2540C-2015          | Total Dissolved Solids         | 12.0     | mg/L       | 10.0         | 02/09/22 10:14 |            |
| <b>92586436021</b>     | <b>GWC-10</b>                  |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/08/22 10:30 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 6.53     | Std. Units |              | 02/08/22 10:30 |            |
| EPA 6010D              | Potassium                      | 0.51     | mg/L       | 0.20         | 02/18/22 18:48 |            |
| EPA 6010D              | Sodium                         | 2.1      | mg/L       | 1.0          | 02/18/22 18:48 |            |
| EPA 6010D              | Calcium                        | 21.3     | mg/L       | 1.0          | 02/18/22 18:48 |            |
| EPA 6010D              | Magnesium                      | 9.0      | mg/L       | 0.050        | 02/18/22 18:48 |            |
| EPA 6020B              | Arsenic                        | 0.0023J  | mg/L       | 0.0050       | 02/18/22 19:37 | B          |
| EPA 6020B              | Barium                         | 0.022    | mg/L       | 0.0050       | 02/18/22 19:37 |            |
| EPA 6020B              | Beryllium                      | 0.00021J | mg/L       | 0.00050      | 02/18/22 19:37 |            |
| EPA 6020B              | Cobalt                         | 0.0018J  | mg/L       | 0.0050       | 02/18/22 19:37 |            |
| EPA 6020B              | Nickel                         | 0.0014J  | mg/L       | 0.0050       | 02/18/22 19:37 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 102      | mg/L       | 10.0         | 02/11/22 10:44 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 88.6     | mg/L       | 5.0          | 02/10/22 20:43 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 88.6     | mg/L       | 5.0          | 02/10/22 20:43 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.9      | mg/L       | 1.0          | 02/14/22 12:50 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.2      | mg/L       | 1.0          | 02/14/22 12:50 |            |
| <b>92586436022</b>     | <b>GWC-10R</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/08/22 10:31 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 7.69     | Std. Units |              | 02/08/22 10:31 |            |
| EPA 6010D              | Potassium                      | 0.71     | mg/L       | 0.20         | 02/18/22 18:53 |            |
| EPA 6010D              | Sodium                         | 2.0      | mg/L       | 1.0          | 02/18/22 18:53 |            |
| EPA 6010D              | Calcium                        | 46.3     | mg/L       | 1.0          | 02/18/22 18:53 |            |
| EPA 6010D              | Magnesium                      | 8.9      | mg/L       | 0.050        | 02/18/22 18:53 |            |
| EPA 6020B              | Antimony                       | 0.0016J  | mg/L       | 0.0030       | 02/18/22 20:00 |            |
| EPA 6020B              | Arsenic                        | 0.0019J  | mg/L       | 0.0050       | 02/18/22 20:00 | B          |
| EPA 6020B              | Barium                         | 0.028    | mg/L       | 0.0050       | 02/18/22 20:00 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 156      | mg/L       | 10.0         | 02/11/22 10:44 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 144      | mg/L       | 5.0          | 02/10/22 20:49 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 144      | mg/L       | 5.0          | 02/10/22 20:49 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 2.2      | mg/L       | 1.0          | 02/14/22 13:04 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.1      | mg/L       | 1.0          | 02/14/22 13:04 |            |
| <b>92586436023</b>     | <b>GWC-11</b>                  |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/08/22 10:31 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 7.20     | Std. Units |              | 02/08/22 10:31 |            |
| EPA 6010D              | Potassium                      | 0.83     | mg/L       | 0.20         | 02/18/22 18:58 |            |
| EPA 6010D              | Sodium                         | 1.4      | mg/L       | 1.0          | 02/18/22 18:58 |            |
| EPA 6010D              | Calcium                        | 19.2     | mg/L       | 1.0          | 02/18/22 18:58 |            |
| EPA 6010D              | Magnesium                      | 10.2     | mg/L       | 0.050        | 02/18/22 18:58 |            |
| EPA 6020B              | Arsenic                        | 0.0023J  | mg/L       | 0.0050       | 02/18/22 20:06 | B          |
| EPA 6020B              | Barium                         | 0.010    | mg/L       | 0.0050       | 02/18/22 20:06 |            |
| EPA 6020B              | Chromium                       | 0.0071   | mg/L       | 0.0050       | 02/18/22 20:06 |            |

### REPORT OF LABORATORY ANALYSIS

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**SUMMARY OF DETECTION**

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Lab Sample ID          | Client Sample ID               | Result  | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|---------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |         |            |              |                |            |
| <b>92586436023</b>     | <b>GWC-11</b>                  |         |            |              |                |            |
| SM 2540C-2015          | Total Dissolved Solids         | 120     | mg/L       | 10.0         | 02/11/22 10:44 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 99.4    | mg/L       | 5.0          | 02/10/22 20:56 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 99.4    | mg/L       | 5.0          | 02/10/22 20:56 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.1     | mg/L       | 1.0          | 02/14/22 18:49 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.7     | mg/L       | 1.0          | 02/14/22 18:49 |            |
| <b>92586436024</b>     | <b>GWC-11R</b>                 |         |            |              |                |            |
|                        | Performed by                   | CUSTOME |            |              | 02/08/22 10:31 |            |
|                        |                                | R       |            |              |                |            |
|                        | pH                             | 7.58    | Std. Units |              | 02/08/22 10:31 |            |
| EPA 6010D              | Potassium                      | 1.1     | mg/L       | 0.20         | 02/18/22 19:03 |            |
| EPA 6010D              | Sodium                         | 0.96J   | mg/L       | 1.0          | 02/18/22 19:03 |            |
| EPA 6010D              | Calcium                        | 34.8    | mg/L       | 1.0          | 02/18/22 19:03 |            |
| EPA 6010D              | Magnesium                      | 18.7    | mg/L       | 0.050        | 02/18/22 19:03 |            |
| EPA 6020B              | Arsenic                        | 0.0035J | mg/L       | 0.0050       | 02/18/22 20:12 | B          |
| EPA 6020B              | Barium                         | 0.021   | mg/L       | 0.0050       | 02/18/22 20:12 |            |
| EPA 6020B              | Chromium                       | 0.0042J | mg/L       | 0.0050       | 02/18/22 20:12 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 157     | mg/L       | 10.0         | 02/11/22 10:44 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 147     | mg/L       | 5.0          | 02/10/22 21:03 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 147     | mg/L       | 5.0          | 02/10/22 21:03 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.4     | mg/L       | 1.0          | 02/14/22 19:34 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.5     | mg/L       | 1.0          | 02/14/22 19:34 |            |
| <b>92586436025</b>     | <b>GWC-13RZ</b>                |         |            |              |                |            |
|                        | Performed by                   | CUSTOME |            |              | 02/08/22 10:31 |            |
|                        |                                | R       |            |              |                |            |
|                        | pH                             | 7.46    | Std. Units |              | 02/08/22 10:31 |            |
| EPA 6010D              | Potassium                      | 1.0     | mg/L       | 0.20         | 02/18/22 19:07 |            |
| EPA 6010D              | Sodium                         | 24.1    | mg/L       | 1.0          | 02/18/22 19:07 |            |
| EPA 6010D              | Calcium                        | 43.9    | mg/L       | 1.0          | 02/18/22 19:07 |            |
| EPA 6010D              | Magnesium                      | 18.7    | mg/L       | 0.050        | 02/18/22 19:07 |            |
| EPA 6020B              | Arsenic                        | 0.0035J | mg/L       | 0.0050       | 02/18/22 20:18 | B          |
| EPA 6020B              | Barium                         | 0.11    | mg/L       | 0.0050       | 02/18/22 20:18 |            |
| EPA 6020B              | Boron                          | 0.017J  | mg/L       | 0.040        | 02/18/22 20:18 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 262     | mg/L       | 10.0         | 02/11/22 10:44 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 159     | mg/L       | 5.0          | 02/10/22 21:11 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 159     | mg/L       | 5.0          | 02/10/22 21:11 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 6.1     | mg/L       | 1.0          | 02/14/22 19:49 |            |
| EPA 300.0 Rev 2.1 1993 | Fluoride                       | 0.13    | mg/L       | 0.10         | 02/14/22 19:49 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 63.1    | mg/L       | 1.0          | 02/14/22 19:49 |            |
| <b>92586436026</b>     | <b>GWC-14Z</b>                 |         |            |              |                |            |
|                        | Performed by                   | CUSTOME |            |              | 02/08/22 10:31 |            |
|                        |                                | R       |            |              |                |            |
|                        | pH                             | 6.06    | Std. Units |              | 02/08/22 10:31 |            |
| EPA 6010D              | Potassium                      | 1.2     | mg/L       | 0.20         | 02/18/22 19:12 |            |
| EPA 6010D              | Sodium                         | 3.3     | mg/L       | 1.0          | 02/18/22 19:12 |            |
| EPA 6010D              | Calcium                        | 14.3    | mg/L       | 1.0          | 02/18/22 19:12 |            |
| EPA 6010D              | Magnesium                      | 6.3     | mg/L       | 0.050        | 02/18/22 19:12 |            |

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Lab Sample ID          | Client Sample ID               | Result   | Units      | Report Limit | Analyzed       | Qualifiers |
|------------------------|--------------------------------|----------|------------|--------------|----------------|------------|
| Method                 | Parameters                     |          |            |              |                |            |
| <b>92586436026</b>     | <b>GWC-14Z</b>                 |          |            |              |                |            |
| EPA 6020B              | Arsenic                        | 0.0019J  | mg/L       | 0.0050       | 02/18/22 20:36 | B          |
| EPA 6020B              | Barium                         | 0.014    | mg/L       | 0.0050       | 02/18/22 20:36 |            |
| EPA 6020B              | Beryllium                      | 0.00011J | mg/L       | 0.00050      | 02/18/22 20:36 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 92.0     | mg/L       | 10.0         | 02/11/22 10:45 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 49.6     | mg/L       | 5.0          | 02/15/22 16:45 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 49.6     | mg/L       | 5.0          | 02/15/22 16:45 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 3.6      | mg/L       | 1.0          | 02/14/22 20:34 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 6.4      | mg/L       | 1.0          | 02/14/22 20:34 |            |
| <b>92586436027</b>     | <b>GWC-15R</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/08/22 10:31 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 7.61     | Std. Units |              | 02/08/22 10:31 |            |
| EPA 6010D              | Potassium                      | 0.97     | mg/L       | 0.20         | 02/18/22 19:26 |            |
| EPA 6010D              | Sodium                         | 1.1      | mg/L       | 1.0          | 02/18/22 19:26 |            |
| EPA 6010D              | Calcium                        | 41.7     | mg/L       | 1.0          | 02/18/22 19:26 |            |
| EPA 6010D              | Magnesium                      | 20.1     | mg/L       | 0.050        | 02/18/22 19:26 |            |
| EPA 6020B              | Arsenic                        | 0.0026J  | mg/L       | 0.0050       | 02/18/22 20:42 | B          |
| EPA 6020B              | Barium                         | 0.017    | mg/L       | 0.0050       | 02/18/22 20:42 |            |
| EPA 6020B              | Nickel                         | 0.00093J | mg/L       | 0.0050       | 02/18/22 20:42 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 162      | mg/L       | 10.0         | 02/11/22 11:39 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 162      | mg/L       | 5.0          | 02/15/22 16:49 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 162      | mg/L       | 5.0          | 02/15/22 16:49 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.2      | mg/L       | 1.0          | 02/14/22 21:19 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 8.3      | mg/L       | 1.0          | 02/14/22 21:19 |            |
| <b>92586436028</b>     | <b>DUP-3</b>                   |          |            |              |                |            |
| EPA 6010D              | Potassium                      | 1.0      | mg/L       | 0.20         | 02/18/22 19:31 |            |
| EPA 6010D              | Sodium                         | 0.95J    | mg/L       | 1.0          | 02/18/22 19:31 |            |
| EPA 6010D              | Calcium                        | 33.7     | mg/L       | 1.0          | 02/18/22 19:31 |            |
| EPA 6010D              | Magnesium                      | 17.8     | mg/L       | 0.050        | 02/18/22 19:31 |            |
| EPA 6020B              | Antimony                       | 0.00094J | mg/L       | 0.0030       | 02/18/22 20:48 |            |
| EPA 6020B              | Arsenic                        | 0.0035J  | mg/L       | 0.0050       | 02/18/22 20:48 | B          |
| EPA 6020B              | Barium                         | 0.020    | mg/L       | 0.0050       | 02/18/22 20:48 |            |
| EPA 6020B              | Chromium                       | 0.0041J  | mg/L       | 0.0050       | 02/18/22 20:48 |            |
| SM 2540C-2015          | Total Dissolved Solids         | 162      | mg/L       | 10.0         | 02/11/22 11:39 |            |
| SM 2320B               | Alkalinity, Total as CaCO3     | 148      | mg/L       | 5.0          | 02/15/22 16:53 |            |
| SM 2320B               | Alkalinity,Bicarbonate (CaCO3) | 148      | mg/L       | 5.0          | 02/15/22 16:53 |            |
| EPA 300.0 Rev 2.1 1993 | Chloride                       | 1.3      | mg/L       | 1.0          | 02/14/22 21:34 |            |
| EPA 300.0 Rev 2.1 1993 | Sulfate                        | 1.5      | mg/L       | 1.0          | 02/14/22 21:34 |            |
| <b>92586436029</b>     | <b>FB-4</b>                    |          |            |              |                |            |
| EPA 6020B              | Arsenic                        | 0.0019J  | mg/L       | 0.0050       | 02/18/22 20:54 | B          |
| <b>92586436030</b>     | <b>GWC-15Z</b>                 |          |            |              |                |            |
|                        | Performed by                   | CUSTOME  |            |              | 02/08/22 10:31 |            |
|                        |                                | R        |            |              |                |            |
|                        | pH                             | 7.83     | Std. Units |              | 02/08/22 10:31 |            |
| EPA 6010D              | Potassium                      | 0.96     | mg/L       | 0.20         | 02/18/22 19:41 |            |

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**SUMMARY OF DETECTION**

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Lab Sample ID<br>Method | Client Sample ID<br>Parameters | Result    | Units      | Report Limit | Analyzed       | Qualifiers |
|-------------------------|--------------------------------|-----------|------------|--------------|----------------|------------|
| <b>92586436030</b>      | <b>GWC-15Z</b>                 |           |            |              |                |            |
| EPA 6010D               | Sodium                         | 3.0       | mg/L       | 1.0          | 02/18/22 19:41 |            |
| EPA 6010D               | Calcium                        | 26.1      | mg/L       | 1.0          | 02/18/22 19:41 |            |
| EPA 6010D               | Magnesium                      | 14.0      | mg/L       | 0.050        | 02/18/22 19:41 |            |
| EPA 6020B               | Arsenic                        | 0.0025J   | mg/L       | 0.0050       | 02/18/22 21:00 | B          |
| EPA 6020B               | Barium                         | 0.012     | mg/L       | 0.0050       | 02/18/22 21:00 |            |
| EPA 6020B               | Chromium                       | 0.0011J   | mg/L       | 0.0050       | 02/18/22 21:00 |            |
| SM 2540C-2015           | Total Dissolved Solids         | 121       | mg/L       | 10.0         | 02/11/22 11:40 |            |
| SM 2320B                | Alkalinity, Total as CaCO3     | 123       | mg/L       | 5.0          | 02/15/22 17:01 |            |
| SM 2320B                | Alkalinity,Bicarbonate (CaCO3) | 123       | mg/L       | 5.0          | 02/15/22 17:01 |            |
| EPA 300.0 Rev 2.1 1993  | Chloride                       | 0.60J     | mg/L       | 1.0          | 02/14/22 22:04 |            |
| EPA 300.0 Rev 2.1 1993  | Sulfate                        | 0.64J     | mg/L       | 1.0          | 02/14/22 22:04 |            |
| <b>92586436031</b>      | <b>FB-5</b>                    |           |            |              |                |            |
| EPA 6020B               | Arsenic                        | 0.0018J   | mg/L       | 0.0050       | 02/18/22 21:12 | B          |
| <b>92586436032</b>      | <b>GWC-13</b>                  |           |            |              |                |            |
|                         | Performed by                   | CUSTOME   |            |              | 02/18/22 13:25 |            |
|                         | pH                             | 7.24      | Std. Units |              | 02/18/22 13:25 |            |
| EPA 6010D               | Potassium                      | 1.9       | mg/L       | 0.20         | 03/01/22 02:45 |            |
| EPA 6010D               | Sodium                         | 1.5       | mg/L       | 1.0          | 03/01/22 02:45 |            |
| EPA 6010D               | Calcium                        | 29.3      | mg/L       | 1.0          | 03/01/22 02:45 |            |
| EPA 6010D               | Magnesium                      | 10.9      | mg/L       | 0.050        | 03/01/22 02:45 |            |
| EPA 6020B               | Barium                         | 0.020     | mg/L       | 0.0050       | 02/25/22 23:19 |            |
| EPA 6020B               | Beryllium                      | 0.000089J | mg/L       | 0.00050      | 02/25/22 23:19 |            |
| EPA 6020B               | Boron                          | 0.015J    | mg/L       | 0.040        | 02/25/22 23:19 |            |
| EPA 6020B               | Chromium                       | 0.0053    | mg/L       | 0.0050       | 02/25/22 23:19 |            |
| SM 2540C-2015           | Total Dissolved Solids         | 119       | mg/L       | 10.0         | 02/23/22 16:01 |            |
| SM 2320B                | Alkalinity, Total as CaCO3     | 109       | mg/L       | 5.0          | 02/25/22 11:45 |            |
| SM 2320B                | Alkalinity,Bicarbonate (CaCO3) | 109       | mg/L       | 5.0          | 02/25/22 11:45 |            |
| EPA 300.0 Rev 2.1 1993  | Chloride                       | 3.1       | mg/L       | 1.0          | 02/25/22 08:51 |            |
| EPA 300.0 Rev 2.1 1993  | Sulfate                        | 6.9       | mg/L       | 1.0          | 02/25/22 08:51 |            |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: GWA-1  |                 | Lab ID: 92586436001 |              | Collected: 02/01/22 14:50 |    | Received: 02/04/22 11:45 |                | Matrix: Water |      |
|--|-----------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                 |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1  |                          | 02/07/22 10:49 |               |      |
| pH   | <b>7.52</b>     | Std. Units          |              |                           | 1  |                          | 02/07/22 10:49 |               |      |
| <b>6010D ATL ICP</b>                                       |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND              | mg/L                | 0.020        | 0.0085                    | 1  | 02/18/22 08:02           | 02/18/22 15:52 | 7440-66-6     |      |
| Potassium  | <b>1.3</b>      | mg/L                | 0.20         | 0.15                      | 1  | 02/18/22 08:02           | 02/18/22 15:52 | 7440-09-7     |      |
| Sodium   | <b>6.5</b>      | mg/L                | 1.0          | 0.58                      | 1  | 02/18/22 08:02           | 02/18/22 15:52 | 7440-23-5     |      |
| Calcium  | <b>34.1</b>     | mg/L                | 1.0          | 0.12                      | 1  | 02/18/22 08:02           | 02/18/22 15:52 | 7440-70-2     |      |
| Magnesium  | <b>16.4</b>     | mg/L                | 0.050        | 0.012                     | 1  | 02/18/22 08:02           | 02/18/22 15:52 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>                                      |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Antimony   | <b>0.0028J</b>  | mg/L                | 0.0030       | 0.00078                   | 1  | 02/18/22 07:59           | 02/18/22 14:39 | 7440-36-0     |      |
| Arsenic  | ND              | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 07:59           | 02/18/22 14:39 | 7440-38-2     |      |
| Barium   | <b>0.015</b>    | mg/L                | 0.0050       | 0.00067                   | 1  | 02/18/22 07:59           | 02/18/22 14:39 | 7440-39-3     |      |
| Beryllium  | ND              | mg/L                | 0.00050      | 0.000054                  | 1  | 02/18/22 07:59           | 02/18/22 14:39 | 7440-41-7     |      |
| Boron  | ND              | mg/L                | 0.040        | 0.0086                    | 1  | 02/18/22 07:59           | 02/18/22 14:39 | 7440-42-8     |      |
| Cadmium  | ND              | mg/L                | 0.00050      | 0.00011                   | 1  | 02/18/22 07:59           | 02/18/22 14:39 | 7440-43-9     |      |
| Chromium   | ND              | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 07:59           | 02/18/22 14:39 | 7440-47-3     |      |
| Cobalt   | ND              | mg/L                | 0.0050       | 0.00039                   | 1  | 02/18/22 07:59           | 02/18/22 14:39 | 7440-48-4     |      |
| Copper   | ND              | mg/L                | 0.0050       | 0.00050                   | 1  | 02/18/22 07:59           | 02/18/22 14:39 | 7440-50-8     |      |
| Lead   | ND              | mg/L                | 0.0010       | 0.00089                   | 1  | 02/18/22 07:59           | 02/18/22 14:39 | 7439-92-1     |      |
| Nickel   | ND              | mg/L                | 0.0050       | 0.00071                   | 1  | 02/18/22 07:59           | 02/18/22 14:39 | 7440-02-0     |      |
| Selenium   | ND              | mg/L                | 0.0050       | 0.0014                    | 1  | 02/18/22 07:59           | 02/18/22 14:39 | 7782-49-2     |      |
| Silver   | ND              | mg/L                | 0.0050       | 0.00044                   | 1  | 02/18/22 07:59           | 02/18/22 14:39 | 7440-22-4     |      |
| Thallium   | ND              | mg/L                | 0.0010       | 0.00018                   | 1  | 02/18/22 07:59           | 02/18/22 14:39 | 7440-28-0     |      |
| Vanadium   | ND              | mg/L                | 0.010        | 0.0019                    | 1  | 02/18/22 07:59           | 02/18/22 14:39 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND              | mg/L                | 0.00020      | 0.00013                   | 1  | 02/15/22 15:15           | 02/16/22 11:09 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015                           |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | <b>143</b>      | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/07/22 17:20 |               |      |
| <b>2320B Alkalinity</b>                                    |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B                                |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Minneapolis                     |                 |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3                                 | <b>161</b>      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 16:44 |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>161</b>      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 16:44 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND              | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 16:44 |               |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWA-1**      **Lab ID: 92586436001**      Collected: 02/01/22 14:50      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results      | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|--------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |              |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |              |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |              |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |              |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>1.2</b>   | mg/L  | 1.0    | 0.60  | 1  |          | 02/12/22 19:54 | 16887-00-6 | M1   |
| Fluoride                                  | ND           | mg/L  | 0.10   | 0.050 | 1  |          | 02/12/22 19:54 | 16984-48-8 | M1   |
| Sulfate                                   | <b>0.93J</b> | mg/L  | 1.0    | 0.50  | 1  |          | 02/12/22 19:54 | 14808-79-8 | M1   |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: GWA-2  |          | Lab ID: 92586436002 |              | Collected: 02/01/22 14:44 |    | Received: 02/04/22 11:45 |                | Matrix: Water |      |
|--|----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results  | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |          |                     |              |                           |    |                          |                |               |      |
| Performed by   | CUSTOMER |                     |              |                           | 1  |                          | 02/07/22 10:50 |               |      |
| pH   | 6.30     | Std. Units          |              |                           | 1  |                          | 02/07/22 10:50 |               |      |
| <b>6010D ATL ICP</b>                                       |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND       | mg/L                | 0.020        | 0.0085                    | 1  | 02/18/22 08:02           | 02/18/22 15:56 | 7440-66-6     |      |
| Potassium  | 0.88     | mg/L                | 0.20         | 0.15                      | 1  | 02/18/22 08:02           | 02/18/22 15:56 | 7440-09-7     |      |
| Sodium   | 1.9      | mg/L                | 1.0          | 0.58                      | 1  | 02/18/22 08:02           | 02/18/22 15:56 | 7440-23-5     |      |
| Calcium  | 48.0     | mg/L                | 1.0          | 0.12                      | 1  | 02/18/22 08:02           | 02/18/22 15:56 | 7440-70-2     | M1   |
| Magnesium  | 14.0     | mg/L                | 0.050        | 0.012                     | 1  | 02/18/22 08:02           | 02/18/22 15:56 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>                                      |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND       | mg/L                | 0.0030       | 0.00078                   | 1  | 02/18/22 07:59           | 02/18/22 14:45 | 7440-36-0     |      |
| Arsenic  | 0.0019J  | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 07:59           | 02/18/22 14:45 | 7440-38-2     |      |
| Barium   | 0.026    | mg/L                | 0.0050       | 0.00067                   | 1  | 02/18/22 07:59           | 02/18/22 14:45 | 7440-39-3     |      |
| Beryllium  | ND       | mg/L                | 0.00050      | 0.000054                  | 1  | 02/18/22 07:59           | 02/18/22 14:45 | 7440-41-7     |      |
| Boron  | ND       | mg/L                | 0.040        | 0.0086                    | 1  | 02/18/22 07:59           | 02/18/22 14:45 | 7440-42-8     |      |
| Cadmium  | ND       | mg/L                | 0.00050      | 0.00011                   | 1  | 02/18/22 07:59           | 02/18/22 14:45 | 7440-43-9     |      |
| Chromium   | ND       | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 07:59           | 02/18/22 14:45 | 7440-47-3     |      |
| Cobalt   | ND       | mg/L                | 0.0050       | 0.00039                   | 1  | 02/18/22 07:59           | 02/18/22 14:45 | 7440-48-4     |      |
| Copper   | ND       | mg/L                | 0.0050       | 0.00050                   | 1  | 02/18/22 07:59           | 02/18/22 14:45 | 7440-50-8     |      |
| Lead   | ND       | mg/L                | 0.0010       | 0.00089                   | 1  | 02/18/22 07:59           | 02/18/22 14:45 | 7439-92-1     |      |
| Nickel   | ND       | mg/L                | 0.0050       | 0.00071                   | 1  | 02/18/22 07:59           | 02/18/22 14:45 | 7440-02-0     |      |
| Selenium   | ND       | mg/L                | 0.0050       | 0.0014                    | 1  | 02/18/22 07:59           | 02/18/22 14:45 | 7782-49-2     |      |
| Silver   | ND       | mg/L                | 0.0050       | 0.00044                   | 1  | 02/18/22 07:59           | 02/18/22 14:45 | 7440-22-4     |      |
| Thallium   | ND       | mg/L                | 0.0010       | 0.00018                   | 1  | 02/18/22 07:59           | 02/18/22 14:45 | 7440-28-0     |      |
| Vanadium   | ND       | mg/L                | 0.010        | 0.0019                    | 1  | 02/18/22 07:59           | 02/18/22 14:45 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND       | mg/L                | 0.00020      | 0.00013                   | 1  | 02/15/22 15:15           | 02/16/22 11:11 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015                           |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | 202      | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/07/22 17:21 |               |      |
| <b>2320B Alkalinity</b>                                    |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B                                |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Minneapolis                     |          |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3                                 | 80.9     | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 17:00 |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | 80.9     | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 17:00 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND       | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 17:00 |               |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWA-2**      **Lab ID: 92586436002**      Collected: 02/01/22 14:44      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 1.4     | mg/L  | 1.0    | 0.60  | 1  |          | 02/12/22 21:04 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/12/22 21:04 | 16984-48-8 |      |
| Sulfate                                   | 86.1    | mg/L  | 1.0    | 0.50  | 1  |          | 02/12/22 21:04 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Sample: GWA-2R   |                 | Lab ID: 92586436003 |              | Collected: 02/01/22 15:45 | Received: 02/04/22 11:45 | Matrix: Water  |                |           |      |
|--|-----------------|---------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                 |                     |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1                        |                | 02/07/22 10:50 |           |      |
| pH   | <b>6.62</b>     | Std. Units          |              |                           | 1                        |                | 02/07/22 10:50 |           |      |
| <b>6010D ATL ICP</b>                                       |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                 |                     |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |                          |                |                |           |      |
| Zinc   | ND              | mg/L                | 0.020        | 0.0085                    | 1                        | 02/18/22 08:02 | 02/18/22 16:16 | 7440-66-6 |      |
| Potassium  | <b>0.67</b>     | mg/L                | 0.20         | 0.15                      | 1                        | 02/18/22 08:02 | 02/18/22 16:16 | 7440-09-7 |      |
| Sodium   | <b>1.1</b>      | mg/L                | 1.0          | 0.58                      | 1                        | 02/18/22 08:02 | 02/18/22 16:16 | 7440-23-5 |      |
| Calcium  | <b>34.1</b>     | mg/L                | 1.0          | 0.12                      | 1                        | 02/18/22 08:02 | 02/18/22 16:16 | 7440-70-2 |      |
| Magnesium  | <b>11.1</b>     | mg/L                | 0.050        | 0.012                     | 1                        | 02/18/22 08:02 | 02/18/22 16:16 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>                                      |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                 |                     |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |                          |                |                |           |      |
| Antimony   | <b>0.0029J</b>  | mg/L                | 0.0030       | 0.00078                   | 1                        | 02/18/22 07:59 | 02/18/22 14:51 | 7440-36-0 |      |
| Arsenic  | <b>0.0053</b>   | mg/L                | 0.0050       | 0.0011                    | 1                        | 02/18/22 07:59 | 02/18/22 14:51 | 7440-38-2 |      |
| Barium   | <b>0.024</b>    | mg/L                | 0.0050       | 0.00067                   | 1                        | 02/18/22 07:59 | 02/18/22 14:51 | 7440-39-3 |      |
| Beryllium  | ND              | mg/L                | 0.00050      | 0.000054                  | 1                        | 02/18/22 07:59 | 02/18/22 14:51 | 7440-41-7 |      |
| Boron  | ND              | mg/L                | 0.040        | 0.0086                    | 1                        | 02/18/22 07:59 | 02/18/22 14:51 | 7440-42-8 |      |
| Cadmium  | ND              | mg/L                | 0.00050      | 0.00011                   | 1                        | 02/18/22 07:59 | 02/18/22 14:51 | 7440-43-9 |      |
| Chromium   | ND              | mg/L                | 0.0050       | 0.0011                    | 1                        | 02/18/22 07:59 | 02/18/22 14:51 | 7440-47-3 |      |
| Cobalt   | <b>0.00093J</b> | mg/L                | 0.0050       | 0.00039                   | 1                        | 02/18/22 07:59 | 02/18/22 14:51 | 7440-48-4 |      |
| Copper   | <b>0.00096J</b> | mg/L                | 0.0050       | 0.00050                   | 1                        | 02/18/22 07:59 | 02/18/22 14:51 | 7440-50-8 |      |
| Lead   | ND              | mg/L                | 0.0010       | 0.00089                   | 1                        | 02/18/22 07:59 | 02/18/22 14:51 | 7439-92-1 |      |
| Nickel   | ND              | mg/L                | 0.0050       | 0.00071                   | 1                        | 02/18/22 07:59 | 02/18/22 14:51 | 7440-02-0 |      |
| Selenium   | ND              | mg/L                | 0.0050       | 0.0014                    | 1                        | 02/18/22 07:59 | 02/18/22 14:51 | 7782-49-2 |      |
| Silver   | ND              | mg/L                | 0.0050       | 0.00044                   | 1                        | 02/18/22 07:59 | 02/18/22 14:51 | 7440-22-4 |      |
| Thallium   | ND              | mg/L                | 0.0010       | 0.00018                   | 1                        | 02/18/22 07:59 | 02/18/22 14:51 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L                | 0.010        | 0.0019                    | 1                        | 02/18/22 07:59 | 02/18/22 14:51 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                 |                     |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |                          |                |                |           |      |
| Mercury  | ND              | mg/L                | 0.00020      | 0.00013                   | 1                        | 02/15/22 15:15 | 02/16/22 11:19 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>                        |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2540C-2015                           |                 |                     |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |                          |                |                |           |      |
| Total Dissolved Solids                                     | <b>114</b>      | mg/L                | 10.0         | 10.0                      | 1                        |                | 02/07/22 17:21 |           |      |
| <b>2320B Alkalinity</b>                                    |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2320B                                |                 |                     |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Minneapolis                     |                 |                     |              |                           |                          |                |                |           |      |
| Alkalinity, Total as CaCO3                                 | <b>122</b>      | mg/L                | 5.0          | 1.8                       | 1                        |                | 02/10/22 17:06 |           |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>122</b>      | mg/L                | 5.0          | 1.8                       | 1                        |                | 02/10/22 17:06 |           |      |
| Alkalinity,Carbonate (CaCO3)                               | ND              | mg/L                | 5.0          | 1.8                       | 1                        |                | 02/10/22 17:06 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWA-2R**      **Lab ID: 92586436003**      Collected: 02/01/22 15:45      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results      | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|--------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |              |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |              |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |              |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |              |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>0.77J</b> | mg/L  | 1.0    | 0.60  | 1  |          | 02/12/22 21:18 | 16887-00-6 |      |
| Fluoride                                  | ND           | mg/L  | 0.10   | 0.050 | 1  |          | 02/12/22 21:18 | 16984-48-8 |      |
| Sulfate                                   | <b>1.5</b>   | mg/L  | 1.0    | 0.50  | 1  |          | 02/12/22 21:18 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: <b>GWA-50</b>                                      | Lab ID: <b>92586436004</b> | Collected: 02/01/22 15:40 | Received: 02/04/22 11:45 | Matrix: Water |    |                |                |           |      |
|--|----------------------------|---------------------------|--------------------------|---------------|----|----------------|----------------|-----------|------|
| Parameters   | Results                    | Units                     | Report Limit             | MDL           | DF | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                            |                           |                          |               |    |                |                |           |      |
| Performed by   | <b>CUSTOMER</b>            |                           |                          |               | 1  |                | 02/07/22 10:50 |           |      |
| pH   | <b>5.61</b>                | Std. Units                |                          |               | 1  |                | 02/07/22 10:50 |           |      |
| <b>6010D ATL ICP</b>                                       |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                            |                           |                          |               |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                            |                           |                          |               |    |                |                |           |      |
| Zinc   | ND                         | mg/L                      | 0.020                    | 0.0085        | 1  | 02/18/22 08:02 | 02/18/22 16:20 | 7440-66-6 |      |
| Potassium  | <b>0.25</b>                | mg/L                      | 0.20                     | 0.15          | 1  | 02/18/22 08:02 | 02/18/22 16:20 | 7440-09-7 |      |
| Sodium   | <b>1.7</b>                 | mg/L                      | 1.0                      | 0.58          | 1  | 02/18/22 08:02 | 02/18/22 16:20 | 7440-23-5 |      |
| Calcium  | <b>1.5</b>                 | mg/L                      | 1.0                      | 0.12          | 1  | 02/18/22 08:02 | 02/18/22 16:20 | 7440-70-2 |      |
| Magnesium  | <b>0.31</b>                | mg/L                      | 0.050                    | 0.012         | 1  | 02/18/22 08:02 | 02/18/22 16:20 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>                                      |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                            |                           |                          |               |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                            |                           |                          |               |    |                |                |           |      |
| Antimony   | <b>0.0015J</b>             | mg/L                      | 0.0030                   | 0.00078       | 1  | 02/18/22 07:59 | 02/18/22 15:15 | 7440-36-0 |      |
| Arsenic  | ND                         | mg/L                      | 0.0050                   | 0.0011        | 1  | 02/18/22 07:59 | 02/18/22 15:15 | 7440-38-2 |      |
| Barium   | <b>0.0065</b>              | mg/L                      | 0.0050                   | 0.00067       | 1  | 02/18/22 07:59 | 02/18/22 15:15 | 7440-39-3 |      |
| Beryllium  | ND                         | mg/L                      | 0.00050                  | 0.000054      | 1  | 02/18/22 07:59 | 02/18/22 15:15 | 7440-41-7 |      |
| Boron  | ND                         | mg/L                      | 0.040                    | 0.0086        | 1  | 02/18/22 07:59 | 02/18/22 15:15 | 7440-42-8 |      |
| Cadmium  | ND                         | mg/L                      | 0.00050                  | 0.00011       | 1  | 02/18/22 07:59 | 02/18/22 15:15 | 7440-43-9 |      |
| Chromium   | ND                         | mg/L                      | 0.0050                   | 0.0011        | 1  | 02/18/22 07:59 | 02/18/22 15:15 | 7440-47-3 |      |
| Cobalt   | ND                         | mg/L                      | 0.0050                   | 0.00039       | 1  | 02/18/22 07:59 | 02/18/22 15:15 | 7440-48-4 |      |
| Copper   | <b>0.0017J</b>             | mg/L                      | 0.0050                   | 0.00050       | 1  | 02/18/22 07:59 | 02/18/22 15:15 | 7440-50-8 |      |
| Lead   | ND                         | mg/L                      | 0.0010                   | 0.00089       | 1  | 02/18/22 07:59 | 02/18/22 15:15 | 7439-92-1 |      |
| Nickel   | <b>0.00080J</b>            | mg/L                      | 0.0050                   | 0.00071       | 1  | 02/18/22 07:59 | 02/18/22 15:15 | 7440-02-0 |      |
| Selenium   | ND                         | mg/L                      | 0.0050                   | 0.0014        | 1  | 02/18/22 07:59 | 02/18/22 15:15 | 7782-49-2 |      |
| Silver   | ND                         | mg/L                      | 0.0050                   | 0.00044       | 1  | 02/18/22 07:59 | 02/18/22 15:15 | 7440-22-4 |      |
| Thallium   | ND                         | mg/L                      | 0.0010                   | 0.00018       | 1  | 02/18/22 07:59 | 02/18/22 15:15 | 7440-28-0 |      |
| Vanadium   | ND                         | mg/L                      | 0.010                    | 0.0019        | 1  | 02/18/22 07:59 | 02/18/22 15:15 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                            |                           |                          |               |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                            |                           |                          |               |    |                |                |           |      |
| Mercury  | ND                         | mg/L                      | 0.00020                  | 0.00013       | 1  | 02/15/22 15:15 | 02/16/22 11:22 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>                        |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: SM 2540C-2015                           |                            |                           |                          |               |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                            |                           |                          |               |    |                |                |           |      |
| Total Dissolved Solids                                     | <b>21.0</b>                | mg/L                      | 10.0                     | 10.0          | 1  |                | 02/07/22 17:21 |           |      |
| <b>2320B Alkalinity</b>                                    |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: SM 2320B                                |                            |                           |                          |               |    |                |                |           |      |
| Pace Analytical Services - Minneapolis                     |                            |                           |                          |               |    |                |                |           |      |
| Alkalinity, Total as CaCO3                                 | <b>4.7J</b>                | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/10/22 19:19 |           |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>4.7J</b>                | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/10/22 19:19 |           |      |
| Alkalinity,Carbonate (CaCO3)                               | ND                         | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/10/22 19:19 |           |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

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**Sample: GWA-50**      **Lab ID: 92586436004**      Collected: 02/01/22 15:40      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results      | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|--------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |              |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |              |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |              |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |              |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>0.91J</b> | mg/L  | 1.0    | 0.60  | 1  |          | 02/12/22 21:32 | 16887-00-6 |      |
| Fluoride                                  | ND           | mg/L  | 0.10   | 0.050 | 1  |          | 02/12/22 21:32 | 16984-48-8 |      |
| Sulfate                                   | ND           | mg/L  | 1.0    | 0.50  | 1  |          | 02/12/22 21:32 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: DUP-1**      **Lab ID: 92586436005**      Collected: 02/01/22 00:00      Received: 02/04/22 11:45      Matrix: Water

| Parameters  | Results         | Units | Report  |          |    | Prepared       | Analyzed       | CAS No.    | Qual |
|---|-----------------|-------|---------|----------|----|----------------|----------------|------------|------|
|   |                 |       | Limit   | MDL      | DF |                |                |            |      |
| <b>6010D ATL ICP</b>  |                 |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 6010D    Preparation Method: EPA 3010A |                 |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |                 |       |         |          |    |                |                |            |      |
| Zinc  | ND              | mg/L  | 0.020   | 0.0085   | 1  | 02/18/22 08:02 | 02/18/22 16:25 | 7440-66-6  |      |
| Potassium   | <b>0.71</b>     | mg/L  | 0.20    | 0.15     | 1  | 02/18/22 08:02 | 02/18/22 16:25 | 7440-09-7  |      |
| Sodium  | <b>1.1</b>      | mg/L  | 1.0     | 0.58     | 1  | 02/18/22 08:02 | 02/18/22 16:25 | 7440-23-5  |      |
| Calcium   | <b>33.8</b>     | mg/L  | 1.0     | 0.12     | 1  | 02/18/22 08:02 | 02/18/22 16:25 | 7440-70-2  |      |
| Magnesium   | <b>11.0</b>     | mg/L  | 0.050   | 0.012    | 1  | 02/18/22 08:02 | 02/18/22 16:25 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>   |                 |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 6020B    Preparation Method: EPA 3005A |                 |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |                 |       |         |          |    |                |                |            |      |
| Antimony  | <b>0.0033</b>   | mg/L  | 0.0030  | 0.00078  | 1  | 02/18/22 07:59 | 02/18/22 15:21 | 7440-36-0  |      |
| Arsenic   | <b>0.0037J</b>  | mg/L  | 0.0050  | 0.0011   | 1  | 02/18/22 07:59 | 02/18/22 15:21 | 7440-38-2  |      |
| Barium  | <b>0.024</b>    | mg/L  | 0.0050  | 0.00067  | 1  | 02/18/22 07:59 | 02/18/22 15:21 | 7440-39-3  |      |
| Beryllium   | ND              | mg/L  | 0.00050 | 0.000054 | 1  | 02/18/22 07:59 | 02/18/22 15:21 | 7440-41-7  |      |
| Boron   | ND              | mg/L  | 0.040   | 0.0086   | 1  | 02/18/22 07:59 | 02/18/22 15:21 | 7440-42-8  |      |
| Cadmium   | ND              | mg/L  | 0.00050 | 0.00011  | 1  | 02/18/22 07:59 | 02/18/22 15:21 | 7440-43-9  |      |
| Chromium  | ND              | mg/L  | 0.0050  | 0.0011   | 1  | 02/18/22 07:59 | 02/18/22 15:21 | 7440-47-3  |      |
| Cobalt  | <b>0.00090J</b> | mg/L  | 0.0050  | 0.00039  | 1  | 02/18/22 07:59 | 02/18/22 15:21 | 7440-48-4  |      |
| Copper  | <b>0.00078J</b> | mg/L  | 0.0050  | 0.00050  | 1  | 02/18/22 07:59 | 02/18/22 15:21 | 7440-50-8  |      |
| Lead  | ND              | mg/L  | 0.0010  | 0.00089  | 1  | 02/18/22 07:59 | 02/18/22 15:21 | 7439-92-1  |      |
| Nickel  | ND              | mg/L  | 0.0050  | 0.00071  | 1  | 02/18/22 07:59 | 02/18/22 15:21 | 7440-02-0  |      |
| Selenium  | ND              | mg/L  | 0.0050  | 0.0014   | 1  | 02/18/22 07:59 | 02/18/22 15:21 | 7782-49-2  |      |
| Silver  | ND              | mg/L  | 0.0050  | 0.00044  | 1  | 02/18/22 07:59 | 02/18/22 15:21 | 7440-22-4  |      |
| Thallium  | ND              | mg/L  | 0.0010  | 0.00018  | 1  | 02/18/22 07:59 | 02/18/22 15:21 | 7440-28-0  |      |
| Vanadium  | ND              | mg/L  | 0.010   | 0.0019   | 1  | 02/18/22 07:59 | 02/18/22 15:21 | 7440-62-2  |      |
| <b>7470 Mercury</b>   |                 |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 7470A    Preparation Method: EPA 7470A |                 |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |                 |       |         |          |    |                |                |            |      |
| Mercury   | ND              | mg/L  | 0.00020 | 0.00013  | 1  | 02/15/22 15:15 | 02/16/22 11:25 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b>                           |                 |       |         |          |    |                |                |            |      |
| Analytical Method: SM 2540C-2015                              |                 |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |                 |       |         |          |    |                |                |            |      |
| Total Dissolved Solids  | <b>118</b>      | mg/L  | 10.0    | 10.0     | 1  |                | 02/07/22 17:21 |            |      |
| <b>2320B Alkalinity</b>                                       |                 |       |         |          |    |                |                |            |      |
| Analytical Method: SM 2320B                                   |                 |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Minneapolis                        |                 |       |         |          |    |                |                |            |      |
| Alkalinity, Total as CaCO3                                    | <b>120</b>      | mg/L  | 5.0     | 1.8      | 1  |                | 02/10/22 17:15 |            |      |
| Alkalinity,Bicarbonate (CaCO3)                                | <b>120</b>      | mg/L  | 5.0     | 1.8      | 1  |                | 02/10/22 17:15 |            |      |
| Alkalinity,Carbonate (CaCO3)                                  | ND              | mg/L  | 5.0     | 1.8      | 1  |                | 02/10/22 17:15 |            |      |
| <b>300.0 IC Anions 28 Days</b>                                |                 |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                     |                 |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Asheville                          |                 |       |         |          |    |                |                |            |      |
| Chloride  | <b>0.77J</b>    | mg/L  | 1.0     | 0.60     | 1  |                | 02/12/22 21:46 | 16887-00-6 |      |
| Fluoride  | ND              | mg/L  | 0.10    | 0.050    | 1  |                | 02/12/22 21:46 | 16984-48-8 |      |
| Sulfate   | <b>1.5</b>      | mg/L  | 1.0     | 0.50     | 1  |                | 02/12/22 21:46 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: FB-1                        |         | Lab ID: 92586436006  |         | Collected: 02/01/22 16:00 | Received: 02/04/22 11:45 | Matrix: Water  |                |            |      |
|-------------------------------------|---------|--|---------|---------------------------|--------------------------|----------------|----------------|------------|------|
| Parameters                          | Results | Units  | Report  |                           |                          | Prepared       | Analyzed       | CAS No.    | Qual |
|                                     |         |  | Limit   | MDL                       | DF                       |                |                |            |      |
| <b>6010D ATL ICP</b>                |         | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |
| Zinc                                | ND      | mg/L   | 0.020   | 0.0085                    | 1                        | 02/18/22 08:02 | 02/18/22 16:39 | 7440-66-6  |      |
| Potassium                           | ND      | mg/L   | 0.20    | 0.15                      | 1                        | 02/18/22 08:02 | 02/18/22 16:39 | 7440-09-7  |      |
| Sodium                              | ND      | mg/L   | 1.0     | 0.58                      | 1                        | 02/18/22 08:02 | 02/18/22 16:39 | 7440-23-5  |      |
| Calcium                             | ND      | mg/L   | 1.0     | 0.12                      | 1                        | 02/18/22 08:02 | 02/18/22 16:39 | 7440-70-2  |      |
| Magnesium                           | ND      | mg/L   | 0.050   | 0.012                     | 1                        | 02/18/22 08:02 | 02/18/22 16:39 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>               |         | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |
| Antimony                            | ND      | mg/L   | 0.0030  | 0.00078                   | 1                        | 02/18/22 07:59 | 02/18/22 15:44 | 7440-36-0  |      |
| Arsenic                             | ND      | mg/L   | 0.0050  | 0.0011                    | 1                        | 02/18/22 07:59 | 02/18/22 15:44 | 7440-38-2  |      |
| Barium                              | ND      | mg/L   | 0.0050  | 0.00067                   | 1                        | 02/18/22 07:59 | 02/18/22 15:44 | 7440-39-3  |      |
| Beryllium                           | ND      | mg/L   | 0.00050 | 0.000054                  | 1                        | 02/18/22 07:59 | 02/18/22 15:44 | 7440-41-7  |      |
| Boron                               | ND      | mg/L   | 0.040   | 0.0086                    | 1                        | 02/18/22 07:59 | 02/18/22 15:44 | 7440-42-8  |      |
| Cadmium                             | ND      | mg/L   | 0.00050 | 0.00011                   | 1                        | 02/18/22 07:59 | 02/18/22 15:44 | 7440-43-9  |      |
| Chromium                            | ND      | mg/L   | 0.0050  | 0.0011                    | 1                        | 02/18/22 07:59 | 02/18/22 15:44 | 7440-47-3  |      |
| Cobalt                              | ND      | mg/L   | 0.0050  | 0.00039                   | 1                        | 02/18/22 07:59 | 02/18/22 15:44 | 7440-48-4  |      |
| Copper                              | ND      | mg/L   | 0.0050  | 0.00050                   | 1                        | 02/18/22 07:59 | 02/18/22 15:44 | 7440-50-8  |      |
| Lead                                | ND      | mg/L   | 0.0010  | 0.00089                   | 1                        | 02/18/22 07:59 | 02/18/22 15:44 | 7439-92-1  |      |
| Nickel                              | ND      | mg/L   | 0.0050  | 0.00071                   | 1                        | 02/18/22 07:59 | 02/18/22 15:44 | 7440-02-0  |      |
| Selenium                            | ND      | mg/L   | 0.0050  | 0.0014                    | 1                        | 02/18/22 07:59 | 02/18/22 15:44 | 7782-49-2  |      |
| Silver                              | ND      | mg/L   | 0.0050  | 0.00044                   | 1                        | 02/18/22 07:59 | 02/18/22 15:44 | 7440-22-4  |      |
| Thallium                            | ND      | mg/L   | 0.0010  | 0.00018                   | 1                        | 02/18/22 07:59 | 02/18/22 15:44 | 7440-28-0  |      |
| Vanadium                            | ND      | mg/L   | 0.010   | 0.0019                    | 1                        | 02/18/22 07:59 | 02/18/22 15:44 | 7440-62-2  |      |
| <b>7470 Mercury</b>                 |         | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |
| Mercury                             | ND      | mg/L   | 0.00020 | 0.00013                   | 1                        | 02/15/22 15:15 | 02/16/22 11:27 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b> |         | Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |         |                           |                          |                |                |            |      |
| Total Dissolved Solids              | ND      | mg/L   | 10.0    | 10.0                      | 1                        |                | 02/07/22 17:21 |            |      |
| <b>2320B Alkalinity</b>             |         | Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |         |                           |                          |                |                |            |      |
| Alkalinity, Total as CaCO3          | ND      | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/10/22 17:21 |            |      |
| Alkalinity,Bicarbonate (CaCO3)      | ND      | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/10/22 17:21 |            |      |
| Alkalinity,Carbonate (CaCO3)        | ND      | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/10/22 17:21 |            |      |
| <b>300.0 IC Anions 28 Days</b>      |         | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |         |                           |                          |                |                |            |      |
| Chloride                            | ND      | mg/L   | 1.0     | 0.60                      | 1                        |                | 02/12/22 22:00 | 16887-00-6 |      |
| Fluoride                            | ND      | mg/L   | 0.10    | 0.050                     | 1                        |                | 02/12/22 22:00 | 16984-48-8 |      |
| Sulfate                             | ND      | mg/L   | 1.0     | 0.50                      | 1                        |                | 02/12/22 22:00 | 14808-79-8 |      |

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: GWA-3A   |          | Lab ID: 92586436007 |              | Collected: 02/02/22 12:08 |    | Received: 02/04/22 11:45 |                | Matrix: Water |      |
|--|----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results  | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |          |                     |              |                           |    |                          |                |               |      |
| Performed by   | CUSTOMER |                     |              |                           | 1  |                          | 02/07/22 10:50 |               |      |
| pH   | 7.94     | Std. Units          |              |                           | 1  |                          | 02/07/22 10:50 |               |      |
| <b>6010D ATL ICP</b>                                       |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND       | mg/L                | 0.020        | 0.0085                    | 1  | 02/18/22 08:02           | 02/18/22 16:44 | 7440-66-6     |      |
| Potassium  | 1.2      | mg/L                | 0.20         | 0.15                      | 1  | 02/18/22 08:02           | 02/18/22 16:44 | 7440-09-7     |      |
| Sodium   | 3.5      | mg/L                | 1.0          | 0.58                      | 1  | 02/18/22 08:02           | 02/18/22 16:44 | 7440-23-5     |      |
| Calcium  | 22.6     | mg/L                | 1.0          | 0.12                      | 1  | 02/18/22 08:02           | 02/18/22 16:44 | 7440-70-2     |      |
| Magnesium  | 11.3     | mg/L                | 0.050        | 0.012                     | 1  | 02/18/22 08:02           | 02/18/22 16:44 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>                                      |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND       | mg/L                | 0.0030       | 0.00078                   | 1  | 02/18/22 07:59           | 02/18/22 15:50 | 7440-36-0     |      |
| Arsenic  | ND       | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 07:59           | 02/18/22 15:50 | 7440-38-2     |      |
| Barium   | 0.0064   | mg/L                | 0.0050       | 0.00067                   | 1  | 02/18/22 07:59           | 02/18/22 15:50 | 7440-39-3     |      |
| Beryllium  | ND       | mg/L                | 0.00050      | 0.000054                  | 1  | 02/18/22 07:59           | 02/18/22 15:50 | 7440-41-7     |      |
| Boron  | ND       | mg/L                | 0.040        | 0.0086                    | 1  | 02/18/22 07:59           | 02/18/22 15:50 | 7440-42-8     |      |
| Cadmium  | ND       | mg/L                | 0.00050      | 0.00011                   | 1  | 02/18/22 07:59           | 02/18/22 15:50 | 7440-43-9     |      |
| Chromium   | 0.0069   | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 07:59           | 02/18/22 15:50 | 7440-47-3     |      |
| Cobalt   | ND       | mg/L                | 0.0050       | 0.00039                   | 1  | 02/18/22 07:59           | 02/18/22 15:50 | 7440-48-4     |      |
| Copper   | ND       | mg/L                | 0.0050       | 0.00050                   | 1  | 02/18/22 07:59           | 02/18/22 15:50 | 7440-50-8     |      |
| Lead   | ND       | mg/L                | 0.0010       | 0.00089                   | 1  | 02/18/22 07:59           | 02/18/22 15:50 | 7439-92-1     |      |
| Nickel   | ND       | mg/L                | 0.0050       | 0.00071                   | 1  | 02/18/22 07:59           | 02/18/22 15:50 | 7440-02-0     |      |
| Selenium   | ND       | mg/L                | 0.0050       | 0.0014                    | 1  | 02/18/22 07:59           | 02/18/22 15:50 | 7782-49-2     |      |
| Silver   | ND       | mg/L                | 0.0050       | 0.00044                   | 1  | 02/18/22 07:59           | 02/18/22 15:50 | 7440-22-4     |      |
| Thallium   | ND       | mg/L                | 0.0010       | 0.00018                   | 1  | 02/18/22 07:59           | 02/18/22 15:50 | 7440-28-0     |      |
| Vanadium   | ND       | mg/L                | 0.010        | 0.0019                    | 1  | 02/18/22 07:59           | 02/18/22 15:50 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND       | mg/L                | 0.00020      | 0.00013                   | 1  | 02/15/22 15:15           | 02/16/22 11:30 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015                           |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | 104      | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/08/22 11:13 |               |      |
| <b>2320B Alkalinity</b>                                    |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B                                |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Minneapolis                     |          |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3                                 | 97.5     | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 20:33 |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | 97.5     | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 20:33 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND       | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 20:33 |               |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

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**Sample: GWA-3A**      **Lab ID: 92586436007**      Collected: 02/02/22 12:08      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results    | Units | Report<br>Limit | MDL   | DF | Prepared | Analyzed       | CAS No.    | Qual |
|---|------------|-------|-----------------|-------|----|----------|----------------|------------|------|
| <b>300.0 IC Anions 28 Days</b>            |            |       |                 |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |            |       |                 |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |            |       |                 |       |    |          |                |            |      |
| Chloride                                  | <b>1.9</b> | mg/L  | 1.0             | 0.60  | 1  |          | 02/12/22 22:14 | 16887-00-6 |      |
| Fluoride                                  | ND         | mg/L  | 0.10            | 0.050 | 1  |          | 02/12/22 22:14 | 16984-48-8 |      |
| Sulfate                                   | <b>3.4</b> | mg/L  | 1.0             | 0.50  | 1  |          | 02/12/22 22:14 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: <b>GWC-5</b>   | Lab ID: <b>92586436008</b> | Collected: 02/02/22 11:34 | Received: 02/04/22 11:45 | Matrix: Water |    |                |                |           |      |
|--|----------------------------|---------------------------|--------------------------|---------------|----|----------------|----------------|-----------|------|
| Parameters   | Results                    | Units                     | Report Limit             | MDL           | DF | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                            |                           |                          |               |    |                |                |           |      |
| Performed by   | <b>CUSTOMER</b>            |                           |                          |               | 1  |                | 02/07/22 10:50 |           |      |
| pH   | <b>5.90</b>                | Std. Units                |                          |               | 1  |                | 02/07/22 10:50 |           |      |
| <b>6010D ATL ICP</b>   |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                            |                           |                          |               |    |                |                |           |      |
| Zinc   | <b>0.034</b>               | mg/L                      | 0.020                    | 0.0085        | 1  | 02/18/22 08:02 | 02/18/22 16:49 | 7440-66-6 |      |
| Potassium  | <b>1.8</b>                 | mg/L                      | 0.20                     | 0.15          | 1  | 02/18/22 08:02 | 02/18/22 16:49 | 7440-09-7 |      |
| Sodium   | <b>1.7</b>                 | mg/L                      | 1.0                      | 0.58          | 1  | 02/18/22 08:02 | 02/18/22 16:49 | 7440-23-5 |      |
| Calcium  | <b>3.7</b>                 | mg/L                      | 1.0                      | 0.12          | 1  | 02/18/22 08:02 | 02/18/22 16:49 | 7440-70-2 |      |
| Magnesium  | <b>0.27</b>                | mg/L                      | 0.050                    | 0.012         | 1  | 02/18/22 08:02 | 02/18/22 16:49 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                            |                           |                          |               |    |                |                |           |      |
| Antimony   | ND                         | mg/L                      | 0.0030                   | 0.00078       | 1  | 02/18/22 07:59 | 02/18/22 15:56 | 7440-36-0 |      |
| Arsenic  | ND                         | mg/L                      | 0.0050                   | 0.0011        | 1  | 02/18/22 07:59 | 02/18/22 15:56 | 7440-38-2 |      |
| Barium   | <b>0.012</b>               | mg/L                      | 0.0050                   | 0.00067       | 1  | 02/18/22 07:59 | 02/18/22 15:56 | 7440-39-3 |      |
| Beryllium  | <b>0.00075</b>             | mg/L                      | 0.00050                  | 0.000054      | 1  | 02/18/22 07:59 | 02/18/22 15:56 | 7440-41-7 |      |
| Boron  | ND                         | mg/L                      | 0.040                    | 0.0086        | 1  | 02/18/22 07:59 | 02/18/22 15:56 | 7440-42-8 |      |
| Cadmium  | ND                         | mg/L                      | 0.00050                  | 0.00011       | 1  | 02/18/22 07:59 | 02/18/22 15:56 | 7440-43-9 |      |
| Chromium   | ND                         | mg/L                      | 0.0050                   | 0.0011        | 1  | 02/18/22 07:59 | 02/18/22 15:56 | 7440-47-3 |      |
| Cobalt   | ND                         | mg/L                      | 0.0050                   | 0.00039       | 1  | 02/18/22 07:59 | 02/18/22 15:56 | 7440-48-4 |      |
| Copper   | <b>0.024</b>               | mg/L                      | 0.0050                   | 0.00050       | 1  | 02/18/22 07:59 | 02/18/22 15:56 | 7440-50-8 |      |
| Lead   | ND                         | mg/L                      | 0.0010                   | 0.00089       | 1  | 02/18/22 07:59 | 02/18/22 15:56 | 7439-92-1 |      |
| Nickel   | <b>0.0088</b>              | mg/L                      | 0.0050                   | 0.00071       | 1  | 02/18/22 07:59 | 02/18/22 15:56 | 7440-02-0 |      |
| Selenium   | ND                         | mg/L                      | 0.0050                   | 0.0014        | 1  | 02/18/22 07:59 | 02/18/22 15:56 | 7782-49-2 |      |
| Silver   | ND                         | mg/L                      | 0.0050                   | 0.00044       | 1  | 02/18/22 07:59 | 02/18/22 15:56 | 7440-22-4 |      |
| Thallium   | ND                         | mg/L                      | 0.0010                   | 0.00018       | 1  | 02/18/22 07:59 | 02/18/22 15:56 | 7440-28-0 |      |
| Vanadium   | ND                         | mg/L                      | 0.010                    | 0.0019        | 1  | 02/18/22 07:59 | 02/18/22 15:56 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                            |                           |                          |               |    |                |                |           |      |
| Mercury  | ND                         | mg/L                      | 0.00020                  | 0.00013       | 1  | 02/15/22 15:15 | 02/16/22 11:32 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                            |                           |                          |               |    |                |                |           |      |
| Total Dissolved Solids   | <b>32.0</b>                | mg/L                      | 10.0                     | 10.0          | 1  |                | 02/08/22 11:13 |           |      |
| <b>2320B Alkalinity</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                            |                           |                          |               |    |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>11.9</b>                | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/10/22 21:53 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>11.9</b>                | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/10/22 21:53 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND                         | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/10/22 21:53 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWC-5**      **Lab ID: 92586436008**      Collected: 02/02/22 11:34      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results      | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|--------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |              |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |              |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |              |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |              |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>0.66J</b> | mg/L  | 1.0    | 0.60  | 1  |          | 02/12/22 22:27 | 16887-00-6 |      |
| Fluoride                                  | ND           | mg/L  | 0.10   | 0.050 | 1  |          | 02/12/22 22:27 | 16984-48-8 |      |
| Sulfate                                   | <b>1.0</b>   | mg/L  | 1.0    | 0.50  | 1  |          | 02/12/22 22:27 | 14808-79-8 |      |

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Sample: GWC-6  |                 | Lab ID: 92586436009 |              | Collected: 02/02/22 15:22 |    | Received: 02/04/22 11:45 |                | Matrix: Water |      |
|--|-----------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                 |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1  |                          | 02/07/22 10:51 |               |      |
| pH   | <b>7.40</b>     | Std. Units          |              |                           | 1  |                          | 02/07/22 10:51 |               |      |
| <b>6010D ATL ICP</b>                                       |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND              | mg/L                | 0.020        | 0.0085                    | 1  | 02/18/22 08:02           | 02/18/22 16:54 | 7440-66-6     |      |
| Potassium  | <b>1.1</b>      | mg/L                | 0.20         | 0.15                      | 1  | 02/18/22 08:02           | 02/18/22 16:54 | 7440-09-7     |      |
| Sodium   | <b>1.0</b>      | mg/L                | 1.0          | 0.58                      | 1  | 02/18/22 08:02           | 02/18/22 16:54 | 7440-23-5     |      |
| Calcium  | <b>15.5</b>     | mg/L                | 1.0          | 0.12                      | 1  | 02/18/22 08:02           | 02/18/22 16:54 | 7440-70-2     |      |
| Magnesium  | <b>7.6</b>      | mg/L                | 0.050        | 0.012                     | 1  | 02/18/22 08:02           | 02/18/22 16:54 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>                                      |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND              | mg/L                | 0.0030       | 0.00078                   | 1  | 02/18/22 07:59           | 02/18/22 16:02 | 7440-36-0     |      |
| Arsenic  | ND              | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 07:59           | 02/18/22 16:02 | 7440-38-2     |      |
| Barium   | <b>0.0064</b>   | mg/L                | 0.0050       | 0.00067                   | 1  | 02/18/22 07:59           | 02/18/22 16:02 | 7440-39-3     |      |
| Beryllium  | ND              | mg/L                | 0.00050      | 0.000054                  | 1  | 02/18/22 07:59           | 02/18/22 16:02 | 7440-41-7     |      |
| Boron  | ND              | mg/L                | 0.040        | 0.0086                    | 1  | 02/18/22 07:59           | 02/18/22 16:02 | 7440-42-8     |      |
| Cadmium  | ND              | mg/L                | 0.00050      | 0.00011                   | 1  | 02/18/22 07:59           | 02/18/22 16:02 | 7440-43-9     |      |
| Chromium   | <b>0.0026J</b>  | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 07:59           | 02/18/22 16:02 | 7440-47-3     |      |
| Cobalt   | ND              | mg/L                | 0.0050       | 0.00039                   | 1  | 02/18/22 07:59           | 02/18/22 16:02 | 7440-48-4     |      |
| Copper   | ND              | mg/L                | 0.0050       | 0.00050                   | 1  | 02/18/22 07:59           | 02/18/22 16:02 | 7440-50-8     |      |
| Lead   | ND              | mg/L                | 0.0010       | 0.00089                   | 1  | 02/18/22 07:59           | 02/18/22 16:02 | 7439-92-1     |      |
| Nickel   | ND              | mg/L                | 0.0050       | 0.00071                   | 1  | 02/18/22 07:59           | 02/18/22 16:02 | 7440-02-0     |      |
| Selenium   | ND              | mg/L                | 0.0050       | 0.0014                    | 1  | 02/18/22 07:59           | 02/18/22 16:02 | 7782-49-2     |      |
| Silver   | ND              | mg/L                | 0.0050       | 0.00044                   | 1  | 02/18/22 07:59           | 02/18/22 16:02 | 7440-22-4     |      |
| Thallium   | ND              | mg/L                | 0.0010       | 0.00018                   | 1  | 02/18/22 07:59           | 02/18/22 16:02 | 7440-28-0     |      |
| Vanadium   | ND              | mg/L                | 0.010        | 0.0019                    | 1  | 02/18/22 07:59           | 02/18/22 16:02 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND              | mg/L                | 0.00020      | 0.00013                   | 1  | 02/15/22 15:15           | 02/16/22 11:35 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015                           |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | <b>73.0</b>     | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/08/22 11:13 |               |      |
| <b>2320B Alkalinity</b>                                    |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B                                |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Minneapolis                     |                 |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3                                 | <b>63.7</b>     | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 20:40 |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>63.7</b>     | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 20:40 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND              | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 20:40 |               |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWC-6**      **Lab ID: 92586436009**      Collected: 02/02/22 15:22      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 1.1     | mg/L  | 1.0    | 0.60  | 1  |          | 02/12/22 22:41 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/12/22 22:41 | 16984-48-8 |      |
| Sulfate                                   | 1.7     | mg/L  | 1.0    | 0.50  | 1  |          | 02/12/22 22:41 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: <b>GWC-6RZ</b>   | Lab ID: <b>92586436010</b> | Collected: 02/02/22 14:00 | Received: 02/04/22 11:45 | Matrix: Water |    |                |                |           |      |
|--|----------------------------|---------------------------|--------------------------|---------------|----|----------------|----------------|-----------|------|
| Parameters   | Results                    | Units                     | Report Limit             | MDL           | DF | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                            |                           |                          |               |    |                |                |           |      |
| Performed by   | <b>CUSTOMER</b>            |                           |                          |               | 1  |                | 02/07/22 10:51 |           |      |
| pH   | <b>6.80</b>                | Std. Units                |                          |               | 1  |                | 02/07/22 10:51 |           |      |
| <b>6010D ATL ICP</b>   |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                            |                           |                          |               |    |                |                |           |      |
| Zinc   | ND                         | mg/L                      | 0.020                    | 0.0085        | 1  | 02/18/22 08:02 | 02/18/22 16:58 | 7440-66-6 |      |
| Potassium  | <b>0.79</b>                | mg/L                      | 0.20                     | 0.15          | 1  | 02/18/22 08:02 | 02/18/22 16:58 | 7440-09-7 |      |
| Sodium   | <b>1.6</b>                 | mg/L                      | 1.0                      | 0.58          | 1  | 02/18/22 08:02 | 02/18/22 16:58 | 7440-23-5 |      |
| Calcium  | <b>10.5</b>                | mg/L                      | 1.0                      | 0.12          | 1  | 02/18/22 08:02 | 02/18/22 16:58 | 7440-70-2 |      |
| Magnesium  | <b>5.4</b>                 | mg/L                      | 0.050                    | 0.012         | 1  | 02/18/22 08:02 | 02/18/22 16:58 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                            |                           |                          |               |    |                |                |           |      |
| Antimony   | ND                         | mg/L                      | 0.0030                   | 0.00078       | 1  | 02/18/22 07:59 | 02/18/22 16:08 | 7440-36-0 |      |
| Arsenic  | <b>0.0012J</b>             | mg/L                      | 0.0050                   | 0.0011        | 1  | 02/18/22 07:59 | 02/18/22 16:08 | 7440-38-2 |      |
| Barium   | <b>0.0066</b>              | mg/L                      | 0.0050                   | 0.00067       | 1  | 02/18/22 07:59 | 02/18/22 16:08 | 7440-39-3 |      |
| Beryllium  | <b>0.000070J</b>           | mg/L                      | 0.00050                  | 0.000054      | 1  | 02/18/22 07:59 | 02/18/22 16:08 | 7440-41-7 |      |
| Boron  | ND                         | mg/L                      | 0.040                    | 0.0086        | 1  | 02/18/22 07:59 | 02/18/22 16:08 | 7440-42-8 |      |
| Cadmium  | ND                         | mg/L                      | 0.00050                  | 0.00011       | 1  | 02/18/22 07:59 | 02/18/22 16:08 | 7440-43-9 |      |
| Chromium   | <b>0.0024J</b>             | mg/L                      | 0.0050                   | 0.0011        | 1  | 02/18/22 07:59 | 02/18/22 16:08 | 7440-47-3 |      |
| Cobalt   | ND                         | mg/L                      | 0.0050                   | 0.00039       | 1  | 02/18/22 07:59 | 02/18/22 16:08 | 7440-48-4 |      |
| Copper   | ND                         | mg/L                      | 0.0050                   | 0.00050       | 1  | 02/18/22 07:59 | 02/18/22 16:08 | 7440-50-8 |      |
| Lead   | ND                         | mg/L                      | 0.0010                   | 0.00089       | 1  | 02/18/22 07:59 | 02/18/22 16:08 | 7439-92-1 |      |
| Nickel   | ND                         | mg/L                      | 0.0050                   | 0.00071       | 1  | 02/18/22 07:59 | 02/18/22 16:08 | 7440-02-0 |      |
| Selenium   | ND                         | mg/L                      | 0.0050                   | 0.0014        | 1  | 02/18/22 07:59 | 02/18/22 16:08 | 7782-49-2 |      |
| Silver   | ND                         | mg/L                      | 0.0050                   | 0.00044       | 1  | 02/18/22 07:59 | 02/18/22 16:08 | 7440-22-4 |      |
| Thallium   | ND                         | mg/L                      | 0.0010                   | 0.00018       | 1  | 02/18/22 07:59 | 02/18/22 16:08 | 7440-28-0 |      |
| Vanadium   | ND                         | mg/L                      | 0.010                    | 0.0019        | 1  | 02/18/22 07:59 | 02/18/22 16:08 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                            |                           |                          |               |    |                |                |           |      |
| Mercury  | ND                         | mg/L                      | 0.00020                  | 0.00013       | 1  | 02/15/22 15:15 | 02/16/22 11:38 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                            |                           |                          |               |    |                |                |           |      |
| Total Dissolved Solids   | <b>51.0</b>                | mg/L                      | 10.0                     | 10.0          | 1  |                | 02/08/22 11:13 |           |      |
| <b>2320B Alkalinity</b>  |                            |                           |                          |               |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                            |                           |                          |               |    |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>43.6</b>                | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/10/22 20:44 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>43.6</b>                | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/10/22 20:44 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND                         | mg/L                      | 5.0                      | 1.8           | 1  |                | 02/10/22 20:44 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWC-6RZ**      **Lab ID: 92586436010**      Collected: 02/02/22 14:00      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 1.3     | mg/L  | 1.0    | 0.60  | 1  |          | 02/12/22 22:55 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/12/22 22:55 | 16984-48-8 |      |
| Sulfate                                   | 1.5     | mg/L  | 1.0    | 0.50  | 1  |          | 02/12/22 22:55 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: **GWC-7Z** Lab ID: **92586436011** Collected: 02/02/22 12:15 Received: 02/04/22 11:45 Matrix: Water

| Parameters   | Results         | Units      | Report  |          |    | Prepared       | Analyzed       | CAS No.   | Qual |
|--|-----------------|------------|---------|----------|----|----------------|----------------|-----------|------|
|  |                 |            | Limit   | MDL      | DF |                |                |           |      |
| <b>Field Data</b>  |                 |            |         |          |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                 |            |         |          |    |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |            |         |          | 1  |                | 02/07/22 10:51 |           |      |
| pH   | <b>7.54</b>     | Std. Units |         |          | 1  |                | 02/07/22 10:51 |           |      |
| <b>6010D ATL ICP</b>                                       |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                 |            |         |          |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |            |         |          |    |                |                |           |      |
| Zinc   | ND              | mg/L       | 0.020   | 0.0085   | 1  | 02/18/22 08:02 | 02/18/22 17:03 | 7440-66-6 |      |
| Potassium  | <b>0.97</b>     | mg/L       | 0.20    | 0.15     | 1  | 02/18/22 08:02 | 02/18/22 17:03 | 7440-09-7 |      |
| Sodium   | <b>2.7</b>      | mg/L       | 1.0     | 0.58     | 1  | 02/18/22 08:02 | 02/18/22 17:03 | 7440-23-5 |      |
| Calcium  | <b>26.9</b>     | mg/L       | 1.0     | 0.12     | 1  | 02/18/22 08:02 | 02/18/22 17:03 | 7440-70-2 |      |
| Magnesium  | <b>13.4</b>     | mg/L       | 0.050   | 0.012    | 1  | 02/18/22 08:02 | 02/18/22 17:03 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>                                      |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                 |            |         |          |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |            |         |          |    |                |                |           |      |
| Antimony   | <b>0.00093J</b> | mg/L       | 0.0030  | 0.00078  | 1  | 02/18/22 07:59 | 02/18/22 16:14 | 7440-36-0 |      |
| Arsenic  | <b>0.0020J</b>  | mg/L       | 0.0050  | 0.0011   | 1  | 02/18/22 07:59 | 02/18/22 16:14 | 7440-38-2 |      |
| Barium   | <b>0.015</b>    | mg/L       | 0.0050  | 0.00067  | 1  | 02/18/22 07:59 | 02/18/22 16:14 | 7440-39-3 |      |
| Beryllium  | ND              | mg/L       | 0.00050 | 0.000054 | 1  | 02/18/22 07:59 | 02/18/22 16:14 | 7440-41-7 |      |
| Boron  | ND              | mg/L       | 0.040   | 0.0086   | 1  | 02/18/22 07:59 | 02/18/22 16:14 | 7440-42-8 |      |
| Cadmium  | ND              | mg/L       | 0.00050 | 0.00011  | 1  | 02/18/22 07:59 | 02/18/22 16:14 | 7440-43-9 |      |
| Chromium   | ND              | mg/L       | 0.0050  | 0.0011   | 1  | 02/18/22 07:59 | 02/18/22 16:14 | 7440-47-3 |      |
| Cobalt   | <b>0.00042J</b> | mg/L       | 0.0050  | 0.00039  | 1  | 02/18/22 07:59 | 02/18/22 16:14 | 7440-48-4 |      |
| Copper   | ND              | mg/L       | 0.0050  | 0.00050  | 1  | 02/18/22 07:59 | 02/18/22 16:14 | 7440-50-8 |      |
| Lead   | ND              | mg/L       | 0.0010  | 0.00089  | 1  | 02/18/22 07:59 | 02/18/22 16:14 | 7439-92-1 |      |
| Nickel   | ND              | mg/L       | 0.0050  | 0.00071  | 1  | 02/18/22 07:59 | 02/18/22 16:14 | 7440-02-0 |      |
| Selenium   | ND              | mg/L       | 0.0050  | 0.0014   | 1  | 02/18/22 07:59 | 02/18/22 16:14 | 7782-49-2 |      |
| Silver   | ND              | mg/L       | 0.0050  | 0.00044  | 1  | 02/18/22 07:59 | 02/18/22 16:14 | 7440-22-4 |      |
| Thallium   | ND              | mg/L       | 0.0010  | 0.00018  | 1  | 02/18/22 07:59 | 02/18/22 16:14 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L       | 0.010   | 0.0019   | 1  | 02/18/22 07:59 | 02/18/22 16:14 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                 |            |         |          |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |            |         |          |    |                |                |           |      |
| Mercury  | ND              | mg/L       | 0.00020 | 0.00013  | 1  | 02/15/22 15:15 | 02/16/22 11:46 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>                        |                 |            |         |          |    |                |                |           |      |
| Analytical Method: SM 2540C-2015                           |                 |            |         |          |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |            |         |          |    |                |                |           |      |
| Total Dissolved Solids                                     | <b>115</b>      | mg/L       | 10.0    | 10.0     | 1  |                | 02/08/22 11:14 |           |      |
| <b>2320B Alkalinity</b>                                    |                 |            |         |          |    |                |                |           |      |
| Analytical Method: SM 2320B                                |                 |            |         |          |    |                |                |           |      |
| Pace Analytical Services - Minneapolis                     |                 |            |         |          |    |                |                |           |      |
| Alkalinity, Total as CaCO3                                 | <b>123</b>      | mg/L       | 5.0     | 1.8      | 1  |                | 02/10/22 20:48 |           |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>123</b>      | mg/L       | 5.0     | 1.8      | 1  |                | 02/10/22 20:48 |           |      |
| Alkalinity,Carbonate (CaCO3)                               | ND              | mg/L       | 5.0     | 1.8      | 1  |                | 02/10/22 20:48 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWC-7Z**      **Lab ID: 92586436011**      Collected: 02/02/22 12:15      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results      | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|--------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |              |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |              |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |              |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |              |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>0.76J</b> | mg/L  | 1.0    | 0.60  | 1  |          | 02/13/22 00:05 | 16887-00-6 | M1   |
| Fluoride                                  | ND           | mg/L  | 0.10   | 0.050 | 1  |          | 02/13/22 00:05 | 16984-48-8 | M1   |
| Sulfate                                   | <b>1.3</b>   | mg/L  | 1.0    | 0.50  | 1  |          | 02/13/22 00:05 | 14808-79-8 | M1   |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWC-8Z**      **Lab ID: 92586436012**      Collected: 02/02/22 14:24      Received: 02/04/22 11:45      Matrix: Water

| Parameters  | Results          | Units      | Report  |          |    | Prepared       | Analyzed       | CAS No.   | Qual |
|---|------------------|------------|---------|----------|----|----------------|----------------|-----------|------|
|   |                  |            | Limit   | MDL      | DF |                |                |           |      |
| <b>Field Data</b>   |                  |            |         |          |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte   |                  |            |         |          |    |                |                |           |      |
| Performed by  | <b>CUSTOMER</b>  |            |         |          | 1  |                | 02/07/22 10:51 |           |      |
| pH  | <b>8.92</b>      | Std. Units |         |          | 1  |                | 02/07/22 10:51 |           |      |
| <b>6010D ATL ICP</b>  |                  |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                  |            |         |          |    |                |                |           |      |
| Zinc  | ND               | mg/L       | 0.020   | 0.0085   | 1  | 02/18/22 08:02 | 02/18/22 17:08 | 7440-66-6 |      |
| Potassium   | <b>1.8</b>       | mg/L       | 0.20    | 0.15     | 1  | 02/18/22 08:02 | 02/18/22 17:08 | 7440-09-7 |      |
| Sodium  | <b>2.1</b>       | mg/L       | 1.0     | 0.58     | 1  | 02/18/22 08:02 | 02/18/22 17:08 | 7440-23-5 |      |
| Calcium   | <b>20.8</b>      | mg/L       | 1.0     | 0.12     | 1  | 02/18/22 08:02 | 02/18/22 17:08 | 7440-70-2 |      |
| Magnesium   | <b>7.0</b>       | mg/L       | 0.050   | 0.012    | 1  | 02/18/22 08:02 | 02/18/22 17:08 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>   |                  |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                  |            |         |          |    |                |                |           |      |
| Antimony  | ND               | mg/L       | 0.0030  | 0.00078  | 1  | 02/18/22 07:59 | 02/18/22 16:20 | 7440-36-0 |      |
| Arsenic   | <b>0.0011J</b>   | mg/L       | 0.0050  | 0.0011   | 1  | 02/18/22 07:59 | 02/18/22 16:20 | 7440-38-2 |      |
| Barium  | <b>0.024</b>     | mg/L       | 0.0050  | 0.00067  | 1  | 02/18/22 07:59 | 02/18/22 16:20 | 7440-39-3 |      |
| Beryllium   | <b>0.000064J</b> | mg/L       | 0.00050 | 0.000054 | 1  | 02/18/22 07:59 | 02/18/22 16:20 | 7440-41-7 |      |
| Boron   | ND               | mg/L       | 0.040   | 0.0086   | 1  | 02/18/22 07:59 | 02/18/22 16:20 | 7440-42-8 |      |
| Cadmium   | ND               | mg/L       | 0.00050 | 0.00011  | 1  | 02/18/22 07:59 | 02/18/22 16:20 | 7440-43-9 |      |
| Chromium  | <b>0.0021J</b>   | mg/L       | 0.0050  | 0.0011   | 1  | 02/18/22 07:59 | 02/18/22 16:20 | 7440-47-3 |      |
| Cobalt  | ND               | mg/L       | 0.0050  | 0.00039  | 1  | 02/18/22 07:59 | 02/18/22 16:20 | 7440-48-4 |      |
| Copper  | ND               | mg/L       | 0.0050  | 0.00050  | 1  | 02/18/22 07:59 | 02/18/22 16:20 | 7440-50-8 |      |
| Lead  | ND               | mg/L       | 0.0010  | 0.00089  | 1  | 02/18/22 07:59 | 02/18/22 16:20 | 7439-92-1 |      |
| Nickel  | ND               | mg/L       | 0.0050  | 0.00071  | 1  | 02/18/22 07:59 | 02/18/22 16:20 | 7440-02-0 |      |
| Selenium  | ND               | mg/L       | 0.0050  | 0.0014   | 1  | 02/18/22 07:59 | 02/18/22 16:20 | 7782-49-2 |      |
| Silver  | ND               | mg/L       | 0.0050  | 0.00044  | 1  | 02/18/22 07:59 | 02/18/22 16:20 | 7440-22-4 |      |
| Thallium  | ND               | mg/L       | 0.0010  | 0.00018  | 1  | 02/18/22 07:59 | 02/18/22 16:20 | 7440-28-0 |      |
| Vanadium  | ND               | mg/L       | 0.010   | 0.0019   | 1  | 02/18/22 07:59 | 02/18/22 16:20 | 7440-62-2 |      |
| <b>7470 Mercury</b>   |                  |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 7470A      Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                  |            |         |          |    |                |                |           |      |
| Mercury   | ND               | mg/L       | 0.00020 | 0.00013  | 1  | 02/15/22 15:15 | 02/16/22 11:48 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>   |                  |            |         |          |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                                |                  |            |         |          |    |                |                |           |      |
| Total Dissolved Solids  | <b>85.0</b>      | mg/L       | 10.0    | 10.0     | 1  |                | 02/08/22 11:14 |           |      |
| <b>2320B Alkalinity</b>   |                  |            |         |          |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis   |                  |            |         |          |    |                |                |           |      |
| Alkalinity, Total as CaCO3  | <b>76.7</b>      | mg/L       | 5.0     | 1.8      | 1  |                | 02/10/22 20:52 |           |      |
| Alkalinity,Bicarbonate (CaCO3)  | <b>76.7</b>      | mg/L       | 5.0     | 1.8      | 1  |                | 02/10/22 20:52 |           |      |
| Alkalinity,Carbonate (CaCO3)  | ND               | mg/L       | 5.0     | 1.8      | 1  |                | 02/10/22 20:52 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWC-8Z**      **Lab ID: 92586436012**      Collected: 02/02/22 14:24      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 1.4     | mg/L  | 1.0    | 0.60  | 1  |          | 02/13/22 00:47 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/13/22 00:47 | 16984-48-8 |      |
| Sulfate                                   | 0.72J   | mg/L  | 1.0    | 0.50  | 1  |          | 02/13/22 00:47 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Parameters   | Results         | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.   | Qual |
|--|-----------------|------------|--------------|----------|----|----------------|----------------|-----------|------|
| <b>Sample: GWC-8RR</b>                                     |                 |            |              |          |    |                |                |           |      |
| <b>Lab ID: 92586436013</b>                                 |                 |            |              |          |    |                |                |           |      |
| Collected: 02/02/22 16:16                                  |                 |            |              |          |    |                |                |           |      |
| Received: 02/04/22 11:45                                   |                 |            |              |          |    |                |                |           |      |
| Matrix: Water  |                 |            |              |          |    |                |                |           |      |
| <b>Field Data</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                 |            |              |          |    |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |            |              |          | 1  |                | 02/07/22 10:51 |           |      |
| pH   | <b>8.13</b>     | Std. Units |              |          | 1  |                | 02/07/22 10:51 |           |      |
| <b>6010D ATL ICP</b>                                       |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                 |            |              |          |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |            |              |          |    |                |                |           |      |
| Zinc   | ND              | mg/L       | 0.020        | 0.0085   | 1  | 02/18/22 08:02 | 02/18/22 17:13 | 7440-66-6 |      |
| Potassium  | <b>1.3</b>      | mg/L       | 0.20         | 0.15     | 1  | 02/18/22 08:02 | 02/18/22 17:13 | 7440-09-7 |      |
| Sodium   | <b>0.81J</b>    | mg/L       | 1.0          | 0.58     | 1  | 02/18/22 08:02 | 02/18/22 17:13 | 7440-23-5 |      |
| Calcium  | <b>23.9</b>     | mg/L       | 1.0          | 0.12     | 1  | 02/18/22 08:02 | 02/18/22 17:13 | 7440-70-2 |      |
| Magnesium  | <b>11.0</b>     | mg/L       | 0.050        | 0.012    | 1  | 02/18/22 08:02 | 02/18/22 17:13 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>                                      |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                 |            |              |          |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |            |              |          |    |                |                |           |      |
| Antimony   | <b>0.0015J</b>  | mg/L       | 0.0030       | 0.00078  | 1  | 02/18/22 07:59 | 02/18/22 16:26 | 7440-36-0 |      |
| Arsenic  | <b>0.0013J</b>  | mg/L       | 0.0050       | 0.0011   | 1  | 02/18/22 07:59 | 02/18/22 16:26 | 7440-38-2 |      |
| Barium   | <b>0.013</b>    | mg/L       | 0.0050       | 0.00067  | 1  | 02/18/22 07:59 | 02/18/22 16:26 | 7440-39-3 |      |
| Beryllium  | ND              | mg/L       | 0.00050      | 0.000054 | 1  | 02/18/22 07:59 | 02/18/22 16:26 | 7440-41-7 |      |
| Boron  | ND              | mg/L       | 0.040        | 0.0086   | 1  | 02/18/22 07:59 | 02/18/22 16:26 | 7440-42-8 |      |
| Cadmium  | ND              | mg/L       | 0.00050      | 0.00011  | 1  | 02/18/22 07:59 | 02/18/22 16:26 | 7440-43-9 |      |
| Chromium   | <b>0.0015J</b>  | mg/L       | 0.0050       | 0.0011   | 1  | 02/18/22 07:59 | 02/18/22 16:26 | 7440-47-3 |      |
| Cobalt   | ND              | mg/L       | 0.0050       | 0.00039  | 1  | 02/18/22 07:59 | 02/18/22 16:26 | 7440-48-4 |      |
| Copper   | ND              | mg/L       | 0.0050       | 0.00050  | 1  | 02/18/22 07:59 | 02/18/22 16:26 | 7440-50-8 |      |
| Lead   | ND              | mg/L       | 0.0010       | 0.00089  | 1  | 02/18/22 07:59 | 02/18/22 16:26 | 7439-92-1 |      |
| Nickel   | ND              | mg/L       | 0.0050       | 0.00071  | 1  | 02/18/22 07:59 | 02/18/22 16:26 | 7440-02-0 |      |
| Selenium   | ND              | mg/L       | 0.0050       | 0.0014   | 1  | 02/18/22 07:59 | 02/18/22 16:26 | 7782-49-2 |      |
| Silver   | ND              | mg/L       | 0.0050       | 0.00044  | 1  | 02/18/22 07:59 | 02/18/22 16:26 | 7440-22-4 |      |
| Thallium   | ND              | mg/L       | 0.0010       | 0.00018  | 1  | 02/18/22 07:59 | 02/18/22 16:26 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L       | 0.010        | 0.0019   | 1  | 02/18/22 07:59 | 02/18/22 16:26 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                 |            |              |          |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |            |              |          |    |                |                |           |      |
| Mercury  | ND              | mg/L       | 0.00020      | 0.00013  | 1  | 02/15/22 15:15 | 02/16/22 11:51 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>                        |                 |            |              |          |    |                |                |           |      |
| Analytical Method: SM 2540C-2015                           |                 |            |              |          |    |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |            |              |          |    |                |                |           |      |
| Total Dissolved Solids                                     | <b>102</b>      | mg/L       | 10.0         | 10.0     | 1  |                | 02/08/22 11:14 |           |      |
| <b>2320B Alkalinity</b>                                    |                 |            |              |          |    |                |                |           |      |
| Analytical Method: SM 2320B                                |                 |            |              |          |    |                |                |           |      |
| Pace Analytical Services - Minneapolis                     |                 |            |              |          |    |                |                |           |      |
| Alkalinity, Total as CaCO3                                 | <b>102</b>      | mg/L       | 5.0          | 1.8      | 1  |                | 02/10/22 21:12 |           |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>102</b>      | mg/L       | 5.0          | 1.8      | 1  |                | 02/10/22 21:12 |           |      |
| Alkalinity,Carbonate (CaCO3)                               | ND              | mg/L       | 5.0          | 1.8      | 1  |                | 02/10/22 21:12 |           |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

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**Sample: GWC-8RR**      **Lab ID: 92586436013**      Collected: 02/02/22 16:16      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results      | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|--------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |              |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |              |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |              |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |              |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>0.77J</b> | mg/L  | 1.0    | 0.60  | 1  |          | 02/13/22 01:01 | 16887-00-6 |      |
| Fluoride                                  | ND           | mg/L  | 0.10   | 0.050 | 1  |          | 02/13/22 01:01 | 16984-48-8 |      |
| Sulfate                                   | <b>0.72J</b> | mg/L  | 1.0    | 0.50  | 1  |          | 02/13/22 01:01 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

**Sample: GWC-9**      **Lab ID: 92586436014**      Collected: 02/02/22 15:02      Received: 02/04/22 11:45      Matrix: Water

| Parameters  | Results         | Units      | Report  |          |    | Prepared       | Analyzed       | CAS No.   | Qual |
|---|-----------------|------------|---------|----------|----|----------------|----------------|-----------|------|
|   |                 |            | Limit   | MDL      | DF |                |                |           |      |
| <b>Field Data</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte   |                 |            |         |          |    |                |                |           |      |
| Performed by  | <b>CUSTOMER</b> |            |         |          | 1  |                | 02/07/22 10:51 |           |      |
| pH  | <b>4.81</b>     | Std. Units |         |          | 1  |                | 02/07/22 10:51 |           |      |
| <b>6010D ATL ICP</b>  |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |         |          |    |                |                |           |      |
| Zinc  | ND              | mg/L       | 0.020   | 0.0085   | 1  | 02/18/22 08:02 | 02/18/22 17:17 | 7440-66-6 |      |
| Potassium   | <b>0.92</b>     | mg/L       | 0.20    | 0.15     | 1  | 02/18/22 08:02 | 02/18/22 17:17 | 7440-09-7 |      |
| Sodium  | <b>1.2</b>      | mg/L       | 1.0     | 0.58     | 1  | 02/18/22 08:02 | 02/18/22 17:17 | 7440-23-5 |      |
| Calcium   | <b>2.2</b>      | mg/L       | 1.0     | 0.12     | 1  | 02/18/22 08:02 | 02/18/22 17:17 | 7440-70-2 |      |
| Magnesium   | <b>1.2</b>      | mg/L       | 0.050   | 0.012    | 1  | 02/18/22 08:02 | 02/18/22 17:17 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |         |          |    |                |                |           |      |
| Antimony  | ND              | mg/L       | 0.0030  | 0.00078  | 1  | 02/18/22 07:59 | 02/18/22 16:32 | 7440-36-0 |      |
| Arsenic   | <b>0.0013J</b>  | mg/L       | 0.0050  | 0.0011   | 1  | 02/18/22 07:59 | 02/18/22 16:32 | 7440-38-2 |      |
| Barium  | <b>0.044</b>    | mg/L       | 0.0050  | 0.00067  | 1  | 02/18/22 07:59 | 02/18/22 16:32 | 7440-39-3 |      |
| Beryllium   | <b>0.00018J</b> | mg/L       | 0.00050 | 0.000054 | 1  | 02/18/22 07:59 | 02/18/22 16:32 | 7440-41-7 |      |
| Boron   | ND              | mg/L       | 0.040   | 0.0086   | 1  | 02/18/22 07:59 | 02/18/22 16:32 | 7440-42-8 |      |
| Cadmium   | ND              | mg/L       | 0.00050 | 0.00011  | 1  | 02/18/22 07:59 | 02/18/22 16:32 | 7440-43-9 |      |
| Chromium  | ND              | mg/L       | 0.0050  | 0.0011   | 1  | 02/18/22 07:59 | 02/18/22 16:32 | 7440-47-3 |      |
| Cobalt  | <b>0.00043J</b> | mg/L       | 0.0050  | 0.00039  | 1  | 02/18/22 07:59 | 02/18/22 16:32 | 7440-48-4 |      |
| Copper  | ND              | mg/L       | 0.0050  | 0.00050  | 1  | 02/18/22 07:59 | 02/18/22 16:32 | 7440-50-8 |      |
| Lead  | ND              | mg/L       | 0.0010  | 0.00089  | 1  | 02/18/22 07:59 | 02/18/22 16:32 | 7439-92-1 |      |
| Nickel  | <b>0.0011J</b>  | mg/L       | 0.0050  | 0.00071  | 1  | 02/18/22 07:59 | 02/18/22 16:32 | 7440-02-0 |      |
| Selenium  | ND              | mg/L       | 0.0050  | 0.0014   | 1  | 02/18/22 07:59 | 02/18/22 16:32 | 7782-49-2 |      |
| Silver  | ND              | mg/L       | 0.0050  | 0.00044  | 1  | 02/18/22 07:59 | 02/18/22 16:32 | 7440-22-4 |      |
| Thallium  | ND              | mg/L       | 0.0010  | 0.00018  | 1  | 02/18/22 07:59 | 02/18/22 16:32 | 7440-28-0 |      |
| Vanadium  | ND              | mg/L       | 0.010   | 0.0019   | 1  | 02/18/22 07:59 | 02/18/22 16:32 | 7440-62-2 |      |
| <b>7470 Mercury</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: EPA 7470A      Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |         |          |    |                |                |           |      |
| Mercury   | ND              | mg/L       | 0.00020 | 0.00013  | 1  | 02/15/22 15:15 | 02/16/22 11:53 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                                |                 |            |         |          |    |                |                |           |      |
| Total Dissolved Solids  | <b>21.0</b>     | mg/L       | 10.0    | 10.0     | 1  |                | 02/08/22 11:14 |           |      |
| <b>2320B Alkalinity</b>   |                 |            |         |          |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis   |                 |            |         |          |    |                |                |           |      |
| Alkalinity, Total as CaCO3  | <b>2.5J</b>     | mg/L       | 5.0     | 1.8      | 1  |                | 02/10/22 21:57 |           |      |
| Alkalinity,Bicarbonate (CaCO3)  | <b>2.5J</b>     | mg/L       | 5.0     | 1.8      | 1  |                | 02/10/22 21:57 |           |      |
| Alkalinity,Carbonate (CaCO3)  | ND              | mg/L       | 5.0     | 1.8      | 1  |                | 02/10/22 21:57 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWC-9**      **Lab ID: 92586436014**      Collected: 02/02/22 15:02      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 2.1     | mg/L  | 1.0    | 0.60  | 1  |          | 02/13/22 01:15 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/13/22 01:15 | 16984-48-8 |      |
| Sulfate                                   | 2.5     | mg/L  | 1.0    | 0.50  | 1  |          | 02/13/22 01:15 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: <b>GWC-12</b>  |                 | Lab ID: <b>92586436015</b> |              | Collected: 02/02/22 15:55 | Received: 02/04/22 11:45 | Matrix: Water  |                |           |      |
|--|-----------------|----------------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results         | Units                      | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                            |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |                            |              |                           | 1                        |                | 02/07/22 10:52 |           |      |
| pH   | <b>6.35</b>     | Std. Units                 |              |                           | 1                        |                | 02/07/22 10:52 |           |      |
| <b>6010D ATL ICP</b>   |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                            |              |                           |                          |                |                |           |      |
| Zinc   | <b>0.019J</b>   | mg/L                       | 0.020        | 0.0085                    | 1                        | 02/18/22 08:02 | 02/18/22 17:22 | 7440-66-6 |      |
| Potassium  | <b>1.1</b>      | mg/L                       | 0.20         | 0.15                      | 1                        | 02/18/22 08:02 | 02/18/22 17:22 | 7440-09-7 |      |
| Sodium   | <b>2.1</b>      | mg/L                       | 1.0          | 0.58                      | 1                        | 02/18/22 08:02 | 02/18/22 17:22 | 7440-23-5 |      |
| Calcium  | <b>8.4</b>      | mg/L                       | 1.0          | 0.12                      | 1                        | 02/18/22 08:02 | 02/18/22 17:22 | 7440-70-2 |      |
| Magnesium  | <b>4.4</b>      | mg/L                       | 0.050        | 0.012                     | 1                        | 02/18/22 08:02 | 02/18/22 17:22 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>  |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                            |              |                           |                          |                |                |           |      |
| Antimony   | ND              | mg/L                       | 0.0030       | 0.00078                   | 1                        | 02/18/22 07:59 | 02/18/22 16:38 | 7440-36-0 |      |
| Arsenic  | <b>0.0027J</b>  | mg/L                       | 0.0050       | 0.0011                    | 1                        | 02/18/22 07:59 | 02/18/22 16:38 | 7440-38-2 |      |
| Barium   | <b>0.023</b>    | mg/L                       | 0.0050       | 0.00067                   | 1                        | 02/18/22 07:59 | 02/18/22 16:38 | 7440-39-3 |      |
| Beryllium  | ND              | mg/L                       | 0.00050      | 0.000054                  | 1                        | 02/18/22 07:59 | 02/18/22 16:38 | 7440-41-7 |      |
| Boron  | ND              | mg/L                       | 0.040        | 0.0086                    | 1                        | 02/18/22 07:59 | 02/18/22 16:38 | 7440-42-8 |      |
| Cadmium  | <b>0.0012</b>   | mg/L                       | 0.00050      | 0.00011                   | 1                        | 02/18/22 07:59 | 02/18/22 16:38 | 7440-43-9 |      |
| Chromium   | ND              | mg/L                       | 0.0050       | 0.0011                    | 1                        | 02/18/22 07:59 | 02/18/22 16:38 | 7440-47-3 |      |
| Cobalt   | <b>0.0034J</b>  | mg/L                       | 0.0050       | 0.00039                   | 1                        | 02/18/22 07:59 | 02/18/22 16:38 | 7440-48-4 |      |
| Copper   | ND              | mg/L                       | 0.0050       | 0.00050                   | 1                        | 02/18/22 07:59 | 02/18/22 16:38 | 7440-50-8 |      |
| Lead   | ND              | mg/L                       | 0.0010       | 0.00089                   | 1                        | 02/18/22 07:59 | 02/18/22 16:38 | 7439-92-1 |      |
| Nickel   | <b>0.0025J</b>  | mg/L                       | 0.0050       | 0.00071                   | 1                        | 02/18/22 07:59 | 02/18/22 16:38 | 7440-02-0 |      |
| Selenium   | ND              | mg/L                       | 0.0050       | 0.0014                    | 1                        | 02/18/22 07:59 | 02/18/22 16:38 | 7782-49-2 |      |
| Silver   | ND              | mg/L                       | 0.0050       | 0.00044                   | 1                        | 02/18/22 07:59 | 02/18/22 16:38 | 7440-22-4 |      |
| Thallium   | ND              | mg/L                       | 0.0010       | 0.00018                   | 1                        | 02/18/22 07:59 | 02/18/22 16:38 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L                       | 0.010        | 0.0019                    | 1                        | 02/18/22 07:59 | 02/18/22 16:38 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                            |              |                           |                          |                |                |           |      |
| Mercury  | ND              | mg/L                       | 0.00020      | 0.00013                   | 1                        | 02/15/22 15:15 | 02/16/22 11:56 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                            |              |                           |                          |                |                |           |      |
| Total Dissolved Solids   | <b>54.0</b>     | mg/L                       | 10.0         | 10.0                      | 1                        |                | 02/08/22 11:14 |           |      |
| <b>2320B Alkalinity</b>  |                 |                            |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                 |                            |              |                           |                          |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>55.9</b>     | mg/L                       | 5.0          | 1.8                       | 1                        |                | 02/10/22 21:19 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>55.9</b>     | mg/L                       | 5.0          | 1.8                       | 1                        |                | 02/10/22 21:19 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND              | mg/L                       | 5.0          | 1.8                       | 1                        |                | 02/10/22 21:19 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWC-12**      **Lab ID: 92586436015**      Collected: 02/02/22 15:55      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results      | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|--------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |              |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |              |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |              |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |              |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>0.79J</b> | mg/L  | 1.0    | 0.60  | 1  |          | 02/13/22 01:28 | 16887-00-6 |      |
| Fluoride                                  | ND           | mg/L  | 0.10   | 0.050 | 1  |          | 02/13/22 01:28 | 16984-48-8 |      |
| Sulfate                                   | ND           | mg/L  | 1.0    | 0.50  | 1  |          | 02/13/22 01:28 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: GWA-50R  |                  | Lab ID: 92586436016 |              | Collected: 02/02/22 10:12 | Received: 02/04/22 11:45 | Matrix: Water  |                |           |      |
|--|------------------|---------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results          | Units               | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                  |                     |              |                           |                          |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                  |                     |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b>  |                     |              |                           | 1                        |                | 02/07/22 10:52 |           |      |
| pH   | <b>5.17</b>      | Std. Units          |              |                           | 1                        |                | 02/07/22 10:52 |           |      |
| <b>6010D ATL ICP</b>   |                  |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |                          |                |                |           |      |
| Zinc   | ND               | mg/L                | 0.020        | 0.0085                    | 1                        | 02/18/22 08:02 | 02/18/22 17:36 | 7440-66-6 |      |
| Potassium  | <b>0.20</b>      | mg/L                | 0.20         | 0.15                      | 1                        | 02/18/22 08:02 | 02/18/22 17:36 | 7440-09-7 |      |
| Sodium   | <b>0.94J</b>     | mg/L                | 1.0          | 0.58                      | 1                        | 02/18/22 08:02 | 02/18/22 17:36 | 7440-23-5 |      |
| Calcium  | <b>0.93J</b>     | mg/L                | 1.0          | 0.12                      | 1                        | 02/18/22 08:02 | 02/18/22 17:36 | 7440-70-2 |      |
| Magnesium  | <b>0.34</b>      | mg/L                | 0.050        | 0.012                     | 1                        | 02/18/22 08:02 | 02/18/22 17:36 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>  |                  |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |                          |                |                |           |      |
| Antimony   | ND               | mg/L                | 0.0030       | 0.00078                   | 1                        | 02/18/22 07:59 | 02/18/22 17:13 | 7440-36-0 |      |
| Arsenic  | ND               | mg/L                | 0.0050       | 0.0011                    | 1                        | 02/18/22 07:59 | 02/18/22 17:13 | 7440-38-2 |      |
| Barium   | <b>0.0090</b>    | mg/L                | 0.0050       | 0.00067                   | 1                        | 02/18/22 07:59 | 02/18/22 17:13 | 7440-39-3 |      |
| Beryllium  | <b>0.000055J</b> | mg/L                | 0.00050      | 0.000054                  | 1                        | 02/18/22 07:59 | 02/18/22 17:13 | 7440-41-7 |      |
| Boron  | ND               | mg/L                | 0.040        | 0.0086                    | 1                        | 02/18/22 07:59 | 02/18/22 17:13 | 7440-42-8 |      |
| Cadmium  | ND               | mg/L                | 0.00050      | 0.00011                   | 1                        | 02/18/22 07:59 | 02/18/22 17:13 | 7440-43-9 |      |
| Chromium   | ND               | mg/L                | 0.0050       | 0.0011                    | 1                        | 02/18/22 07:59 | 02/18/22 17:13 | 7440-47-3 |      |
| Cobalt   | ND               | mg/L                | 0.0050       | 0.00039                   | 1                        | 02/18/22 07:59 | 02/18/22 17:13 | 7440-48-4 |      |
| Copper   | <b>0.0033J</b>   | mg/L                | 0.0050       | 0.00050                   | 1                        | 02/18/22 07:59 | 02/18/22 17:13 | 7440-50-8 |      |
| Lead   | ND               | mg/L                | 0.0010       | 0.00089                   | 1                        | 02/18/22 07:59 | 02/18/22 17:13 | 7439-92-1 |      |
| Nickel   | <b>0.00089J</b>  | mg/L                | 0.0050       | 0.00071                   | 1                        | 02/18/22 07:59 | 02/18/22 17:13 | 7440-02-0 |      |
| Selenium   | ND               | mg/L                | 0.0050       | 0.0014                    | 1                        | 02/18/22 07:59 | 02/18/22 17:13 | 7782-49-2 |      |
| Silver   | <b>0.0012J</b>   | mg/L                | 0.0050       | 0.00044                   | 1                        | 02/18/22 07:59 | 02/18/22 17:13 | 7440-22-4 |      |
| Thallium   | ND               | mg/L                | 0.0010       | 0.00018                   | 1                        | 02/18/22 07:59 | 02/18/22 17:13 | 7440-28-0 |      |
| Vanadium   | ND               | mg/L                | 0.010        | 0.0019                    | 1                        | 02/18/22 07:59 | 02/18/22 17:13 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                  |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                  |                     |              |                           |                          |                |                |           |      |
| Mercury  | ND               | mg/L                | 0.00020      | 0.00013                   | 1                        | 02/15/22 15:15 | 02/16/22 11:59 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                  |                     |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                  |                     |              |                           |                          |                |                |           |      |
| Total Dissolved Solids   | <b>15.0</b>      | mg/L                | 10.0         | 10.0                      | 1                        |                | 02/08/22 11:15 |           |      |
| <b>2320B Alkalinity</b>  |                  |                     |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                  |                     |              |                           |                          |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>2.9J</b>      | mg/L                | 5.0          | 1.8                       | 1                        |                | 02/10/22 22:00 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>2.9J</b>      | mg/L                | 5.0          | 1.8                       | 1                        |                | 02/10/22 22:00 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND               | mg/L                | 5.0          | 1.8                       | 1                        |                | 02/10/22 22:00 |           |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

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**Sample: GWA-50R**      **Lab ID: 92586436016**      Collected: 02/02/22 10:12      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results      | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|--------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |              |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |              |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |              |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |              |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>0.70J</b> | mg/L  | 1.0    | 0.60  | 1  |          | 02/13/22 01:42 | 16887-00-6 |      |
| Fluoride                                  | ND           | mg/L  | 0.10   | 0.050 | 1  |          | 02/13/22 01:42 | 16984-48-8 |      |
| Sulfate                                   | <b>0.53J</b> | mg/L  | 1.0    | 0.50  | 1  |          | 02/13/22 01:42 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: DUP-2                       |                 | Lab ID: 92586436017  |              | Collected: 02/02/22 00:00 | Received: 02/04/22 11:45 | Matrix: Water  |                |            |      |
|-------------------------------------|-----------------|--|--------------|---------------------------|--------------------------|----------------|----------------|------------|------|
| Parameters                          | Results         | Units  | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.    | Qual |
| <b>6010D ATL ICP</b>                |                 | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Zinc                                | ND              | mg/L   | 0.020        | 0.0085                    | 1                        | 02/18/22 08:02 | 02/18/22 17:41 | 7440-66-6  |      |
| Potassium                           | <b>0.97</b>     | mg/L   | 0.20         | 0.15                      | 1                        | 02/18/22 08:02 | 02/18/22 17:41 | 7440-09-7  |      |
| Sodium                              | <b>1.2</b>      | mg/L   | 1.0          | 0.58                      | 1                        | 02/18/22 08:02 | 02/18/22 17:41 | 7440-23-5  |      |
| Calcium                             | <b>2.3</b>      | mg/L   | 1.0          | 0.12                      | 1                        | 02/18/22 08:02 | 02/18/22 17:41 | 7440-70-2  |      |
| Magnesium                           | <b>1.2</b>      | mg/L   | 0.050        | 0.012                     | 1                        | 02/18/22 08:02 | 02/18/22 17:41 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>               |                 | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Antimony                            | ND              | mg/L   | 0.0030       | 0.00078                   | 1                        | 02/18/22 07:59 | 02/18/22 17:19 | 7440-36-0  |      |
| Arsenic                             | ND              | mg/L   | 0.0050       | 0.0011                    | 1                        | 02/18/22 07:59 | 02/18/22 17:19 | 7440-38-2  |      |
| Barium                              | <b>0.045</b>    | mg/L   | 0.0050       | 0.00067                   | 1                        | 02/18/22 07:59 | 02/18/22 17:19 | 7440-39-3  |      |
| Beryllium                           | <b>0.00018J</b> | mg/L   | 0.00050      | 0.000054                  | 1                        | 02/18/22 07:59 | 02/18/22 17:19 | 7440-41-7  |      |
| Boron                               | ND              | mg/L   | 0.040        | 0.0086                    | 1                        | 02/18/22 07:59 | 02/18/22 17:19 | 7440-42-8  |      |
| Cadmium                             | ND              | mg/L   | 0.00050      | 0.00011                   | 1                        | 02/18/22 07:59 | 02/18/22 17:19 | 7440-43-9  |      |
| Chromium                            | ND              | mg/L   | 0.0050       | 0.0011                    | 1                        | 02/18/22 07:59 | 02/18/22 17:19 | 7440-47-3  |      |
| Cobalt                              | <b>0.00042J</b> | mg/L   | 0.0050       | 0.00039                   | 1                        | 02/18/22 07:59 | 02/18/22 17:19 | 7440-48-4  |      |
| Copper                              | ND              | mg/L   | 0.0050       | 0.00050                   | 1                        | 02/18/22 07:59 | 02/18/22 17:19 | 7440-50-8  |      |
| Lead                                | ND              | mg/L   | 0.0010       | 0.00089                   | 1                        | 02/18/22 07:59 | 02/18/22 17:19 | 7439-92-1  |      |
| Nickel                              | <b>0.0011J</b>  | mg/L   | 0.0050       | 0.00071                   | 1                        | 02/18/22 07:59 | 02/18/22 17:19 | 7440-02-0  |      |
| Selenium                            | ND              | mg/L   | 0.0050       | 0.0014                    | 1                        | 02/18/22 07:59 | 02/18/22 17:19 | 7782-49-2  |      |
| Silver                              | ND              | mg/L   | 0.0050       | 0.00044                   | 1                        | 02/18/22 07:59 | 02/18/22 17:19 | 7440-22-4  |      |
| Thallium                            | ND              | mg/L   | 0.0010       | 0.00018                   | 1                        | 02/18/22 07:59 | 02/18/22 17:19 | 7440-28-0  |      |
| Vanadium                            | ND              | mg/L   | 0.010        | 0.0019                    | 1                        | 02/18/22 07:59 | 02/18/22 17:19 | 7440-62-2  |      |
| <b>7470 Mercury</b>                 |                 | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Mercury                             | ND              | mg/L   | 0.00020      | 0.00013                   | 1                        | 02/15/22 15:15 | 02/16/22 12:01 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b> |                 | Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |              |                           |                          |                |                |            |      |
| Total Dissolved Solids              | <b>27.0</b>     | mg/L   | 10.0         | 10.0                      | 1                        |                | 02/08/22 11:15 |            |      |
| <b>2320B Alkalinity</b>             |                 | Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |              |                           |                          |                |                |            |      |
| Alkalinity, Total as CaCO3          | <b>2.6J</b>     | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/10/22 22:03 |            |      |
| Alkalinity,Bicarbonate (CaCO3)      | <b>2.6J</b>     | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/10/22 22:03 |            |      |
| Alkalinity,Carbonate (CaCO3)        | ND              | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/10/22 22:03 |            |      |
| <b>300.0 IC Anions 28 Days</b>      |                 | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |              |                           |                          |                |                |            |      |
| Chloride                            | <b>2.1</b>      | mg/L   | 1.0          | 0.60                      | 1                        |                | 02/13/22 01:56 | 16887-00-6 |      |
| Fluoride                            | ND              | mg/L   | 0.10         | 0.050                     | 1                        |                | 02/13/22 01:56 | 16984-48-8 |      |
| Sulfate                             | <b>2.5</b>      | mg/L   | 1.0          | 0.50                      | 1                        |                | 02/13/22 01:56 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

**Sample: FB-2**      **Lab ID: 92586436018**      Collected: 02/02/22 16:14      Received: 02/04/22 11:45      Matrix: Water

| Parameters  | Results | Units | Report  |          |    | Prepared       | Analyzed       | CAS No.    | Qual |
|---|---------|-------|---------|----------|----|----------------|----------------|------------|------|
|   |         |       | Limit   | MDL      | DF |                |                |            |      |
| <b>6010D ATL ICP</b>  |         |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 6010D    Preparation Method: EPA 3010A |         |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |         |       |         |          |    |                |                |            |      |
| Zinc  | ND      | mg/L  | 0.020   | 0.0085   | 1  | 02/18/22 08:02 | 02/18/22 17:46 | 7440-66-6  |      |
| Potassium   | ND      | mg/L  | 0.20    | 0.15     | 1  | 02/18/22 08:02 | 02/18/22 17:46 | 7440-09-7  |      |
| Sodium  | ND      | mg/L  | 1.0     | 0.58     | 1  | 02/18/22 08:02 | 02/18/22 17:46 | 7440-23-5  |      |
| Calcium   | ND      | mg/L  | 1.0     | 0.12     | 1  | 02/18/22 08:02 | 02/18/22 17:46 | 7440-70-2  |      |
| Magnesium   | ND      | mg/L  | 0.050   | 0.012    | 1  | 02/18/22 08:02 | 02/18/22 17:46 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>   |         |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 6020B    Preparation Method: EPA 3005A |         |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |         |       |         |          |    |                |                |            |      |
| Antimony  | ND      | mg/L  | 0.0030  | 0.00078  | 1  | 02/18/22 07:59 | 02/18/22 17:25 | 7440-36-0  |      |
| Arsenic   | ND      | mg/L  | 0.0050  | 0.0011   | 1  | 02/18/22 07:59 | 02/18/22 17:25 | 7440-38-2  |      |
| Barium  | ND      | mg/L  | 0.0050  | 0.00067  | 1  | 02/18/22 07:59 | 02/18/22 17:25 | 7440-39-3  |      |
| Beryllium   | ND      | mg/L  | 0.00050 | 0.000054 | 1  | 02/18/22 07:59 | 02/18/22 17:25 | 7440-41-7  |      |
| Boron   | ND      | mg/L  | 0.040   | 0.0086   | 1  | 02/18/22 07:59 | 02/18/22 17:25 | 7440-42-8  |      |
| Cadmium   | ND      | mg/L  | 0.00050 | 0.00011  | 1  | 02/18/22 07:59 | 02/18/22 17:25 | 7440-43-9  |      |
| Chromium  | ND      | mg/L  | 0.0050  | 0.0011   | 1  | 02/18/22 07:59 | 02/18/22 17:25 | 7440-47-3  |      |
| Cobalt  | ND      | mg/L  | 0.0050  | 0.00039  | 1  | 02/18/22 07:59 | 02/18/22 17:25 | 7440-48-4  |      |
| Copper  | ND      | mg/L  | 0.0050  | 0.00050  | 1  | 02/18/22 07:59 | 02/18/22 17:25 | 7440-50-8  |      |
| Lead  | ND      | mg/L  | 0.0010  | 0.00089  | 1  | 02/18/22 07:59 | 02/18/22 17:25 | 7439-92-1  |      |
| Nickel  | ND      | mg/L  | 0.0050  | 0.00071  | 1  | 02/18/22 07:59 | 02/18/22 17:25 | 7440-02-0  |      |
| Selenium  | ND      | mg/L  | 0.0050  | 0.0014   | 1  | 02/18/22 07:59 | 02/18/22 17:25 | 7782-49-2  |      |
| Silver  | ND      | mg/L  | 0.0050  | 0.00044  | 1  | 02/18/22 07:59 | 02/18/22 17:25 | 7440-22-4  |      |
| Thallium  | ND      | mg/L  | 0.0010  | 0.00018  | 1  | 02/18/22 07:59 | 02/18/22 17:25 | 7440-28-0  |      |
| Vanadium  | ND      | mg/L  | 0.010   | 0.0019   | 1  | 02/18/22 07:59 | 02/18/22 17:25 | 7440-62-2  |      |
| <b>7470 Mercury</b>   |         |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 7470A    Preparation Method: EPA 7470A |         |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |         |       |         |          |    |                |                |            |      |
| Mercury   | ND      | mg/L  | 0.00020 | 0.00013  | 1  | 02/15/22 15:15 | 02/16/22 12:46 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b>                           |         |       |         |          |    |                |                |            |      |
| Analytical Method: SM 2540C-2015                              |         |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |         |       |         |          |    |                |                |            |      |
| Total Dissolved Solids  | ND      | mg/L  | 10.0    | 10.0     | 1  |                | 02/08/22 11:15 |            |      |
| <b>2320B Alkalinity</b>                                       |         |       |         |          |    |                |                |            |      |
| Analytical Method: SM 2320B                                   |         |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Minneapolis                        |         |       |         |          |    |                |                |            |      |
| Alkalinity, Total as CaCO <sub>3</sub>                        | ND      | mg/L  | 5.0     | 1.8      | 1  |                | 02/10/22 21:29 |            |      |
| Alkalinity,Bicarbonate (CaCO <sub>3</sub> )                   | ND      | mg/L  | 5.0     | 1.8      | 1  |                | 02/10/22 21:29 |            |      |
| Alkalinity,Carbonate (CaCO <sub>3</sub> )                     | ND      | mg/L  | 5.0     | 1.8      | 1  |                | 02/10/22 21:29 |            |      |
| <b>300.0 IC Anions 28 Days</b>                                |         |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                     |         |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Asheville                          |         |       |         |          |    |                |                |            |      |
| Chloride  | ND      | mg/L  | 1.0     | 0.60     | 1  |                | 02/13/22 02:38 | 16887-00-6 |      |
| Fluoride  | ND      | mg/L  | 0.10    | 0.050    | 1  |                | 02/13/22 02:38 | 16984-48-8 |      |
| Sulfate   | ND      | mg/L  | 1.0     | 0.50     | 1  |                | 02/13/22 02:38 | 14808-79-8 |      |

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: GWA-4RZ  |                 | Lab ID: 92586436019 |              | Collected: 02/03/22 10:55 | Received: 02/04/22 11:45 | Matrix: Water  |                |           |      |
|--|-----------------|---------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |                     |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1                        |                | 02/07/22 10:52 |           |      |
| pH   | <b>7.20</b>     | Std. Units          |              |                           | 1                        |                | 02/07/22 10:52 |           |      |
| <b>6010D ATL ICP</b>   |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |                          |                |                |           |      |
| Zinc   | ND              | mg/L                | 0.020        | 0.0085                    | 1                        | 02/18/22 08:05 | 02/18/22 18:15 | 7440-66-6 |      |
| Potassium  | <b>0.88</b>     | mg/L                | 0.20         | 0.15                      | 1                        | 02/18/22 08:05 | 02/18/22 18:15 | 7440-09-7 |      |
| Sodium   | <b>3.8</b>      | mg/L                | 1.0          | 0.58                      | 1                        | 02/18/22 08:05 | 02/18/22 18:15 | 7440-23-5 |      |
| Calcium  | <b>57.7</b>     | mg/L                | 1.0          | 0.12                      | 1                        | 02/18/22 08:05 | 02/18/22 18:15 | 7440-70-2 | M1   |
| Magnesium  | <b>24.6</b>     | mg/L                | 0.050        | 0.012                     | 1                        | 02/18/22 08:05 | 02/18/22 18:15 | 7439-95-4 | M1   |
| <b>6020 MET ICPMS</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |                          |                |                |           |      |
| Antimony   | ND              | mg/L                | 0.0030       | 0.00078                   | 1                        | 02/18/22 07:59 | 02/18/22 17:31 | 7440-36-0 |      |
| Arsenic  | <b>0.0034J</b>  | mg/L                | 0.0050       | 0.0011                    | 1                        | 02/18/22 07:59 | 02/18/22 17:31 | 7440-38-2 |      |
| Barium   | <b>0.063</b>    | mg/L                | 0.0050       | 0.00067                   | 1                        | 02/18/22 07:59 | 02/18/22 17:31 | 7440-39-3 |      |
| Beryllium  | ND              | mg/L                | 0.00050      | 0.000054                  | 1                        | 02/18/22 07:59 | 02/18/22 17:31 | 7440-41-7 |      |
| Boron  | ND              | mg/L                | 0.040        | 0.0086                    | 1                        | 02/18/22 07:59 | 02/18/22 17:31 | 7440-42-8 |      |
| Cadmium  | ND              | mg/L                | 0.00050      | 0.00011                   | 1                        | 02/18/22 07:59 | 02/18/22 17:31 | 7440-43-9 |      |
| Chromium   | ND              | mg/L                | 0.0050       | 0.0011                    | 1                        | 02/18/22 07:59 | 02/18/22 17:31 | 7440-47-3 |      |
| Cobalt   | <b>0.0059</b>   | mg/L                | 0.0050       | 0.00039                   | 1                        | 02/18/22 07:59 | 02/18/22 17:31 | 7440-48-4 |      |
| Copper   | ND              | mg/L                | 0.0050       | 0.00050                   | 1                        | 02/18/22 07:59 | 02/18/22 17:31 | 7440-50-8 |      |
| Lead   | ND              | mg/L                | 0.0010       | 0.00089                   | 1                        | 02/18/22 07:59 | 02/18/22 17:31 | 7439-92-1 |      |
| Nickel   | ND              | mg/L                | 0.0050       | 0.00071                   | 1                        | 02/18/22 07:59 | 02/18/22 17:31 | 7440-02-0 |      |
| Selenium   | ND              | mg/L                | 0.0050       | 0.0014                    | 1                        | 02/18/22 07:59 | 02/18/22 17:31 | 7782-49-2 |      |
| Silver   | ND              | mg/L                | 0.0050       | 0.00044                   | 1                        | 02/18/22 07:59 | 02/18/22 17:31 | 7440-22-4 |      |
| Thallium   | ND              | mg/L                | 0.0010       | 0.00018                   | 1                        | 02/18/22 07:59 | 02/18/22 17:31 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L                | 0.010        | 0.0019                    | 1                        | 02/18/22 07:59 | 02/18/22 17:31 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |                          |                |                |           |      |
| Mercury  | ND              | mg/L                | 0.00020      | 0.00013                   | 1                        | 02/15/22 15:15 | 02/16/22 12:49 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |                     |              |                           |                          |                |                |           |      |
| Total Dissolved Solids   | <b>243</b>      | mg/L                | 10.0         | 10.0                      | 1                        |                | 02/09/22 10:14 |           |      |
| <b>2320B Alkalinity</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                 |                     |              |                           |                          |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>221</b>      | mg/L                | 5.0          | 1.8                       | 1                        |                | 02/15/22 17:21 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>221</b>      | mg/L                | 5.0          | 1.8                       | 1                        |                | 02/15/22 17:21 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND              | mg/L                | 5.0          | 1.8                       | 1                        |                | 02/15/22 17:21 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWA-4RZ**      **Lab ID: 92586436019**      Collected: 02/03/22 10:55      Received: 02/04/22 11:45      Matrix: Water

| Parameters                                | Results     | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|-------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |             |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |             |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |             |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |             |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>2.6</b>  | mg/L  | 1.0    | 0.60  | 1  |          | 02/13/22 02:52 | 16887-00-6 |      |
| Fluoride                                  | <b>0.15</b> | mg/L  | 0.10   | 0.050 | 1  |          | 02/13/22 02:52 | 16984-48-8 |      |
| Sulfate                                   | <b>20.7</b> | mg/L  | 1.0    | 0.50  | 1  |          | 02/13/22 02:52 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: <b>FB-3</b>                 |             | Lab ID: <b>92586436020</b>   |              | Collected: 02/03/22 12:00 | Received: 02/04/22 11:45 | Matrix: Water  |                |            |      |
|-------------------------------------|-------------|--|--------------|---------------------------|--------------------------|----------------|----------------|------------|------|
| Parameters                          | Results     | Units  | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.    | Qual |
| <b>6010D ATL ICP</b>                |             | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Zinc                                | ND          | mg/L   | 0.020        | 0.0085                    | 1                        | 02/18/22 08:05 | 02/18/22 18:44 | 7440-66-6  |      |
| Potassium                           | ND          | mg/L   | 0.20         | 0.15                      | 1                        | 02/18/22 08:05 | 02/18/22 18:44 | 7440-09-7  |      |
| Sodium                              | ND          | mg/L   | 1.0          | 0.58                      | 1                        | 02/18/22 08:05 | 02/18/22 18:44 | 7440-23-5  |      |
| Calcium                             | ND          | mg/L   | 1.0          | 0.12                      | 1                        | 02/18/22 08:05 | 02/18/22 18:44 | 7440-70-2  |      |
| Magnesium                           | ND          | mg/L   | 0.050        | 0.012                     | 1                        | 02/18/22 08:05 | 02/18/22 18:44 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>               |             | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Antimony                            | ND          | mg/L   | 0.0030       | 0.00078                   | 1                        | 02/18/22 07:59 | 02/18/22 17:43 | 7440-36-0  |      |
| Arsenic                             | ND          | mg/L   | 0.0050       | 0.0011                    | 1                        | 02/18/22 07:59 | 02/18/22 17:43 | 7440-38-2  |      |
| Barium                              | ND          | mg/L   | 0.0050       | 0.00067                   | 1                        | 02/18/22 07:59 | 02/18/22 17:43 | 7440-39-3  |      |
| Beryllium                           | ND          | mg/L   | 0.00050      | 0.000054                  | 1                        | 02/18/22 07:59 | 02/18/22 17:43 | 7440-41-7  |      |
| Boron                               | ND          | mg/L   | 0.040        | 0.0086                    | 1                        | 02/18/22 07:59 | 02/18/22 17:43 | 7440-42-8  |      |
| Cadmium                             | ND          | mg/L   | 0.00050      | 0.00011                   | 1                        | 02/18/22 07:59 | 02/18/22 17:43 | 7440-43-9  |      |
| Chromium                            | ND          | mg/L   | 0.0050       | 0.0011                    | 1                        | 02/18/22 07:59 | 02/18/22 17:43 | 7440-47-3  |      |
| Cobalt                              | ND          | mg/L   | 0.0050       | 0.00039                   | 1                        | 02/18/22 07:59 | 02/18/22 17:43 | 7440-48-4  |      |
| Copper                              | ND          | mg/L   | 0.0050       | 0.00050                   | 1                        | 02/18/22 07:59 | 02/18/22 17:43 | 7440-50-8  |      |
| Lead                                | ND          | mg/L   | 0.0010       | 0.00089                   | 1                        | 02/18/22 07:59 | 02/18/22 17:43 | 7439-92-1  |      |
| Nickel                              | ND          | mg/L   | 0.0050       | 0.00071                   | 1                        | 02/18/22 07:59 | 02/18/22 17:43 | 7440-02-0  |      |
| Selenium                            | ND          | mg/L   | 0.0050       | 0.0014                    | 1                        | 02/18/22 07:59 | 02/18/22 17:43 | 7782-49-2  |      |
| Silver                              | ND          | mg/L   | 0.0050       | 0.00044                   | 1                        | 02/18/22 07:59 | 02/18/22 17:43 | 7440-22-4  |      |
| Thallium                            | ND          | mg/L   | 0.0010       | 0.00018                   | 1                        | 02/18/22 07:59 | 02/18/22 17:43 | 7440-28-0  |      |
| Vanadium                            | ND          | mg/L   | 0.010        | 0.0019                    | 1                        | 02/18/22 07:59 | 02/18/22 17:43 | 7440-62-2  |      |
| <b>7470 Mercury</b>                 |             | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Mercury                             | ND          | mg/L   | 0.00020      | 0.00013                   | 1                        | 02/15/22 15:15 | 02/16/22 12:51 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b> |             | Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |              |                           |                          |                |                |            |      |
| Total Dissolved Solids              | <b>12.0</b> | mg/L   | 10.0         | 10.0                      | 1                        |                | 02/09/22 10:14 |            |      |
| <b>2320B Alkalinity</b>             |             | Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |              |                           |                          |                |                |            |      |
| Alkalinity, Total as CaCO3          | ND          | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/15/22 17:26 |            |      |
| Alkalinity,Bicarbonate (CaCO3)      | ND          | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/15/22 17:26 |            |      |
| Alkalinity,Carbonate (CaCO3)        | ND          | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/15/22 17:26 |            |      |
| <b>300.0 IC Anions 28 Days</b>      |             | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |              |                           |                          |                |                |            |      |
| Chloride                            | ND          | mg/L   | 1.0          | 0.60                      | 1                        |                | 02/13/22 03:06 | 16887-00-6 |      |
| Fluoride                            | ND          | mg/L   | 0.10         | 0.050                     | 1                        |                | 02/13/22 03:06 | 16984-48-8 |      |
| Sulfate                             | ND          | mg/L   | 1.0          | 0.50                      | 1                        |                | 02/13/22 03:06 | 14808-79-8 |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: GWC-10   |          | Lab ID: 92586436021 |              | Collected: 02/04/22 11:15 |    | Received: 02/08/22 08:10 |                | Matrix: Water |      |
|--|----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results  | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |          |                     |              |                           |    |                          |                |               |      |
| Performed by   | CUSTOMER |                     |              |                           | 1  |                          | 02/08/22 10:30 |               |      |
| pH   | 6.53     | Std. Units          |              |                           | 1  |                          | 02/08/22 10:30 |               |      |
| <b>6010D ATL ICP</b>                                       |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND       | mg/L                | 0.020        | 0.0085                    | 1  | 02/18/22 08:05           | 02/18/22 18:48 | 7440-66-6     |      |
| Potassium  | 0.51     | mg/L                | 0.20         | 0.15                      | 1  | 02/18/22 08:05           | 02/18/22 18:48 | 7440-09-7     |      |
| Sodium   | 2.1      | mg/L                | 1.0          | 0.58                      | 1  | 02/18/22 08:05           | 02/18/22 18:48 | 7440-23-5     |      |
| Calcium  | 21.3     | mg/L                | 1.0          | 0.12                      | 1  | 02/18/22 08:05           | 02/18/22 18:48 | 7440-70-2     |      |
| Magnesium  | 9.0      | mg/L                | 0.050        | 0.012                     | 1  | 02/18/22 08:05           | 02/18/22 18:48 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>                                      |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND       | mg/L                | 0.0030       | 0.00078                   | 1  | 02/18/22 08:01           | 02/18/22 19:37 | 7440-36-0     |      |
| Arsenic  | 0.0023J  | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 08:01           | 02/18/22 19:37 | 7440-38-2     | B    |
| Barium   | 0.022    | mg/L                | 0.0050       | 0.00067                   | 1  | 02/18/22 08:01           | 02/18/22 19:37 | 7440-39-3     |      |
| Beryllium  | 0.00021J | mg/L                | 0.00050      | 0.000054                  | 1  | 02/18/22 08:01           | 02/18/22 19:37 | 7440-41-7     |      |
| Boron  | ND       | mg/L                | 0.040        | 0.0086                    | 1  | 02/18/22 08:01           | 02/18/22 19:37 | 7440-42-8     |      |
| Cadmium  | ND       | mg/L                | 0.00050      | 0.00011                   | 1  | 02/18/22 08:01           | 02/18/22 19:37 | 7440-43-9     |      |
| Chromium   | ND       | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 08:01           | 02/18/22 19:37 | 7440-47-3     |      |
| Cobalt   | 0.0018J  | mg/L                | 0.0050       | 0.00039                   | 1  | 02/18/22 08:01           | 02/18/22 19:37 | 7440-48-4     |      |
| Copper   | ND       | mg/L                | 0.0050       | 0.00050                   | 1  | 02/18/22 08:01           | 02/18/22 19:37 | 7440-50-8     |      |
| Lead   | ND       | mg/L                | 0.0010       | 0.00089                   | 1  | 02/18/22 08:01           | 02/18/22 19:37 | 7439-92-1     |      |
| Nickel   | 0.0014J  | mg/L                | 0.0050       | 0.00071                   | 1  | 02/18/22 08:01           | 02/18/22 19:37 | 7440-02-0     |      |
| Selenium   | ND       | mg/L                | 0.0050       | 0.0014                    | 1  | 02/18/22 08:01           | 02/18/22 19:37 | 7782-49-2     |      |
| Silver   | ND       | mg/L                | 0.0050       | 0.00044                   | 1  | 02/18/22 08:01           | 02/18/22 19:37 | 7440-22-4     |      |
| Thallium   | ND       | mg/L                | 0.0010       | 0.00018                   | 1  | 02/18/22 08:01           | 02/18/22 19:37 | 7440-28-0     |      |
| Vanadium   | ND       | mg/L                | 0.010        | 0.0019                    | 1  | 02/18/22 08:01           | 02/18/22 19:37 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND       | mg/L                | 0.00020      | 0.00013                   | 1  | 02/15/22 15:15           | 02/16/22 12:54 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015                           |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | 102      | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/11/22 10:44 |               |      |
| <b>2320B Alkalinity</b>                                    |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B                                |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Minneapolis                     |          |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3                                 | 88.6     | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 20:43 |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | 88.6     | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 20:43 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND       | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 20:43 |               |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWC-10**      **Lab ID: 92586436021**      Collected: 02/04/22 11:15      Received: 02/08/22 08:10      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 1.9     | mg/L  | 1.0    | 0.60  | 1  |          | 02/14/22 12:50 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/14/22 12:50 | 16984-48-8 |      |
| Sulfate                                   | 1.2     | mg/L  | 1.0    | 0.50  | 1  |          | 02/14/22 12:50 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Sample: GWC-10R  |          | Lab ID: 92586436022 |              | Collected: 02/04/22 12:40 |    | Received: 02/08/22 08:10 |                | Matrix: Water |      |
|--|----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results  | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |          |                     |              |                           |    |                          |                |               |      |
| Performed by   | CUSTOMER |                     |              |                           | 1  |                          | 02/08/22 10:31 |               |      |
| pH   | 7.69     | Std. Units          |              |                           | 1  |                          | 02/08/22 10:31 |               |      |
| <b>6010D ATL ICP</b>                                       |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND       | mg/L                | 0.020        | 0.0085                    | 1  | 02/18/22 08:05           | 02/18/22 18:53 | 7440-66-6     |      |
| Potassium  | 0.71     | mg/L                | 0.20         | 0.15                      | 1  | 02/18/22 08:05           | 02/18/22 18:53 | 7440-09-7     |      |
| Sodium   | 2.0      | mg/L                | 1.0          | 0.58                      | 1  | 02/18/22 08:05           | 02/18/22 18:53 | 7440-23-5     |      |
| Calcium  | 46.3     | mg/L                | 1.0          | 0.12                      | 1  | 02/18/22 08:05           | 02/18/22 18:53 | 7440-70-2     |      |
| Magnesium  | 8.9      | mg/L                | 0.050        | 0.012                     | 1  | 02/18/22 08:05           | 02/18/22 18:53 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>                                      |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Antimony   | 0.0016J  | mg/L                | 0.0030       | 0.00078                   | 1  | 02/18/22 08:01           | 02/18/22 20:00 | 7440-36-0     |      |
| Arsenic  | 0.0019J  | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 08:01           | 02/18/22 20:00 | 7440-38-2     | B    |
| Barium   | 0.028    | mg/L                | 0.0050       | 0.00067                   | 1  | 02/18/22 08:01           | 02/18/22 20:00 | 7440-39-3     |      |
| Beryllium  | ND       | mg/L                | 0.00050      | 0.000054                  | 1  | 02/18/22 08:01           | 02/18/22 20:00 | 7440-41-7     |      |
| Boron  | ND       | mg/L                | 0.040        | 0.0086                    | 1  | 02/18/22 08:01           | 02/18/22 20:00 | 7440-42-8     |      |
| Cadmium  | ND       | mg/L                | 0.00050      | 0.00011                   | 1  | 02/18/22 08:01           | 02/18/22 20:00 | 7440-43-9     |      |
| Chromium   | ND       | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 08:01           | 02/18/22 20:00 | 7440-47-3     |      |
| Cobalt   | ND       | mg/L                | 0.0050       | 0.00039                   | 1  | 02/18/22 08:01           | 02/18/22 20:00 | 7440-48-4     |      |
| Copper   | ND       | mg/L                | 0.0050       | 0.00050                   | 1  | 02/18/22 08:01           | 02/18/22 20:00 | 7440-50-8     |      |
| Lead   | ND       | mg/L                | 0.0010       | 0.00089                   | 1  | 02/18/22 08:01           | 02/18/22 20:00 | 7439-92-1     |      |
| Nickel   | ND       | mg/L                | 0.0050       | 0.00071                   | 1  | 02/18/22 08:01           | 02/18/22 20:00 | 7440-02-0     |      |
| Selenium   | ND       | mg/L                | 0.0050       | 0.0014                    | 1  | 02/18/22 08:01           | 02/18/22 20:00 | 7782-49-2     |      |
| Silver   | ND       | mg/L                | 0.0050       | 0.00044                   | 1  | 02/18/22 08:01           | 02/18/22 20:00 | 7440-22-4     |      |
| Thallium   | ND       | mg/L                | 0.0010       | 0.00018                   | 1  | 02/18/22 08:01           | 02/18/22 20:00 | 7440-28-0     |      |
| Vanadium   | ND       | mg/L                | 0.010        | 0.0019                    | 1  | 02/18/22 08:01           | 02/18/22 20:00 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND       | mg/L                | 0.00020      | 0.00013                   | 1  | 02/15/22 15:15           | 02/16/22 12:56 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015                           |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | 156      | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/11/22 10:44 |               |      |
| <b>2320B Alkalinity</b>                                    |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B                                |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Minneapolis                     |          |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3                                 | 144      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 20:49 |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | 144      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 20:49 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND       | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 20:49 |               |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

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**Sample: GWC-10R**      **Lab ID: 92586436022**      Collected: 02/04/22 12:40      Received: 02/08/22 08:10      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 2.2     | mg/L  | 1.0    | 0.60  | 1  |          | 02/14/22 13:04 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/14/22 13:04 | 16984-48-8 |      |
| Sulfate                                   | 1.1     | mg/L  | 1.0    | 0.50  | 1  |          | 02/14/22 13:04 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: **GWC-11** Lab ID: **92586436023** Collected: 02/04/22 12:33 Received: 02/08/22 08:10 Matrix: Water

| Parameters   | Results         | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.   | Qual |
|--|-----------------|------------|--------------|----------|----|----------------|----------------|-----------|------|
| <b>Field Data</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |                 |            |              |          |    |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |            |              |          | 1  |                | 02/08/22 10:31 |           |      |
| pH   | <b>7.20</b>     | Std. Units |              |          | 1  |                | 02/08/22 10:31 |           |      |
| <b>6010D ATL ICP</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |              |          |    |                |                |           |      |
| Zinc   | ND              | mg/L       | 0.020        | 0.0085   | 1  | 02/18/22 08:05 | 02/18/22 18:58 | 7440-66-6 |      |
| Potassium  | <b>0.83</b>     | mg/L       | 0.20         | 0.15     | 1  | 02/18/22 08:05 | 02/18/22 18:58 | 7440-09-7 |      |
| Sodium   | <b>1.4</b>      | mg/L       | 1.0          | 0.58     | 1  | 02/18/22 08:05 | 02/18/22 18:58 | 7440-23-5 |      |
| Calcium  | <b>19.2</b>     | mg/L       | 1.0          | 0.12     | 1  | 02/18/22 08:05 | 02/18/22 18:58 | 7440-70-2 |      |
| Magnesium  | <b>10.2</b>     | mg/L       | 0.050        | 0.012    | 1  | 02/18/22 08:05 | 02/18/22 18:58 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |              |          |    |                |                |           |      |
| Antimony   | ND              | mg/L       | 0.0030       | 0.00078  | 1  | 02/18/22 08:01 | 02/18/22 20:06 | 7440-36-0 |      |
| Arsenic  | <b>0.0023J</b>  | mg/L       | 0.0050       | 0.0011   | 1  | 02/18/22 08:01 | 02/18/22 20:06 | 7440-38-2 | B    |
| Barium   | <b>0.010</b>    | mg/L       | 0.0050       | 0.00067  | 1  | 02/18/22 08:01 | 02/18/22 20:06 | 7440-39-3 |      |
| Beryllium  | ND              | mg/L       | 0.00050      | 0.000054 | 1  | 02/18/22 08:01 | 02/18/22 20:06 | 7440-41-7 |      |
| Boron  | ND              | mg/L       | 0.040        | 0.0086   | 1  | 02/18/22 08:01 | 02/18/22 20:06 | 7440-42-8 |      |
| Cadmium  | ND              | mg/L       | 0.00050      | 0.00011  | 1  | 02/18/22 08:01 | 02/18/22 20:06 | 7440-43-9 |      |
| Chromium   | <b>0.0071</b>   | mg/L       | 0.0050       | 0.0011   | 1  | 02/18/22 08:01 | 02/18/22 20:06 | 7440-47-3 |      |
| Cobalt   | ND              | mg/L       | 0.0050       | 0.00039  | 1  | 02/18/22 08:01 | 02/18/22 20:06 | 7440-48-4 |      |
| Copper   | ND              | mg/L       | 0.0050       | 0.00050  | 1  | 02/18/22 08:01 | 02/18/22 20:06 | 7440-50-8 |      |
| Lead   | ND              | mg/L       | 0.0010       | 0.00089  | 1  | 02/18/22 08:01 | 02/18/22 20:06 | 7439-92-1 |      |
| Nickel   | ND              | mg/L       | 0.0050       | 0.00071  | 1  | 02/18/22 08:01 | 02/18/22 20:06 | 7440-02-0 |      |
| Selenium   | ND              | mg/L       | 0.0050       | 0.0014   | 1  | 02/18/22 08:01 | 02/18/22 20:06 | 7782-49-2 |      |
| Silver   | ND              | mg/L       | 0.0050       | 0.00044  | 1  | 02/18/22 08:01 | 02/18/22 20:06 | 7440-22-4 |      |
| Thallium   | ND              | mg/L       | 0.0010       | 0.00018  | 1  | 02/18/22 08:01 | 02/18/22 20:06 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L       | 0.010        | 0.0019   | 1  | 02/18/22 08:01 | 02/18/22 20:06 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |              |          |    |                |                |           |      |
| Mercury  | ND              | mg/L       | 0.00020      | 0.00013  | 1  | 02/15/22 15:15 | 02/16/22 12:59 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |            |              |          |    |                |                |           |      |
| Total Dissolved Solids   | <b>120</b>      | mg/L       | 10.0         | 10.0     | 1  |                | 02/11/22 10:44 |           |      |
| <b>2320B Alkalinity</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                 |            |              |          |    |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>99.4</b>     | mg/L       | 5.0          | 1.8      | 1  |                | 02/10/22 20:56 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>99.4</b>     | mg/L       | 5.0          | 1.8      | 1  |                | 02/10/22 20:56 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND              | mg/L       | 5.0          | 1.8      | 1  |                | 02/10/22 20:56 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWC-11**      **Lab ID: 92586436023**      Collected: 02/04/22 12:33      Received: 02/08/22 08:10      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 1.1     | mg/L  | 1.0    | 0.60  | 1  |          | 02/14/22 18:49 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/14/22 18:49 | 16984-48-8 |      |
| Sulfate                                   | 1.7     | mg/L  | 1.0    | 0.50  | 1  |          | 02/14/22 18:49 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWC-11R**      **Lab ID: 92586436024**      Collected: 02/04/22 10:45      Received: 02/08/22 08:10      Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|------------|---------|-------|--------------|-----|----|----------|----------|---------|------|
|------------|---------|-------|--------------|-----|----|----------|----------|---------|------|

**Field Data**

Analytical Method:  
Pace Analytical Services - Charlotte

|              |                 |            |  |  |   |  |                |  |  |
|--------------|-----------------|------------|--|--|---|--|----------------|--|--|
| Performed by | <b>CUSTOMER</b> |            |  |  | 1 |  | 02/08/22 10:31 |  |  |
| pH           | <b>7.58</b>     | Std. Units |  |  | 1 |  | 02/08/22 10:31 |  |  |

**6010D ATL ICP**

Analytical Method: EPA 6010D      Preparation Method: EPA 3010A  
Pace Analytical Services - Peachtree Corners, GA

|           |              |      |       |        |   |                |                |           |  |
|-----------|--------------|------|-------|--------|---|----------------|----------------|-----------|--|
| Zinc      | ND           | mg/L | 0.020 | 0.0085 | 1 | 02/18/22 08:05 | 02/18/22 19:03 | 7440-66-6 |  |
| Potassium | <b>1.1</b>   | mg/L | 0.20  | 0.15   | 1 | 02/18/22 08:05 | 02/18/22 19:03 | 7440-09-7 |  |
| Sodium    | <b>0.96J</b> | mg/L | 1.0   | 0.58   | 1 | 02/18/22 08:05 | 02/18/22 19:03 | 7440-23-5 |  |
| Calcium   | <b>34.8</b>  | mg/L | 1.0   | 0.12   | 1 | 02/18/22 08:05 | 02/18/22 19:03 | 7440-70-2 |  |
| Magnesium | <b>18.7</b>  | mg/L | 0.050 | 0.012  | 1 | 02/18/22 08:05 | 02/18/22 19:03 | 7439-95-4 |  |

**6020 MET ICPMS**

Analytical Method: EPA 6020B      Preparation Method: EPA 3005A  
Pace Analytical Services - Peachtree Corners, GA

|           |                |      |         |          |   |                |                |           |   |
|-----------|----------------|------|---------|----------|---|----------------|----------------|-----------|---|
| Antimony  | ND             | mg/L | 0.0030  | 0.00078  | 1 | 02/18/22 08:01 | 02/18/22 20:12 | 7440-36-0 |   |
| Arsenic   | <b>0.0035J</b> | mg/L | 0.0050  | 0.0011   | 1 | 02/18/22 08:01 | 02/18/22 20:12 | 7440-38-2 | B |
| Barium    | <b>0.021</b>   | mg/L | 0.0050  | 0.00067  | 1 | 02/18/22 08:01 | 02/18/22 20:12 | 7440-39-3 |   |
| Beryllium | ND             | mg/L | 0.00050 | 0.000054 | 1 | 02/18/22 08:01 | 02/18/22 20:12 | 7440-41-7 |   |
| Boron     | ND             | mg/L | 0.040   | 0.0086   | 1 | 02/18/22 08:01 | 02/18/22 20:12 | 7440-42-8 |   |
| Cadmium   | ND             | mg/L | 0.00050 | 0.00011  | 1 | 02/18/22 08:01 | 02/18/22 20:12 | 7440-43-9 |   |
| Chromium  | <b>0.0042J</b> | mg/L | 0.0050  | 0.0011   | 1 | 02/18/22 08:01 | 02/18/22 20:12 | 7440-47-3 |   |
| Cobalt    | ND             | mg/L | 0.0050  | 0.00039  | 1 | 02/18/22 08:01 | 02/18/22 20:12 | 7440-48-4 |   |
| Copper    | ND             | mg/L | 0.0050  | 0.00050  | 1 | 02/18/22 08:01 | 02/18/22 20:12 | 7440-50-8 |   |
| Lead      | ND             | mg/L | 0.0010  | 0.00089  | 1 | 02/18/22 08:01 | 02/18/22 20:12 | 7439-92-1 |   |
| Nickel    | ND             | mg/L | 0.0050  | 0.00071  | 1 | 02/18/22 08:01 | 02/18/22 20:12 | 7440-02-0 |   |
| Selenium  | ND             | mg/L | 0.0050  | 0.0014   | 1 | 02/18/22 08:01 | 02/18/22 20:12 | 7782-49-2 |   |
| Silver    | ND             | mg/L | 0.0050  | 0.00044  | 1 | 02/18/22 08:01 | 02/18/22 20:12 | 7440-22-4 |   |
| Thallium  | ND             | mg/L | 0.0010  | 0.00018  | 1 | 02/18/22 08:01 | 02/18/22 20:12 | 7440-28-0 |   |
| Vanadium  | ND             | mg/L | 0.010   | 0.0019   | 1 | 02/18/22 08:01 | 02/18/22 20:12 | 7440-62-2 |   |

**7470 Mercury**

Analytical Method: EPA 7470A      Preparation Method: EPA 7470A  
Pace Analytical Services - Peachtree Corners, GA

|         |    |      |         |         |   |                |                |           |  |
|---------|----|------|---------|---------|---|----------------|----------------|-----------|--|
| Mercury | ND | mg/L | 0.00020 | 0.00013 | 1 | 02/15/22 15:15 | 02/16/22 13:02 | 7439-97-6 |  |
|---------|----|------|---------|---------|---|----------------|----------------|-----------|--|

**2540C Total Dissolved Solids**

Analytical Method: SM 2540C-2015  
Pace Analytical Services - Peachtree Corners, GA

|                        |            |      |      |      |   |  |                |  |  |
|------------------------|------------|------|------|------|---|--|----------------|--|--|
| Total Dissolved Solids | <b>157</b> | mg/L | 10.0 | 10.0 | 1 |  | 02/11/22 10:44 |  |  |
|------------------------|------------|------|------|------|---|--|----------------|--|--|

**2320B Alkalinity**

Analytical Method: SM 2320B  
Pace Analytical Services - Minneapolis

|                                |            |      |     |     |   |  |                |  |  |
|--------------------------------|------------|------|-----|-----|---|--|----------------|--|--|
| Alkalinity, Total as CaCO3     | <b>147</b> | mg/L | 5.0 | 1.8 | 1 |  | 02/10/22 21:03 |  |  |
| Alkalinity,Bicarbonate (CaCO3) | <b>147</b> | mg/L | 5.0 | 1.8 | 1 |  | 02/10/22 21:03 |  |  |
| Alkalinity,Carbonate (CaCO3)   | ND         | mg/L | 5.0 | 1.8 | 1 |  | 02/10/22 21:03 |  |  |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWC-11R**      **Lab ID: 92586436024**      Collected: 02/04/22 10:45      Received: 02/08/22 08:10      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 1.4     | mg/L  | 1.0    | 0.60  | 1  |          | 02/14/22 19:34 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/14/22 19:34 | 16984-48-8 |      |
| Sulfate                                   | 1.5     | mg/L  | 1.0    | 0.50  | 1  |          | 02/14/22 19:34 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Sample: GWC-13RZ   |                 | Lab ID: 92586436025 |              | Collected: 02/04/22 09:44 |    | Received: 02/08/22 08:10 |                | Matrix: Water |      |
|--|-----------------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                 |                     |              |                           |    |                          |                |               |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1  |                          | 02/08/22 10:31 |               |      |
| pH   | <b>7.46</b>     | Std. Units          |              |                           | 1  |                          | 02/08/22 10:31 |               |      |
| <b>6010D ATL ICP</b>                                       |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND              | mg/L                | 0.020        | 0.0085                    | 1  | 02/18/22 08:05           | 02/18/22 19:07 | 7440-66-6     |      |
| Potassium  | <b>1.0</b>      | mg/L                | 0.20         | 0.15                      | 1  | 02/18/22 08:05           | 02/18/22 19:07 | 7440-09-7     |      |
| Sodium   | <b>24.1</b>     | mg/L                | 1.0          | 0.58                      | 1  | 02/18/22 08:05           | 02/18/22 19:07 | 7440-23-5     |      |
| Calcium  | <b>43.9</b>     | mg/L                | 1.0          | 0.12                      | 1  | 02/18/22 08:05           | 02/18/22 19:07 | 7440-70-2     |      |
| Magnesium  | <b>18.7</b>     | mg/L                | 0.050        | 0.012                     | 1  | 02/18/22 08:05           | 02/18/22 19:07 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>                                      |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND              | mg/L                | 0.0030       | 0.00078                   | 1  | 02/18/22 08:01           | 02/18/22 20:18 | 7440-36-0     |      |
| Arsenic  | <b>0.0035J</b>  | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 08:01           | 02/18/22 20:18 | 7440-38-2     | B    |
| Barium   | <b>0.11</b>     | mg/L                | 0.0050       | 0.00067                   | 1  | 02/18/22 08:01           | 02/18/22 20:18 | 7440-39-3     |      |
| Beryllium  | ND              | mg/L                | 0.00050      | 0.000054                  | 1  | 02/18/22 08:01           | 02/18/22 20:18 | 7440-41-7     |      |
| Boron  | <b>0.017J</b>   | mg/L                | 0.040        | 0.0086                    | 1  | 02/18/22 08:01           | 02/18/22 20:18 | 7440-42-8     |      |
| Cadmium  | ND              | mg/L                | 0.00050      | 0.00011                   | 1  | 02/18/22 08:01           | 02/18/22 20:18 | 7440-43-9     |      |
| Chromium   | ND              | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 08:01           | 02/18/22 20:18 | 7440-47-3     |      |
| Cobalt   | ND              | mg/L                | 0.0050       | 0.00039                   | 1  | 02/18/22 08:01           | 02/18/22 20:18 | 7440-48-4     |      |
| Copper   | ND              | mg/L                | 0.0050       | 0.00050                   | 1  | 02/18/22 08:01           | 02/18/22 20:18 | 7440-50-8     |      |
| Lead   | ND              | mg/L                | 0.0010       | 0.00089                   | 1  | 02/18/22 08:01           | 02/18/22 20:18 | 7439-92-1     |      |
| Nickel   | ND              | mg/L                | 0.0050       | 0.00071                   | 1  | 02/18/22 08:01           | 02/18/22 20:18 | 7440-02-0     |      |
| Selenium   | ND              | mg/L                | 0.0050       | 0.0014                    | 1  | 02/18/22 08:01           | 02/18/22 20:18 | 7782-49-2     |      |
| Silver   | ND              | mg/L                | 0.0050       | 0.00044                   | 1  | 02/18/22 08:01           | 02/18/22 20:18 | 7440-22-4     |      |
| Thallium   | ND              | mg/L                | 0.0010       | 0.00018                   | 1  | 02/18/22 08:01           | 02/18/22 20:18 | 7440-28-0     |      |
| Vanadium   | ND              | mg/L                | 0.010        | 0.0019                    | 1  | 02/18/22 08:01           | 02/18/22 20:18 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND              | mg/L                | 0.00020      | 0.00013                   | 1  | 02/15/22 15:15           | 02/16/22 13:04 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015                           |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |                 |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | <b>262</b>      | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/11/22 10:44 |               |      |
| <b>2320B Alkalinity</b>                                    |                 |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B                                |                 |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Minneapolis                     |                 |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3                                 | <b>159</b>      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 21:11 |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>159</b>      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 21:11 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND              | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/10/22 21:11 |               |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWC-13RZ**      **Lab ID: 92586436025**      Collected: 02/04/22 09:44      Received: 02/08/22 08:10      Matrix: Water

| Parameters                                | Results     | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|-------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |             |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |             |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |             |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |             |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>6.1</b>  | mg/L  | 1.0    | 0.60  | 1  |          | 02/14/22 19:49 | 16887-00-6 |      |
| Fluoride                                  | <b>0.13</b> | mg/L  | 0.10   | 0.050 | 1  |          | 02/14/22 19:49 | 16984-48-8 |      |
| Sulfate                                   | <b>63.1</b> | mg/L  | 1.0    | 0.50  | 1  |          | 02/14/22 19:49 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: **GWC-14Z** Lab ID: **92586436026** Collected: 02/04/22 11:30 Received: 02/08/22 08:10 Matrix: Water

| Parameters   | Results         | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.   | Qual |
|--|-----------------|------------|--------------|----------|----|----------------|----------------|-----------|------|
| <b>Field Data</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method:<br>Pace Analytical Services - Charlotte   |                 |            |              |          |    |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |            |              |          | 1  |                | 02/08/22 10:31 |           |      |
| pH   | <b>6.06</b>     | Std. Units |              |          | 1  |                | 02/08/22 10:31 |           |      |
| <b>6010D ATL ICP</b>   |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |              |          |    |                |                |           |      |
| Zinc   | ND              | mg/L       | 0.020        | 0.0085   | 1  | 02/18/22 08:05 | 02/18/22 19:12 | 7440-66-6 |      |
| Potassium  | <b>1.2</b>      | mg/L       | 0.20         | 0.15     | 1  | 02/18/22 08:05 | 02/18/22 19:12 | 7440-09-7 |      |
| Sodium   | <b>3.3</b>      | mg/L       | 1.0          | 0.58     | 1  | 02/18/22 08:05 | 02/18/22 19:12 | 7440-23-5 |      |
| Calcium  | <b>14.3</b>     | mg/L       | 1.0          | 0.12     | 1  | 02/18/22 08:05 | 02/18/22 19:12 | 7440-70-2 |      |
| Magnesium  | <b>6.3</b>      | mg/L       | 0.050        | 0.012    | 1  | 02/18/22 08:05 | 02/18/22 19:12 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |              |          |    |                |                |           |      |
| Antimony   | ND              | mg/L       | 0.0030       | 0.00078  | 1  | 02/18/22 08:01 | 02/18/22 20:36 | 7440-36-0 |      |
| Arsenic  | <b>0.0019J</b>  | mg/L       | 0.0050       | 0.0011   | 1  | 02/18/22 08:01 | 02/18/22 20:36 | 7440-38-2 | B    |
| Barium   | <b>0.014</b>    | mg/L       | 0.0050       | 0.00067  | 1  | 02/18/22 08:01 | 02/18/22 20:36 | 7440-39-3 |      |
| Beryllium  | <b>0.00011J</b> | mg/L       | 0.00050      | 0.000054 | 1  | 02/18/22 08:01 | 02/18/22 20:36 | 7440-41-7 |      |
| Boron  | ND              | mg/L       | 0.040        | 0.0086   | 1  | 02/18/22 08:01 | 02/18/22 20:36 | 7440-42-8 |      |
| Cadmium  | ND              | mg/L       | 0.00050      | 0.00011  | 1  | 02/18/22 08:01 | 02/18/22 20:36 | 7440-43-9 |      |
| Chromium   | ND              | mg/L       | 0.0050       | 0.0011   | 1  | 02/18/22 08:01 | 02/18/22 20:36 | 7440-47-3 |      |
| Cobalt   | ND              | mg/L       | 0.0050       | 0.00039  | 1  | 02/18/22 08:01 | 02/18/22 20:36 | 7440-48-4 |      |
| Copper   | ND              | mg/L       | 0.0050       | 0.00050  | 1  | 02/18/22 08:01 | 02/18/22 20:36 | 7440-50-8 |      |
| Lead   | ND              | mg/L       | 0.0010       | 0.00089  | 1  | 02/18/22 08:01 | 02/18/22 20:36 | 7439-92-1 |      |
| Nickel   | ND              | mg/L       | 0.0050       | 0.00071  | 1  | 02/18/22 08:01 | 02/18/22 20:36 | 7440-02-0 |      |
| Selenium   | ND              | mg/L       | 0.0050       | 0.0014   | 1  | 02/18/22 08:01 | 02/18/22 20:36 | 7782-49-2 |      |
| Silver   | ND              | mg/L       | 0.0050       | 0.00044  | 1  | 02/18/22 08:01 | 02/18/22 20:36 | 7440-22-4 |      |
| Thallium   | ND              | mg/L       | 0.0010       | 0.00018  | 1  | 02/18/22 08:01 | 02/18/22 20:36 | 7440-28-0 |      |
| Vanadium   | ND              | mg/L       | 0.010        | 0.0019   | 1  | 02/18/22 08:01 | 02/18/22 20:36 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |              |          |    |                |                |           |      |
| Mercury  | ND              | mg/L       | 0.00020      | 0.00013  | 1  | 02/15/22 15:15 | 02/16/22 13:12 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |                 |            |              |          |    |                |                |           |      |
| Total Dissolved Solids   | <b>92.0</b>     | mg/L       | 10.0         | 10.0     | 1  |                | 02/11/22 10:45 |           |      |
| <b>2320B Alkalinity</b>  |                 |            |              |          |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |                 |            |              |          |    |                |                |           |      |
| Alkalinity, Total as CaCO3   | <b>49.6</b>     | mg/L       | 5.0          | 1.8      | 1  |                | 02/15/22 16:45 |           |      |
| Alkalinity,Bicarbonate (CaCO3)   | <b>49.6</b>     | mg/L       | 5.0          | 1.8      | 1  |                | 02/15/22 16:45 |           |      |
| Alkalinity,Carbonate (CaCO3)   | ND              | mg/L       | 5.0          | 1.8      | 1  |                | 02/15/22 16:45 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWC-14Z**      **Lab ID: 92586436026**      Collected: 02/04/22 11:30      Received: 02/08/22 08:10      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 3.6     | mg/L  | 1.0    | 0.60  | 1  |          | 02/14/22 20:34 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/14/22 20:34 | 16984-48-8 |      |
| Sulfate                                   | 6.4     | mg/L  | 1.0    | 0.50  | 1  |          | 02/14/22 20:34 | 14808-79-8 |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Sample: GWC-15R  |          | Lab ID: 92586436027 |              | Collected: 02/04/22 13:14 |    | Received: 02/08/22 08:10 |                | Matrix: Water |      |
|--|----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results  | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |          |                     |              |                           |    |                          |                |               |      |
| Performed by   | CUSTOMER |                     |              |                           | 1  |                          | 02/08/22 10:31 |               |      |
| pH   | 7.61     | Std. Units          |              |                           | 1  |                          | 02/08/22 10:31 |               |      |
| <b>6010D ATL ICP</b>                                       |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND       | mg/L                | 0.020        | 0.0085                    | 1  | 02/18/22 08:05           | 02/18/22 19:26 | 7440-66-6     |      |
| Potassium  | 0.97     | mg/L                | 0.20         | 0.15                      | 1  | 02/18/22 08:05           | 02/18/22 19:26 | 7440-09-7     |      |
| Sodium   | 1.1      | mg/L                | 1.0          | 0.58                      | 1  | 02/18/22 08:05           | 02/18/22 19:26 | 7440-23-5     |      |
| Calcium  | 41.7     | mg/L                | 1.0          | 0.12                      | 1  | 02/18/22 08:05           | 02/18/22 19:26 | 7440-70-2     |      |
| Magnesium  | 20.1     | mg/L                | 0.050        | 0.012                     | 1  | 02/18/22 08:05           | 02/18/22 19:26 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>                                      |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND       | mg/L                | 0.0030       | 0.00078                   | 1  | 02/18/22 08:01           | 02/18/22 20:42 | 7440-36-0     |      |
| Arsenic  | 0.0026J  | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 08:01           | 02/18/22 20:42 | 7440-38-2     | B    |
| Barium   | 0.017    | mg/L                | 0.0050       | 0.00067                   | 1  | 02/18/22 08:01           | 02/18/22 20:42 | 7440-39-3     |      |
| Beryllium  | ND       | mg/L                | 0.00050      | 0.000054                  | 1  | 02/18/22 08:01           | 02/18/22 20:42 | 7440-41-7     |      |
| Boron  | ND       | mg/L                | 0.040        | 0.0086                    | 1  | 02/18/22 08:01           | 02/18/22 20:42 | 7440-42-8     |      |
| Cadmium  | ND       | mg/L                | 0.00050      | 0.00011                   | 1  | 02/18/22 08:01           | 02/18/22 20:42 | 7440-43-9     |      |
| Chromium   | ND       | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 08:01           | 02/18/22 20:42 | 7440-47-3     |      |
| Cobalt   | ND       | mg/L                | 0.0050       | 0.00039                   | 1  | 02/18/22 08:01           | 02/18/22 20:42 | 7440-48-4     |      |
| Copper   | ND       | mg/L                | 0.0050       | 0.00050                   | 1  | 02/18/22 08:01           | 02/18/22 20:42 | 7440-50-8     |      |
| Lead   | ND       | mg/L                | 0.0010       | 0.00089                   | 1  | 02/18/22 08:01           | 02/18/22 20:42 | 7439-92-1     |      |
| Nickel   | 0.00093J | mg/L                | 0.0050       | 0.00071                   | 1  | 02/18/22 08:01           | 02/18/22 20:42 | 7440-02-0     |      |
| Selenium   | ND       | mg/L                | 0.0050       | 0.0014                    | 1  | 02/18/22 08:01           | 02/18/22 20:42 | 7782-49-2     |      |
| Silver   | ND       | mg/L                | 0.0050       | 0.00044                   | 1  | 02/18/22 08:01           | 02/18/22 20:42 | 7440-22-4     |      |
| Thallium   | ND       | mg/L                | 0.0010       | 0.00018                   | 1  | 02/18/22 08:01           | 02/18/22 20:42 | 7440-28-0     |      |
| Vanadium   | ND       | mg/L                | 0.010        | 0.0019                    | 1  | 02/18/22 08:01           | 02/18/22 20:42 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND       | mg/L                | 0.00020      | 0.00013                   | 1  | 02/15/22 15:15           | 02/16/22 13:15 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015                           |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | 162      | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/11/22 11:39 |               |      |
| <b>2320B Alkalinity</b>                                    |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B                                |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Minneapolis                     |          |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3                                 | 162      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/15/22 16:49 |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | 162      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/15/22 16:49 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND       | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/15/22 16:49 |               |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWC-15R**      **Lab ID: 92586436027**      Collected: 02/04/22 13:14      Received: 02/08/22 08:10      Matrix: Water

| Parameters                                | Results    | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |            |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |            |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |            |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |            |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>1.2</b> | mg/L  | 1.0    | 0.60  | 1  |          | 02/14/22 21:19 | 16887-00-6 |      |
| Fluoride                                  | ND         | mg/L  | 0.10   | 0.050 | 1  |          | 02/14/22 21:19 | 16984-48-8 |      |
| Sulfate                                   | <b>8.3</b> | mg/L  | 1.0    | 0.50  | 1  |          | 02/14/22 21:19 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: DUP-3      Lab ID: 92586436028      Collected: 02/04/22 00:00      Received: 02/08/22 08:10      Matrix: Water |          |       |              |          |    |                |                |            |      |
|--|----------|-------|--------------|----------|----|----------------|----------------|------------|------|
| Parameters   | Results  | Units | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.    | Qual |
| <b>6010D ATL ICP</b>   |          |       |              |          |    |                |                |            |      |
| Analytical Method: EPA 6010D    Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA      |          |       |              |          |    |                |                |            |      |
| Zinc   | ND       | mg/L  | 0.020        | 0.0085   | 1  | 02/18/22 08:05 | 02/18/22 19:31 | 7440-66-6  |      |
| Potassium  | 1.0      | mg/L  | 0.20         | 0.15     | 1  | 02/18/22 08:05 | 02/18/22 19:31 | 7440-09-7  |      |
| Sodium   | 0.95J    | mg/L  | 1.0          | 0.58     | 1  | 02/18/22 08:05 | 02/18/22 19:31 | 7440-23-5  |      |
| Calcium  | 33.7     | mg/L  | 1.0          | 0.12     | 1  | 02/18/22 08:05 | 02/18/22 19:31 | 7440-70-2  |      |
| Magnesium  | 17.8     | mg/L  | 0.050        | 0.012    | 1  | 02/18/22 08:05 | 02/18/22 19:31 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>  |          |       |              |          |    |                |                |            |      |
| Analytical Method: EPA 6020B    Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA      |          |       |              |          |    |                |                |            |      |
| Antimony   | 0.00094J | mg/L  | 0.0030       | 0.00078  | 1  | 02/18/22 08:01 | 02/18/22 20:48 | 7440-36-0  |      |
| Arsenic  | 0.0035J  | mg/L  | 0.0050       | 0.0011   | 1  | 02/18/22 08:01 | 02/18/22 20:48 | 7440-38-2  | B    |
| Barium   | 0.020    | mg/L  | 0.0050       | 0.00067  | 1  | 02/18/22 08:01 | 02/18/22 20:48 | 7440-39-3  |      |
| Beryllium  | ND       | mg/L  | 0.00050      | 0.000054 | 1  | 02/18/22 08:01 | 02/18/22 20:48 | 7440-41-7  |      |
| Boron  | ND       | mg/L  | 0.040        | 0.0086   | 1  | 02/18/22 08:01 | 02/18/22 20:48 | 7440-42-8  |      |
| Cadmium  | ND       | mg/L  | 0.00050      | 0.00011  | 1  | 02/18/22 08:01 | 02/18/22 20:48 | 7440-43-9  |      |
| Chromium   | 0.0041J  | mg/L  | 0.0050       | 0.0011   | 1  | 02/18/22 08:01 | 02/18/22 20:48 | 7440-47-3  |      |
| Cobalt   | ND       | mg/L  | 0.0050       | 0.00039  | 1  | 02/18/22 08:01 | 02/18/22 20:48 | 7440-48-4  |      |
| Copper   | ND       | mg/L  | 0.0050       | 0.00050  | 1  | 02/18/22 08:01 | 02/18/22 20:48 | 7440-50-8  |      |
| Lead   | ND       | mg/L  | 0.0010       | 0.00089  | 1  | 02/18/22 08:01 | 02/18/22 20:48 | 7439-92-1  |      |
| Nickel   | ND       | mg/L  | 0.0050       | 0.00071  | 1  | 02/18/22 08:01 | 02/18/22 20:48 | 7440-02-0  |      |
| Selenium   | ND       | mg/L  | 0.0050       | 0.0014   | 1  | 02/18/22 08:01 | 02/18/22 20:48 | 7782-49-2  |      |
| Silver   | ND       | mg/L  | 0.0050       | 0.00044  | 1  | 02/18/22 08:01 | 02/18/22 20:48 | 7440-22-4  |      |
| Thallium   | ND       | mg/L  | 0.0010       | 0.00018  | 1  | 02/18/22 08:01 | 02/18/22 20:48 | 7440-28-0  |      |
| Vanadium   | ND       | mg/L  | 0.010        | 0.0019   | 1  | 02/18/22 08:01 | 02/18/22 20:48 | 7440-62-2  |      |
| <b>7470 Mercury</b>  |          |       |              |          |    |                |                |            |      |
| Analytical Method: EPA 7470A    Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA      |          |       |              |          |    |                |                |            |      |
| Mercury  | ND       | mg/L  | 0.00020      | 0.00013  | 1  | 02/15/22 15:15 | 02/16/22 13:17 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b>  |          |       |              |          |    |                |                |            |      |
| Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                                   |          |       |              |          |    |                |                |            |      |
| Total Dissolved Solids   | 162      | mg/L  | 10.0         | 10.0     | 1  |                | 02/11/22 11:39 |            |      |
| <b>2320B Alkalinity</b>  |          |       |              |          |    |                |                |            |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |          |       |              |          |    |                |                |            |      |
| Alkalinity, Total as CaCO3   | 148      | mg/L  | 5.0          | 1.8      | 1  |                | 02/15/22 16:53 |            |      |
| Alkalinity,Bicarbonate (CaCO3)   | 148      | mg/L  | 5.0          | 1.8      | 1  |                | 02/15/22 16:53 |            |      |
| Alkalinity,Carbonate (CaCO3)   | ND       | mg/L  | 5.0          | 1.8      | 1  |                | 02/15/22 16:53 |            |      |
| <b>300.0 IC Anions 28 Days</b>   |          |       |              |          |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                                      |          |       |              |          |    |                |                |            |      |
| Chloride   | 1.3      | mg/L  | 1.0          | 0.60     | 1  |                | 02/14/22 21:34 | 16887-00-6 |      |
| Fluoride   | ND       | mg/L  | 0.10         | 0.050    | 1  |                | 02/14/22 21:34 | 16984-48-8 |      |
| Sulfate  | 1.5      | mg/L  | 1.0          | 0.50     | 1  |                | 02/14/22 21:34 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: FB-4**      **Lab ID: 92586436029**      Collected: 02/04/22 13:15      Received: 02/08/22 08:10      Matrix: Water

| Parameters  | Results        | Units | Report  |          |    | Prepared       | Analyzed       | CAS No.    | Qual |
|---|----------------|-------|---------|----------|----|----------------|----------------|------------|------|
|   |                |       | Limit   | MDL      | DF |                |                |            |      |
| <b>6010D ATL ICP</b>  |                |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 6010D    Preparation Method: EPA 3010A |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |                |       |         |          |    |                |                |            |      |
| Zinc  | ND             | mg/L  | 0.020   | 0.0085   | 1  | 02/18/22 08:05 | 02/18/22 19:36 | 7440-66-6  |      |
| Potassium   | ND             | mg/L  | 0.20    | 0.15     | 1  | 02/18/22 08:05 | 02/18/22 19:36 | 7440-09-7  |      |
| Sodium  | ND             | mg/L  | 1.0     | 0.58     | 1  | 02/18/22 08:05 | 02/18/22 19:36 | 7440-23-5  |      |
| Calcium   | ND             | mg/L  | 1.0     | 0.12     | 1  | 02/18/22 08:05 | 02/18/22 19:36 | 7440-70-2  |      |
| Magnesium   | ND             | mg/L  | 0.050   | 0.012    | 1  | 02/18/22 08:05 | 02/18/22 19:36 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>   |                |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 6020B    Preparation Method: EPA 3005A |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |                |       |         |          |    |                |                |            |      |
| Antimony  | ND             | mg/L  | 0.0030  | 0.00078  | 1  | 02/18/22 08:01 | 02/18/22 20:54 | 7440-36-0  |      |
| Arsenic   | <b>0.0019J</b> | mg/L  | 0.0050  | 0.0011   | 1  | 02/18/22 08:01 | 02/18/22 20:54 | 7440-38-2  | B    |
| Barium  | ND             | mg/L  | 0.0050  | 0.00067  | 1  | 02/18/22 08:01 | 02/18/22 20:54 | 7440-39-3  |      |
| Beryllium   | ND             | mg/L  | 0.00050 | 0.000054 | 1  | 02/18/22 08:01 | 02/18/22 20:54 | 7440-41-7  |      |
| Boron   | ND             | mg/L  | 0.040   | 0.0086   | 1  | 02/18/22 08:01 | 02/18/22 20:54 | 7440-42-8  |      |
| Cadmium   | ND             | mg/L  | 0.00050 | 0.00011  | 1  | 02/18/22 08:01 | 02/18/22 20:54 | 7440-43-9  |      |
| Chromium  | ND             | mg/L  | 0.0050  | 0.0011   | 1  | 02/18/22 08:01 | 02/18/22 20:54 | 7440-47-3  |      |
| Cobalt  | ND             | mg/L  | 0.0050  | 0.00039  | 1  | 02/18/22 08:01 | 02/18/22 20:54 | 7440-48-4  |      |
| Copper  | ND             | mg/L  | 0.0050  | 0.00050  | 1  | 02/18/22 08:01 | 02/18/22 20:54 | 7440-50-8  |      |
| Lead  | ND             | mg/L  | 0.0010  | 0.00089  | 1  | 02/18/22 08:01 | 02/18/22 20:54 | 7439-92-1  |      |
| Nickel  | ND             | mg/L  | 0.0050  | 0.00071  | 1  | 02/18/22 08:01 | 02/18/22 20:54 | 7440-02-0  |      |
| Selenium  | ND             | mg/L  | 0.0050  | 0.0014   | 1  | 02/18/22 08:01 | 02/18/22 20:54 | 7782-49-2  |      |
| Silver  | ND             | mg/L  | 0.0050  | 0.00044  | 1  | 02/18/22 08:01 | 02/18/22 20:54 | 7440-22-4  |      |
| Thallium  | ND             | mg/L  | 0.0010  | 0.00018  | 1  | 02/18/22 08:01 | 02/18/22 20:54 | 7440-28-0  |      |
| Vanadium  | ND             | mg/L  | 0.010   | 0.0019   | 1  | 02/18/22 08:01 | 02/18/22 20:54 | 7440-62-2  |      |
| <b>7470 Mercury</b>   |                |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 7470A    Preparation Method: EPA 7470A |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |                |       |         |          |    |                |                |            |      |
| Mercury   | ND             | mg/L  | 0.00020 | 0.00013  | 1  | 02/15/22 15:15 | 02/16/22 13:20 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b>                           |                |       |         |          |    |                |                |            |      |
| Analytical Method: SM 2540C-2015                              |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Peachtree Corners, GA              |                |       |         |          |    |                |                |            |      |
| Total Dissolved Solids  | ND             | mg/L  | 10.0    | 10.0     | 1  |                | 02/11/22 11:40 |            |      |
| <b>2320B Alkalinity</b>                                       |                |       |         |          |    |                |                |            |      |
| Analytical Method: SM 2320B                                   |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Minneapolis                        |                |       |         |          |    |                |                |            |      |
| Alkalinity, Total as CaCO3                                    | ND             | mg/L  | 5.0     | 1.8      | 1  |                | 02/15/22 16:58 |            |      |
| Alkalinity,Bicarbonate (CaCO3)                                | ND             | mg/L  | 5.0     | 1.8      | 1  |                | 02/15/22 16:58 |            |      |
| Alkalinity,Carbonate (CaCO3)                                  | ND             | mg/L  | 5.0     | 1.8      | 1  |                | 02/15/22 16:58 |            |      |
| <b>300.0 IC Anions 28 Days</b>                                |                |       |         |          |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993                     |                |       |         |          |    |                |                |            |      |
| Pace Analytical Services - Asheville                          |                |       |         |          |    |                |                |            |      |
| Chloride  | ND             | mg/L  | 1.0     | 0.60     | 1  |                | 02/14/22 21:49 | 16887-00-6 |      |
| Fluoride  | ND             | mg/L  | 0.10    | 0.050    | 1  |                | 02/14/22 21:49 | 16984-48-8 |      |
| Sulfate   | ND             | mg/L  | 1.0     | 0.50     | 1  |                | 02/14/22 21:49 | 14808-79-8 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Sample: GWC-15Z  |          | Lab ID: 92586436030 |              | Collected: 02/07/22 10:13 |    | Received: 02/08/22 08:10 |                | Matrix: Water |      |
|--|----------|---------------------|--------------|---------------------------|----|--------------------------|----------------|---------------|------|
| Parameters   | Results  | Units               | Report Limit | MDL                       | DF | Prepared                 | Analyzed       | CAS No.       | Qual |
| <b>Field Data</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: Pace Analytical Services - Charlotte    |          |                     |              |                           |    |                          |                |               |      |
| Performed by   | CUSTOMER |                     |              |                           | 1  |                          | 02/08/22 10:31 |               |      |
| pH   | 7.83     | Std. Units          |              |                           | 1  |                          | 02/08/22 10:31 |               |      |
| <b>6010D ATL ICP</b>                                       |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Zinc   | ND       | mg/L                | 0.020        | 0.0085                    | 1  | 02/18/22 08:05           | 02/18/22 19:41 | 7440-66-6     |      |
| Potassium  | 0.96     | mg/L                | 0.20         | 0.15                      | 1  | 02/18/22 08:05           | 02/18/22 19:41 | 7440-09-7     |      |
| Sodium   | 3.0      | mg/L                | 1.0          | 0.58                      | 1  | 02/18/22 08:05           | 02/18/22 19:41 | 7440-23-5     |      |
| Calcium  | 26.1     | mg/L                | 1.0          | 0.12                      | 1  | 02/18/22 08:05           | 02/18/22 19:41 | 7440-70-2     |      |
| Magnesium  | 14.0     | mg/L                | 0.050        | 0.012                     | 1  | 02/18/22 08:05           | 02/18/22 19:41 | 7439-95-4     |      |
| <b>6020 MET ICPMS</b>                                      |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Antimony   | ND       | mg/L                | 0.0030       | 0.00078                   | 1  | 02/18/22 08:01           | 02/18/22 21:00 | 7440-36-0     |      |
| Arsenic  | 0.0025J  | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 08:01           | 02/18/22 21:00 | 7440-38-2     | B    |
| Barium   | 0.012    | mg/L                | 0.0050       | 0.00067                   | 1  | 02/18/22 08:01           | 02/18/22 21:00 | 7440-39-3     |      |
| Beryllium  | ND       | mg/L                | 0.00050      | 0.000054                  | 1  | 02/18/22 08:01           | 02/18/22 21:00 | 7440-41-7     |      |
| Boron  | ND       | mg/L                | 0.040        | 0.0086                    | 1  | 02/18/22 08:01           | 02/18/22 21:00 | 7440-42-8     |      |
| Cadmium  | ND       | mg/L                | 0.00050      | 0.00011                   | 1  | 02/18/22 08:01           | 02/18/22 21:00 | 7440-43-9     |      |
| Chromium   | 0.0011J  | mg/L                | 0.0050       | 0.0011                    | 1  | 02/18/22 08:01           | 02/18/22 21:00 | 7440-47-3     |      |
| Cobalt   | ND       | mg/L                | 0.0050       | 0.00039                   | 1  | 02/18/22 08:01           | 02/18/22 21:00 | 7440-48-4     |      |
| Copper   | ND       | mg/L                | 0.0050       | 0.00050                   | 1  | 02/18/22 08:01           | 02/18/22 21:00 | 7440-50-8     |      |
| Lead   | ND       | mg/L                | 0.0010       | 0.00089                   | 1  | 02/18/22 08:01           | 02/18/22 21:00 | 7439-92-1     |      |
| Nickel   | ND       | mg/L                | 0.0050       | 0.00071                   | 1  | 02/18/22 08:01           | 02/18/22 21:00 | 7440-02-0     |      |
| Selenium   | ND       | mg/L                | 0.0050       | 0.0014                    | 1  | 02/18/22 08:01           | 02/18/22 21:00 | 7782-49-2     |      |
| Silver   | ND       | mg/L                | 0.0050       | 0.00044                   | 1  | 02/18/22 08:01           | 02/18/22 21:00 | 7440-22-4     |      |
| Thallium   | ND       | mg/L                | 0.0010       | 0.00018                   | 1  | 02/18/22 08:01           | 02/18/22 21:00 | 7440-28-0     |      |
| Vanadium   | ND       | mg/L                | 0.010        | 0.0019                    | 1  | 02/18/22 08:01           | 02/18/22 21:00 | 7440-62-2     |      |
| <b>7470 Mercury</b>  |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Mercury  | ND       | mg/L                | 0.00020      | 0.00013                   | 1  | 02/15/22 15:15           | 02/16/22 13:23 | 7439-97-6     |      |
| <b>2540C Total Dissolved Solids</b>                        |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2540C-2015                           |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Peachtree Corners, GA           |          |                     |              |                           |    |                          |                |               |      |
| Total Dissolved Solids                                     | 121      | mg/L                | 10.0         | 10.0                      | 1  |                          | 02/11/22 11:40 |               |      |
| <b>2320B Alkalinity</b>                                    |          |                     |              |                           |    |                          |                |               |      |
| Analytical Method: SM 2320B                                |          |                     |              |                           |    |                          |                |               |      |
| Pace Analytical Services - Minneapolis                     |          |                     |              |                           |    |                          |                |               |      |
| Alkalinity, Total as CaCO3                                 | 123      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/15/22 17:01 |               |      |
| Alkalinity,Bicarbonate (CaCO3)                             | 123      | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/15/22 17:01 |               |      |
| Alkalinity,Carbonate (CaCO3)                               | ND       | mg/L                | 5.0          | 1.8                       | 1  |                          | 02/15/22 17:01 |               |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

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**Sample: GWC-15Z**      **Lab ID: 92586436030**      Collected: 02/07/22 10:13      Received: 02/08/22 08:10      Matrix: Water

| Parameters                                | Results      | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|--------------|-------|--------|-------|----|----------|----------------|------------|------|
|   |              |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |              |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |              |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |              |       |        |       |    |          |                |            |      |
| Chloride                                  | <b>0.60J</b> | mg/L  | 1.0    | 0.60  | 1  |          | 02/14/22 22:04 | 16887-00-6 |      |
| Fluoride                                  | ND           | mg/L  | 0.10   | 0.050 | 1  |          | 02/14/22 22:04 | 16984-48-8 |      |
| Sulfate                                   | <b>0.64J</b> | mg/L  | 1.0    | 0.50  | 1  |          | 02/14/22 22:04 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: <b>FB-5</b>                 |                | Lab ID: <b>92586436031</b>   |              | Collected: 02/07/22 11:30 | Received: 02/08/22 08:10 | Matrix: Water  |                |            |      |  |
|-------------------------------------|----------------|--|--------------|---------------------------|--------------------------|----------------|----------------|------------|------|--|
| Parameters                          | Results        | Units  | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.    | Qual |  |
| <b>6010D ATL ICP</b>                |                | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |  |
| Zinc                                | ND             | mg/L   | 0.020        | 0.0085                    | 1                        | 02/18/22 08:05 | 02/18/22 19:46 | 7440-66-6  |      |  |
| Potassium                           | ND             | mg/L   | 0.20         | 0.15                      | 1                        | 02/18/22 08:05 | 02/18/22 19:46 | 7440-09-7  |      |  |
| Sodium                              | ND             | mg/L   | 1.0          | 0.58                      | 1                        | 02/18/22 08:05 | 02/18/22 19:46 | 7440-23-5  |      |  |
| Calcium                             | ND             | mg/L   | 1.0          | 0.12                      | 1                        | 02/18/22 08:05 | 02/18/22 19:46 | 7440-70-2  |      |  |
| Magnesium                           | ND             | mg/L   | 0.050        | 0.012                     | 1                        | 02/18/22 08:05 | 02/18/22 19:46 | 7439-95-4  |      |  |
| <b>6020 MET ICPMS</b>               |                | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |  |
| Antimony                            | ND             | mg/L   | 0.0030       | 0.00078                   | 1                        | 02/18/22 08:01 | 02/18/22 21:12 | 7440-36-0  |      |  |
| Arsenic                             | <b>0.0018J</b> | mg/L   | 0.0050       | 0.0011                    | 1                        | 02/18/22 08:01 | 02/18/22 21:12 | 7440-38-2  | B    |  |
| Barium                              | ND             | mg/L   | 0.0050       | 0.00067                   | 1                        | 02/18/22 08:01 | 02/18/22 21:12 | 7440-39-3  |      |  |
| Beryllium                           | ND             | mg/L   | 0.00050      | 0.000054                  | 1                        | 02/18/22 08:01 | 02/18/22 21:12 | 7440-41-7  |      |  |
| Boron                               | ND             | mg/L   | 0.040        | 0.0086                    | 1                        | 02/18/22 08:01 | 02/18/22 21:12 | 7440-42-8  |      |  |
| Cadmium                             | ND             | mg/L   | 0.00050      | 0.00011                   | 1                        | 02/18/22 08:01 | 02/18/22 21:12 | 7440-43-9  |      |  |
| Chromium                            | ND             | mg/L   | 0.0050       | 0.0011                    | 1                        | 02/18/22 08:01 | 02/18/22 21:12 | 7440-47-3  |      |  |
| Cobalt                              | ND             | mg/L   | 0.0050       | 0.00039                   | 1                        | 02/18/22 08:01 | 02/18/22 21:12 | 7440-48-4  |      |  |
| Copper                              | ND             | mg/L   | 0.0050       | 0.00050                   | 1                        | 02/18/22 08:01 | 02/18/22 21:12 | 7440-50-8  |      |  |
| Lead                                | ND             | mg/L   | 0.0010       | 0.00089                   | 1                        | 02/18/22 08:01 | 02/18/22 21:12 | 7439-92-1  |      |  |
| Nickel                              | ND             | mg/L   | 0.0050       | 0.00071                   | 1                        | 02/18/22 08:01 | 02/18/22 21:12 | 7440-02-0  |      |  |
| Selenium                            | ND             | mg/L   | 0.0050       | 0.0014                    | 1                        | 02/18/22 08:01 | 02/18/22 21:12 | 7782-49-2  |      |  |
| Silver                              | ND             | mg/L   | 0.0050       | 0.00044                   | 1                        | 02/18/22 08:01 | 02/18/22 21:12 | 7440-22-4  |      |  |
| Thallium                            | ND             | mg/L   | 0.0010       | 0.00018                   | 1                        | 02/18/22 08:01 | 02/18/22 21:12 | 7440-28-0  |      |  |
| Vanadium                            | ND             | mg/L   | 0.010        | 0.0019                    | 1                        | 02/18/22 08:01 | 02/18/22 21:12 | 7440-62-2  |      |  |
| <b>7470 Mercury</b>                 |                | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |  |
| Mercury                             | ND             | mg/L   | 0.00020      | 0.00013                   | 1                        | 02/16/22 08:30 | 02/16/22 13:31 | 7439-97-6  |      |  |
| <b>2540C Total Dissolved Solids</b> |                | Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |              |                           |                          |                |                |            |      |  |
| Total Dissolved Solids              | ND             | mg/L   | 10.0         | 10.0                      | 1                        |                | 02/11/22 11:40 |            |      |  |
| <b>2320B Alkalinity</b>             |                | Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |              |                           |                          |                |                |            |      |  |
| Alkalinity, Total as CaCO3          | ND             | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/15/22 17:05 |            |      |  |
| Alkalinity,Bicarbonate (CaCO3)      | ND             | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/15/22 17:05 |            |      |  |
| Alkalinity,Carbonate (CaCO3)        | ND             | mg/L   | 5.0          | 1.8                       | 1                        |                | 02/15/22 17:05 |            |      |  |
| <b>300.0 IC Anions 28 Days</b>      |                | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |              |                           |                          |                |                |            |      |  |
| Chloride                            | ND             | mg/L   | 1.0          | 0.60                      | 1                        |                | 02/14/22 22:19 | 16887-00-6 |      |  |
| Fluoride                            | ND             | mg/L   | 0.10         | 0.050                     | 1                        |                | 02/14/22 22:19 | 16984-48-8 |      |  |
| Sulfate                             | ND             | mg/L   | 1.0          | 0.50                      | 1                        |                | 02/14/22 22:19 | 14808-79-8 |      |  |

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## ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: <b>GWC-13</b>                                      |                  | Lab ID: <b>92586436032</b> |              | Collected: 02/17/22 13:06 | Received: 02/18/22 09:52 | Matrix: Water  |                |           |      |
|--|------------------|----------------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results          | Units                      | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                  |                            |              |                           |                          |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte    |                  |                            |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b>  |                            |              |                           | 1                        |                | 02/18/22 13:25 |           |      |
| pH   | <b>7.24</b>      | Std. Units                 |              |                           | 1                        |                | 02/18/22 13:25 |           |      |
| <b>6010D ATL ICP</b>                                       |                  |                            |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6010D Preparation Method: EPA 3010A |                  |                            |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                  |                            |              |                           |                          |                |                |           |      |
| Zinc   | ND               | mg/L                       | 0.020        | 0.0085                    | 1                        | 02/25/22 10:43 | 03/01/22 02:45 | 7440-66-6 |      |
| Potassium  | <b>1.9</b>       | mg/L                       | 0.20         | 0.15                      | 1                        | 02/25/22 10:43 | 03/01/22 02:45 | 7440-09-7 |      |
| Sodium   | <b>1.5</b>       | mg/L                       | 1.0          | 0.58                      | 1                        | 02/25/22 10:43 | 03/01/22 02:45 | 7440-23-5 |      |
| Calcium  | <b>29.3</b>      | mg/L                       | 1.0          | 0.12                      | 1                        | 02/25/22 10:43 | 03/01/22 02:45 | 7440-70-2 |      |
| Magnesium  | <b>10.9</b>      | mg/L                       | 0.050        | 0.012                     | 1                        | 02/25/22 10:43 | 03/01/22 02:45 | 7439-95-4 |      |
| <b>6020 MET ICPMS</b>                                      |                  |                            |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A |                  |                            |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                  |                            |              |                           |                          |                |                |           |      |
| Antimony   | ND               | mg/L                       | 0.0030       | 0.00078                   | 1                        | 02/25/22 10:38 | 02/25/22 23:19 | 7440-36-0 |      |
| Arsenic  | ND               | mg/L                       | 0.0050       | 0.0011                    | 1                        | 02/25/22 10:38 | 02/25/22 23:19 | 7440-38-2 |      |
| Barium   | <b>0.020</b>     | mg/L                       | 0.0050       | 0.00067                   | 1                        | 02/25/22 10:38 | 02/25/22 23:19 | 7440-39-3 |      |
| Beryllium  | <b>0.000089J</b> | mg/L                       | 0.00050      | 0.000054                  | 1                        | 02/25/22 10:38 | 02/25/22 23:19 | 7440-41-7 |      |
| Boron  | <b>0.015J</b>    | mg/L                       | 0.040        | 0.0086                    | 1                        | 02/25/22 10:38 | 02/25/22 23:19 | 7440-42-8 |      |
| Cadmium  | ND               | mg/L                       | 0.00050      | 0.00011                   | 1                        | 02/25/22 10:38 | 02/25/22 23:19 | 7440-43-9 |      |
| Chromium   | <b>0.0053</b>    | mg/L                       | 0.0050       | 0.0011                    | 1                        | 02/25/22 10:38 | 02/25/22 23:19 | 7440-47-3 |      |
| Cobalt   | ND               | mg/L                       | 0.0050       | 0.00039                   | 1                        | 02/25/22 10:38 | 02/25/22 23:19 | 7440-48-4 |      |
| Copper   | ND               | mg/L                       | 0.0050       | 0.00050                   | 1                        | 02/25/22 10:38 | 02/25/22 23:19 | 7440-50-8 |      |
| Lead   | ND               | mg/L                       | 0.0010       | 0.00089                   | 1                        | 02/25/22 10:38 | 02/25/22 23:19 | 7439-92-1 |      |
| Nickel   | ND               | mg/L                       | 0.0050       | 0.00071                   | 1                        | 02/25/22 10:38 | 02/25/22 23:19 | 7440-02-0 |      |
| Selenium   | ND               | mg/L                       | 0.0050       | 0.0014                    | 1                        | 02/25/22 10:38 | 02/25/22 23:19 | 7782-49-2 |      |
| Silver   | ND               | mg/L                       | 0.0050       | 0.00044                   | 1                        | 02/25/22 10:38 | 02/25/22 23:19 | 7440-22-4 |      |
| Thallium   | ND               | mg/L                       | 0.0010       | 0.00018                   | 1                        | 02/25/22 10:38 | 02/25/22 23:19 | 7440-28-0 |      |
| Vanadium   | ND               | mg/L                       | 0.010        | 0.0019                    | 1                        | 02/25/22 10:38 | 02/25/22 23:19 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |                  |                            |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 7470A Preparation Method: EPA 7470A |                  |                            |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                  |                            |              |                           |                          |                |                |           |      |
| Mercury  | ND               | mg/L                       | 0.00020      | 0.00013                   | 1                        | 02/28/22 10:30 | 02/28/22 15:09 | 7439-97-6 |      |
| <b>2540C Total Dissolved Solids</b>                        |                  |                            |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2540C-2015                           |                  |                            |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Peachtree Corners, GA           |                  |                            |              |                           |                          |                |                |           |      |
| Total Dissolved Solids                                     | <b>119</b>       | mg/L                       | 10.0         | 10.0                      | 1                        |                | 02/23/22 16:01 |           |      |
| <b>2320B Alkalinity</b>                                    |                  |                            |              |                           |                          |                |                |           |      |
| Analytical Method: SM 2320B                                |                  |                            |              |                           |                          |                |                |           |      |
| Pace Analytical Services - Minneapolis                     |                  |                            |              |                           |                          |                |                |           |      |
| Alkalinity, Total as CaCO3                                 | <b>109</b>       | mg/L                       | 5.0          | 1.8                       | 1                        |                | 02/25/22 11:45 |           |      |
| Alkalinity,Bicarbonate (CaCO3)                             | <b>109</b>       | mg/L                       | 5.0          | 1.8                       | 1                        |                | 02/25/22 11:45 |           |      |
| Alkalinity,Carbonate (CaCO3)                               | ND               | mg/L                       | 5.0          | 1.8                       | 1                        |                | 02/25/22 11:45 |           |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

**Sample: GWC-13**      **Lab ID: 92586436032**      Collected: 02/17/22 13:06      Received: 02/18/22 09:52      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 3.1     | mg/L  | 1.0    | 0.60  | 1  |          | 02/25/22 08:51 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 02/25/22 08:51 | 16984-48-8 |      |
| Sulfate                                   | 6.9     | mg/L  | 1.0    | 0.50  | 1  |          | 02/25/22 08:51 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Sample: <b>FB-6</b>                 |         | Lab ID: <b>92586436033</b>   |         | Collected: 02/17/22 13:40 | Received: 02/18/22 09:52 | Matrix: Water  |                |            |      |
|-------------------------------------|---------|--|---------|---------------------------|--------------------------|----------------|----------------|------------|------|
| Parameters                          | Results | Units  | Report  |                           |                          | Prepared       | Analyzed       | CAS No.    | Qual |
|                                     |         |  | Limit   | MDL                       | DF                       |                |                |            |      |
| <b>6010D ATL ICP</b>                |         | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |
| Zinc                                | ND      | mg/L   | 0.020   | 0.0085                    | 1                        | 02/25/22 10:43 | 03/01/22 02:55 | 7440-66-6  |      |
| Potassium                           | ND      | mg/L   | 0.20    | 0.15                      | 1                        | 02/25/22 10:43 | 03/01/22 02:55 | 7440-09-7  |      |
| Sodium                              | ND      | mg/L   | 1.0     | 0.58                      | 1                        | 02/25/22 10:43 | 03/01/22 02:55 | 7440-23-5  |      |
| Calcium                             | ND      | mg/L   | 1.0     | 0.12                      | 1                        | 02/25/22 10:43 | 03/01/22 02:55 | 7440-70-2  |      |
| Magnesium                           | ND      | mg/L   | 0.050   | 0.012                     | 1                        | 02/25/22 10:43 | 03/01/22 02:55 | 7439-95-4  |      |
| <b>6020 MET ICPMS</b>               |         | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |
| Antimony                            | ND      | mg/L   | 0.0030  | 0.00078                   | 1                        | 02/25/22 10:38 | 02/25/22 23:31 | 7440-36-0  |      |
| Arsenic                             | ND      | mg/L   | 0.0050  | 0.0011                    | 1                        | 02/25/22 10:38 | 02/25/22 23:31 | 7440-38-2  |      |
| Barium                              | ND      | mg/L   | 0.0050  | 0.00067                   | 1                        | 02/25/22 10:38 | 02/25/22 23:31 | 7440-39-3  |      |
| Beryllium                           | ND      | mg/L   | 0.00050 | 0.000054                  | 1                        | 02/25/22 10:38 | 02/25/22 23:31 | 7440-41-7  |      |
| Boron                               | ND      | mg/L   | 0.040   | 0.0086                    | 1                        | 02/25/22 10:38 | 02/25/22 23:31 | 7440-42-8  |      |
| Cadmium                             | ND      | mg/L   | 0.00050 | 0.00011                   | 1                        | 02/25/22 10:38 | 02/25/22 23:31 | 7440-43-9  |      |
| Chromium                            | ND      | mg/L   | 0.0050  | 0.0011                    | 1                        | 02/25/22 10:38 | 02/25/22 23:31 | 7440-47-3  |      |
| Cobalt                              | ND      | mg/L   | 0.0050  | 0.00039                   | 1                        | 02/25/22 10:38 | 02/25/22 23:31 | 7440-48-4  |      |
| Copper                              | ND      | mg/L   | 0.0050  | 0.00050                   | 1                        | 02/25/22 10:38 | 02/25/22 23:31 | 7440-50-8  |      |
| Lead                                | ND      | mg/L   | 0.0010  | 0.00089                   | 1                        | 02/25/22 10:38 | 02/25/22 23:31 | 7439-92-1  |      |
| Nickel                              | ND      | mg/L   | 0.0050  | 0.00071                   | 1                        | 02/25/22 10:38 | 02/25/22 23:31 | 7440-02-0  |      |
| Selenium                            | ND      | mg/L   | 0.0050  | 0.0014                    | 1                        | 02/25/22 10:38 | 02/25/22 23:31 | 7782-49-2  |      |
| Silver                              | ND      | mg/L   | 0.0050  | 0.00044                   | 1                        | 02/25/22 10:38 | 02/25/22 23:31 | 7440-22-4  |      |
| Thallium                            | ND      | mg/L   | 0.0010  | 0.00018                   | 1                        | 02/25/22 10:38 | 02/25/22 23:31 | 7440-28-0  |      |
| Vanadium                            | ND      | mg/L   | 0.010   | 0.0019                    | 1                        | 02/25/22 10:38 | 02/25/22 23:31 | 7440-62-2  |      |
| <b>7470 Mercury</b>                 |         | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |
| Mercury                             | ND      | mg/L   | 0.00020 | 0.00013                   | 1                        | 02/28/22 10:30 | 02/28/22 15:12 | 7439-97-6  |      |
| <b>2540C Total Dissolved Solids</b> |         | Analytical Method: SM 2540C-2015<br>Pace Analytical Services - Peachtree Corners, GA                           |         |                           |                          |                |                |            |      |
| Total Dissolved Solids              | ND      | mg/L   | 10.0    | 10.0                      | 1                        |                | 02/23/22 16:01 |            |      |
| <b>2320B Alkalinity</b>             |         | Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |         |                           |                          |                |                |            |      |
| Alkalinity, Total as CaCO3          | ND      | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/25/22 11:48 |            |      |
| Alkalinity,Bicarbonate (CaCO3)      | ND      | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/25/22 11:48 |            |      |
| Alkalinity,Carbonate (CaCO3)        | ND      | mg/L   | 5.0     | 1.8                       | 1                        |                | 02/25/22 11:48 |            |      |
| <b>300.0 IC Anions 28 Days</b>      |         | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |         |                           |                          |                |                |            |      |
| Chloride                            | ND      | mg/L   | 1.0     | 0.60                      | 1                        |                | 02/25/22 09:07 | 16887-00-6 |      |
| Fluoride                            | ND      | mg/L   | 0.10    | 0.050                     | 1                        |                | 02/25/22 09:07 | 16984-48-8 |      |
| Sulfate                             | ND      | mg/L   | 1.0     | 0.50                      | 1                        |                | 02/25/22 09:07 | 14808-79-8 |      |

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

QC Batch: 679147 Analysis Method: EPA 6010D  
 QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
 Laboratory: Pace Analytical Services - Peachtree Corners, GA  
 Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006, 92586436007,  
 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014,  
 92586436015, 92586436016, 92586436017, 92586436018

METHOD BLANK: 3553757 Matrix: Water  
 Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006, 92586436007,  
 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014,  
 92586436015, 92586436016, 92586436017, 92586436018

| Parameter | Units | Blank Result | Reporting Limit | MDL    | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|--------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 0.12   | 02/18/22 15:42 |            |
| Magnesium | mg/L  | ND           | 0.050           | 0.012  | 02/18/22 15:42 |            |
| Potassium | mg/L  | ND           | 0.20            | 0.15   | 02/18/22 15:42 |            |
| Sodium    | mg/L  | ND           | 1.0             | 0.58   | 02/18/22 15:42 |            |
| Zinc      | mg/L  | ND           | 0.020           | 0.0085 | 02/18/22 15:42 |            |

LABORATORY CONTROL SAMPLE: 3553758

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 1.1        | 108       | 80-120       |            |
| Magnesium | mg/L  | 1           | 1.1        | 107       | 80-120       |            |
| Potassium | mg/L  | 1           | 1.1        | 106       | 80-120       |            |
| Sodium    | mg/L  | 1           | 1.1        | 110       | 80-120       |            |
| Zinc      | mg/L  | 1           | 1.1        | 107       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3553759 3553760

| Parameter | Units | MS          |        | MSD         |        | MS    |       | MSD |        | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|--------|-------|-------|-----|--------|--------------|-----|---------|------|
|           |       | Spike Conc. | Result | Spike Conc. | Result | % Rec | % Rec |     |        |              |     |         |      |
| Calcium   | mg/L  | 48.0        | 1      | 1           | 49.4   | 48.9  | 137   | 89  | 75-125 | 1            | 20  | M1      |      |
| Magnesium | mg/L  | 14.0        | 1      | 1           | 15.2   | 14.8  | 124   | 80  | 75-125 | 3            | 20  |         |      |
| Potassium | mg/L  | 0.88        | 1      | 1           | 2.0    | 2.0   | 109   | 113 | 75-125 | 2            | 20  |         |      |
| Sodium    | mg/L  | 1.9         | 1      | 1           | 3.0    | 3.0   | 112   | 112 | 75-125 | 0            | 20  |         |      |
| Zinc      | mg/L  | ND          | 1      | 1           | 1.1    | 1.1   | 107   | 109 | 75-125 | 2            | 20  |         |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

QC Batch: 679167 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92586436019, 92586436020, 92586436021, 92586436022, 92586436023, 92586436024, 92586436025, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

METHOD BLANK: 3553950 Matrix: Water  
Associated Lab Samples: 92586436019, 92586436020, 92586436021, 92586436022, 92586436023, 92586436024, 92586436025, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

| Parameter | Units | Blank Result | Reporting Limit | MDL    | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|--------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 0.12   | 02/18/22 18:05 |            |
| Magnesium | mg/L  | ND           | 0.050           | 0.012  | 02/18/22 18:05 |            |
| Potassium | mg/L  | ND           | 0.20            | 0.15   | 02/18/22 18:05 |            |
| Sodium    | mg/L  | ND           | 1.0             | 0.58   | 02/18/22 18:05 |            |
| Zinc      | mg/L  | ND           | 0.020           | 0.0085 | 02/18/22 18:05 |            |

LABORATORY CONTROL SAMPLE: 3553951

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 1.1        | 110       | 80-120       |            |
| Magnesium | mg/L  | 1           | 1.1        | 108       | 80-120       |            |
| Potassium | mg/L  | 1           | 1.1        | 111       | 80-120       |            |
| Sodium    | mg/L  | 1           | 1.1        | 111       | 80-120       |            |
| Zinc      | mg/L  | 1           | 1.1        | 107       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3553952 3553953

| Parameter | Units | MS                 |             | MSD         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual  |
|-----------|-------|--------------------|-------------|-------------|-----------|----------|-----------|--------------|--------|---------|-------|
|           |       | 92586436019 Result | Spike Conc. | Spike Conc. | MS Result |          |           |              |        |         |       |
| Calcium   | mg/L  | 57.7               | 1           | 1           | 59.5      | 60.5     | 179       | 272          | 75-125 | 2       | 20 M1 |
| Magnesium | mg/L  | 24.6               | 1           | 1           | 25.7      | 26.4     | 117       | 185          | 75-125 | 3       | 20 M1 |
| Potassium | mg/L  | 0.88               | 1           | 1           | 2.0       | 2.0      | 114       | 112          | 75-125 | 1       | 20    |
| Sodium    | mg/L  | 3.8                | 1           | 1           | 5.0       | 5.1      | 115       | 122          | 75-125 | 2       | 20    |
| Zinc      | mg/L  | ND                 | 1           | 1           | 1.1       | 1.1      | 108       | 107          | 75-125 | 1       | 20    |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

QC Batch: 680899

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92586436032, 92586436033

METHOD BLANK: 3562225

Matrix: Water

Associated Lab Samples: 92586436032, 92586436033

| Parameter | Units | Blank Result | Reporting Limit | MDL    | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|--------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 0.12   | 03/01/22 00:25 |            |
| Magnesium | mg/L  | ND           | 0.050           | 0.012  | 03/01/22 00:25 |            |
| Potassium | mg/L  | ND           | 0.20            | 0.15   | 03/02/22 14:55 |            |
| Sodium    | mg/L  | ND           | 1.0             | 0.58   | 03/01/22 00:25 |            |
| Zinc      | mg/L  | ND           | 0.020           | 0.0085 | 03/01/22 00:25 |            |

LABORATORY CONTROL SAMPLE: 3562226

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 1.0        | 102       | 80-120       |            |
| Magnesium | mg/L  | 1           | 1.0        | 104       | 80-120       |            |
| Potassium | mg/L  | 1           | 1.0        | 100       | 80-120       |            |
| Sodium    | mg/L  | 1           | 0.99J      | 99        | 80-120       |            |
| Zinc      | mg/L  | 1           | 1.1        | 106       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3562227 3562228

| Parameter | Units | MS          |        | MSD         |        | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|--------|----------|-----------|--------------|-----|---------|------|
|           |       | Spike Conc. | Result | Spike Conc. | Result |          |           |              |     |         |      |
| Calcium   | mg/L  | 1           | 167    | 1           | 164    | -228     | -156      | 75-125       | 0   | 20      | M1   |
| Magnesium | mg/L  | 1           | 31.8   | 1           | 31.7   | -10      | -34       | 75-125       | 1   | 20      | M1   |
| Potassium | mg/L  | 1           | 1.5    | 1           | 2.5    | 97       | 78        | 75-125       | 8   | 20      |      |
| Sodium    | mg/L  | 1           | 56.6   | 1           | 55.8   | -88      | -93       | 75-125       | 0   | 20      | M1   |
| Zinc      | mg/L  | 1           | ND     | 1           | 1.0    | 105      | 105       | 75-125       | 0   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

QC Batch: 679148 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006, 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018, 92586436019, 92586436020

METHOD BLANK: 3553776 Matrix: Water  
Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006, 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018, 92586436019, 92586436020

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony  | mg/L  | ND           | 0.0030          | 0.00078  | 02/18/22 14:27 |            |
| Arsenic   | mg/L  | ND           | 0.0050          | 0.0011   | 02/18/22 14:27 |            |
| Barium    | mg/L  | ND           | 0.0050          | 0.00067  | 02/18/22 14:27 |            |
| Beryllium | mg/L  | ND           | 0.00050         | 0.000054 | 02/18/22 14:27 |            |
| Boron     | mg/L  | ND           | 0.040           | 0.0086   | 02/18/22 14:27 |            |
| Cadmium   | mg/L  | ND           | 0.00050         | 0.00011  | 02/18/22 14:27 |            |
| Chromium  | mg/L  | ND           | 0.0050          | 0.0011   | 02/18/22 14:27 |            |
| Cobalt    | mg/L  | ND           | 0.0050          | 0.00039  | 02/18/22 14:27 |            |
| Copper    | mg/L  | ND           | 0.0050          | 0.00050  | 02/18/22 14:27 |            |
| Lead      | mg/L  | ND           | 0.0010          | 0.00089  | 02/18/22 14:27 |            |
| Nickel    | mg/L  | ND           | 0.0050          | 0.00071  | 02/18/22 14:27 |            |
| Selenium  | mg/L  | ND           | 0.0050          | 0.0014   | 02/18/22 14:27 |            |
| Silver    | mg/L  | ND           | 0.0050          | 0.00044  | 02/18/22 14:27 |            |
| Thallium  | mg/L  | ND           | 0.0010          | 0.00018  | 02/18/22 14:27 |            |
| Vanadium  | mg/L  | ND           | 0.010           | 0.0019   | 02/18/22 14:27 |            |

LABORATORY CONTROL SAMPLE: 3553777

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony  | mg/L  | 0.1         | 0.11       | 110       | 80-120       |            |
| Arsenic   | mg/L  | 0.1         | 0.10       | 102       | 80-120       |            |
| Barium    | mg/L  | 0.1         | 0.10       | 104       | 80-120       |            |
| Beryllium | mg/L  | 0.1         | 0.11       | 105       | 80-120       |            |
| Boron     | mg/L  | 1           | 1.1        | 107       | 80-120       |            |
| Cadmium   | mg/L  | 0.1         | 0.10       | 105       | 80-120       |            |
| Chromium  | mg/L  | 0.1         | 0.11       | 109       | 80-120       |            |
| Cobalt    | mg/L  | 0.1         | 0.11       | 106       | 80-120       |            |
| Copper    | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Lead      | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Nickel    | mg/L  | 0.1         | 0.10       | 104       | 80-120       |            |
| Selenium  | mg/L  | 0.1         | 0.10       | 102       | 80-120       |            |
| Silver    | mg/L  | 0.1         | 0.10       | 103       | 80-120       |            |
| Thallium  | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Vanadium  | mg/L  | 0.1         | 0.11       | 106       | 80-120       |            |

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**QUALITY CONTROL DATA**

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Parameter | Units | 92586436003 |                | 3553778         |           | 3553779    |          | % Rec | % Rec  | % Rec | Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-----------------|-----------|------------|----------|-------|--------|-------|--------|-----|---------|------|
|           |       | MS Result   | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec |       |        |       |        |     |         |      |
| Antimony  | mg/L  | 0.0029J     | 0.1            | 0.1             | 0.11      | 0.11       | 106      | 110   | 75-125 | 4     | 20     |     |         |      |
| Arsenic   | mg/L  | 0.0053      | 0.1            | 0.1             | 0.10      | 0.10       | 99       | 100   | 75-125 | 0     | 20     |     |         |      |
| Barium    | mg/L  | 0.024       | 0.1            | 0.1             | 0.13      | 0.13       | 103      | 108   | 75-125 | 4     | 20     |     |         |      |
| Beryllium | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.10       | 102      | 103   | 75-125 | 1     | 20     |     |         |      |
| Boron     | mg/L  | ND          | 1              | 1               | 1.0       | 1.1        | 104      | 107   | 75-125 | 3     | 20     |     |         |      |
| Cadmium   | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.10       | 103      | 101   | 75-125 | 3     | 20     |     |         |      |
| Chromium  | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.10       | 104      | 101   | 75-125 | 3     | 20     |     |         |      |
| Cobalt    | mg/L  | 0.00093J    | 0.1            | 0.1             | 0.099     | 0.097      | 98       | 96    | 75-125 | 2     | 20     |     |         |      |
| Copper    | mg/L  | 0.00096J    | 0.1            | 0.1             | 0.096     | 0.095      | 95       | 94    | 75-125 | 1     | 20     |     |         |      |
| Lead      | mg/L  | ND          | 0.1            | 0.1             | 0.095     | 0.094      | 95       | 94    | 75-125 | 1     | 20     |     |         |      |
| Nickel    | mg/L  | ND          | 0.1            | 0.1             | 0.098     | 0.097      | 97       | 97    | 75-125 | 0     | 20     |     |         |      |
| Selenium  | mg/L  | ND          | 0.1            | 0.1             | 0.096     | 0.098      | 96       | 98    | 75-125 | 2     | 20     |     |         |      |
| Silver    | mg/L  | ND          | 0.1            | 0.1             | 0.099     | 0.10       | 99       | 102   | 75-125 | 3     | 20     |     |         |      |
| Thallium  | mg/L  | ND          | 0.1            | 0.1             | 0.097     | 0.096      | 97       | 96    | 75-125 | 1     | 20     |     |         |      |
| Vanadium  | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.10       | 104      | 103   | 75-125 | 1     | 20     |     |         |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

QC Batch: 679169 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92586436021, 92586436022, 92586436023, 92586436024, 92586436025, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

METHOD BLANK: 3553959 Matrix: Water  
Associated Lab Samples: 92586436021, 92586436022, 92586436023, 92586436024, 92586436025, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony  | mg/L  | ND           | 0.0030          | 0.00078  | 02/18/22 19:25 |            |
| Arsenic   | mg/L  | 0.0019J      | 0.0050          | 0.0011   | 02/18/22 19:25 |            |
| Barium    | mg/L  | ND           | 0.0050          | 0.00067  | 02/18/22 19:25 |            |
| Beryllium | mg/L  | ND           | 0.00050         | 0.000054 | 02/18/22 19:25 |            |
| Boron     | mg/L  | ND           | 0.040           | 0.0086   | 02/18/22 19:25 |            |
| Cadmium   | mg/L  | ND           | 0.00050         | 0.00011  | 02/18/22 19:25 |            |
| Chromium  | mg/L  | ND           | 0.0050          | 0.0011   | 02/18/22 19:25 |            |
| Cobalt    | mg/L  | ND           | 0.0050          | 0.00039  | 02/18/22 19:25 |            |
| Copper    | mg/L  | ND           | 0.0050          | 0.00050  | 02/18/22 19:25 |            |
| Lead      | mg/L  | ND           | 0.0010          | 0.00089  | 02/18/22 19:25 |            |
| Nickel    | mg/L  | ND           | 0.0050          | 0.00071  | 02/18/22 19:25 |            |
| Selenium  | mg/L  | ND           | 0.0050          | 0.0014   | 02/18/22 19:25 |            |
| Silver    | mg/L  | ND           | 0.0050          | 0.00044  | 02/18/22 19:25 |            |
| Thallium  | mg/L  | ND           | 0.0010          | 0.00018  | 02/18/22 19:25 |            |
| Vanadium  | mg/L  | ND           | 0.010           | 0.0019   | 02/18/22 19:25 |            |

LABORATORY CONTROL SAMPLE: 3553960

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony  | mg/L  | 0.1         | 0.11       | 107       | 80-120       |            |
| Arsenic   | mg/L  | 0.1         | 0.11       | 107       | 80-120       |            |
| Barium    | mg/L  | 0.1         | 0.10       | 102       | 80-120       |            |
| Beryllium | mg/L  | 0.1         | 0.11       | 111       | 80-120       |            |
| Boron     | mg/L  | 1           | 1.0        | 105       | 80-120       |            |
| Cadmium   | mg/L  | 0.1         | 0.11       | 106       | 80-120       |            |
| Chromium  | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Cobalt    | mg/L  | 0.1         | 0.10       | 104       | 80-120       |            |
| Copper    | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Lead      | mg/L  | 0.1         | 0.10       | 104       | 80-120       |            |
| Nickel    | mg/L  | 0.1         | 0.10       | 104       | 80-120       |            |
| Selenium  | mg/L  | 0.1         | 0.10       | 102       | 80-120       |            |
| Silver    | mg/L  | 0.1         | 0.098      | 98        | 80-120       |            |
| Thallium  | mg/L  | 0.1         | 0.10       | 102       | 80-120       |            |
| Vanadium  | mg/L  | 0.1         | 0.10       | 104       | 80-120       |            |

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**QUALITY CONTROL DATA**

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Parameter | Units | 92586436021 |                | 3553961         |           | 3553962    |          | % Rec | % Rec  | % Rec | Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-----------------|-----------|------------|----------|-------|--------|-------|--------|-----|---------|------|
|           |       | Result      | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec |       |        |       |        |     |         |      |
| Antimony  | mg/L  | ND          | 0.1            | 0.1             | 0.11      | 0.11       | 110      | 106   | 75-125 | 4     | 20     |     |         |      |
| Arsenic   | mg/L  | 0.0023J     | 0.1            | 0.1             | 0.11      | 0.10       | 104      | 101   | 75-125 | 3     | 20     |     |         |      |
| Barium    | mg/L  | 0.022       | 0.1            | 0.1             | 0.12      | 0.12       | 99       | 95    | 75-125 | 3     | 20     |     |         |      |
| Beryllium | mg/L  | 0.00021J    | 0.1            | 0.1             | 0.11      | 0.10       | 108      | 104   | 75-125 | 4     | 20     |     |         |      |
| Boron     | mg/L  | ND          | 1              | 1               | 1.0       | 0.99       | 104      | 98    | 75-125 | 6     | 20     |     |         |      |
| Cadmium   | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.10       | 102      | 103   | 75-125 | 1     | 20     |     |         |      |
| Chromium  | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.098      | 102      | 98    | 75-125 | 4     | 20     |     |         |      |
| Cobalt    | mg/L  | 0.0018J     | 0.1            | 0.1             | 0.10      | 0.10       | 102      | 98    | 75-125 | 4     | 20     |     |         |      |
| Copper    | mg/L  | ND          | 0.1            | 0.1             | 0.099     | 0.095      | 99       | 94    | 75-125 | 4     | 20     |     |         |      |
| Lead      | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.099      | 100      | 99    | 75-125 | 1     | 20     |     |         |      |
| Nickel    | mg/L  | 0.0014J     | 0.1            | 0.1             | 0.10      | 0.097      | 101      | 95    | 75-125 | 5     | 20     |     |         |      |
| Selenium  | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.099      | 101      | 99    | 75-125 | 2     | 20     |     |         |      |
| Silver    | mg/L  | ND          | 0.1            | 0.1             | 0.099     | 0.097      | 99       | 97    | 75-125 | 2     | 20     |     |         |      |
| Thallium  | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.096      | 100      | 96    | 75-125 | 4     | 20     |     |         |      |
| Vanadium  | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.10       | 100      | 100   | 75-125 | 0     | 20     |     |         |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

QC Batch: 680871 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92586436032, 92586436033

METHOD BLANK: 3562117 Matrix: Water

Associated Lab Samples: 92586436032, 92586436033

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony  | mg/L  | ND           | 0.0030          | 0.00078  | 02/25/22 20:37 |            |
| Arsenic   | mg/L  | ND           | 0.0050          | 0.0011   | 02/25/22 20:37 |            |
| Barium    | mg/L  | ND           | 0.0050          | 0.00067  | 02/25/22 20:37 |            |
| Beryllium | mg/L  | ND           | 0.00050         | 0.000054 | 02/25/22 20:37 |            |
| Boron     | mg/L  | ND           | 0.040           | 0.0086   | 02/25/22 20:37 |            |
| Cadmium   | mg/L  | ND           | 0.00050         | 0.00011  | 02/25/22 20:37 |            |
| Chromium  | mg/L  | ND           | 0.0050          | 0.0011   | 02/25/22 20:37 |            |
| Cobalt    | mg/L  | ND           | 0.0050          | 0.00039  | 02/25/22 20:37 |            |
| Copper    | mg/L  | ND           | 0.0050          | 0.00050  | 02/25/22 20:37 |            |
| Lead      | mg/L  | ND           | 0.0010          | 0.00089  | 02/25/22 20:37 |            |
| Nickel    | mg/L  | ND           | 0.0050          | 0.00071  | 02/25/22 20:37 |            |
| Selenium  | mg/L  | ND           | 0.0050          | 0.0014   | 02/25/22 20:37 |            |
| Silver    | mg/L  | ND           | 0.0050          | 0.00044  | 02/25/22 20:37 |            |
| Thallium  | mg/L  | ND           | 0.0010          | 0.00018  | 02/25/22 20:37 |            |
| Vanadium  | mg/L  | ND           | 0.010           | 0.0019   | 02/25/22 20:37 |            |

LABORATORY CONTROL SAMPLE: 3562118

| 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         | 0.098      | 98        | 80-120       |            |
| Barium    | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Beryllium | mg/L  | 0.1         | 0.11       | 109       | 80-120       |            |
| Boron     | mg/L  | 1           | 1.1        | 112       | 80-120       |            |
| Cadmium   | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Chromium  | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Cobalt    | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Copper    | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |
| Lead      | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |
| Nickel    | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Selenium  | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Silver    | mg/L  | 0.1         | 0.097      | 97        | 80-120       |            |
| Thallium  | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Vanadium  | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Parameter | Units | 92587322014 |                | 3562119        |           | 3562120    |          | % Rec | % Rec  | % Rec | Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|----------------|-----------|------------|----------|-------|--------|-------|--------|-----|---------|------|
|           |       | Result      | MS Spike Conc. | MS Spike Conc. | MS Result | MSD Result | MS % Rec |       |        |       |        |     |         |      |
| Antimony  | mg/L  | ND          | 0.1            | 0.1            | 0.10      | 0.11       | 104      | 106   | 75-125 | 2     | 20     |     |         |      |
| Arsenic   | mg/L  | 0.0046J     | 0.1            | 0.1            | 0.11      | 0.12       | 106      | 110   | 75-125 | 4     | 20     |     |         |      |
| Barium    | mg/L  | 0.046       | 0.1            | 0.1            | 0.15      | 0.15       | 105      | 109   | 75-125 | 3     | 20     |     |         |      |
| Beryllium | mg/L  | 0.00011J    | 0.1            | 0.1            | 0.10      | 0.10       | 100      | 104   | 75-125 | 4     | 20     |     |         |      |
| Boron     | mg/L  | 10.5        | 1              | 1              | 11.0      | 11.5       | 50       | 104   | 75-125 | 5     | 20     | M1  |         |      |
| Cadmium   | mg/L  | 0.00024J    | 0.1            | 0.1            | 0.094     | 0.099      | 94       | 99    | 75-125 | 5     | 20     |     |         |      |
| Chromium  | mg/L  | ND          | 0.1            | 0.1            | 0.10      | 0.11       | 99       | 106   | 75-125 | 7     | 20     |     |         |      |
| Cobalt    | mg/L  | 0.031       | 0.1            | 0.1            | 0.12      | 0.13       | 93       | 99    | 75-125 | 4     | 20     |     |         |      |
| Copper    | mg/L  | ND          | 0.1            | 0.1            | 0.095     | 0.093      | 95       | 93    | 75-125 | 2     | 20     |     |         |      |
| Lead      | mg/L  | ND          | 0.1            | 0.1            | 0.085     | 0.087      | 85       | 87    | 75-125 | 3     | 20     |     |         |      |
| Nickel    | mg/L  | 0.011       | 0.1            | 0.1            | 0.10      | 0.11       | 93       | 97    | 75-125 | 4     | 20     |     |         |      |
| Selenium  | mg/L  | ND          | 0.1            | 0.1            | 0.11      | 0.11       | 104      | 108   | 75-125 | 4     | 20     |     |         |      |
| Silver    | mg/L  | ND          | 0.1            | 0.1            | 0.087     | 0.088      | 87       | 88    | 75-125 | 2     | 20     |     |         |      |
| Thallium  | mg/L  | ND          | 0.1            | 0.1            | 0.087     | 0.090      | 87       | 90    | 75-125 | 3     | 20     |     |         |      |
| Vanadium  | mg/L  | ND          | 0.1            | 0.1            | 0.10      | 0.11       | 103      | 109   | 75-125 | 6     | 20     |     |         |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

|                  |           |                       |  |
|------------------|-----------|-----------------------|--|
| QC Batch:        | 678396    | Analysis Method:      | EPA 7470A  |
| QC Batch Method: | EPA 7470A | Analysis Description: | 7470 Mercury                                     |
|                  |           | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006, 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017

METHOD BLANK: 3550157 Matrix: Water  
Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006, 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017

| Parameter | Units | Blank Result | Reporting Limit | MDL     | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|---------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00020         | 0.00013 | 02/16/22 10:48 |            |

LABORATORY CONTROL SAMPLE: 3550158

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0023     | 92        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3550159 3550160

| Parameter | Units | 3550159        |                 | 3550160   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |      |
| Mercury   | mg/L  | ND             | 0.0025          | 0.0021    | 0.0023     | 85       | 92        | 75-125       | 8   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

|                  |           |                       |  |
|------------------|-----------|-----------------------|--|
| QC Batch:        | 678399    | Analysis Method:      | EPA 7470A  |
| QC Batch Method: | EPA 7470A | Analysis Description: | 7470 Mercury                                     |
|                  |           | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92586436018, 92586436019, 92586436020, 92586436021, 92586436022, 92586436023, 92586436024, 92586436025, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030

METHOD BLANK: 3550166 Matrix: Water

Associated Lab Samples: 92586436018, 92586436019, 92586436020, 92586436021, 92586436022, 92586436023, 92586436024, 92586436025, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030

| Parameter | Units | Blank Result | Reporting Limit | MDL     | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|---------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00020         | 0.00013 | 02/16/22 12:04 |            |

LABORATORY CONTROL SAMPLE: 3550167

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0023     | 93        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3550168 3550169

| Parameter | Units | 92586342013 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          | 0.0021    | 0.0022     | 82       | 87        | 75-125       | 6   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

|                            |  |
|----------------------------|--|
| QC Batch: 678404           | Analysis Method: EPA 7470A                                   |
| QC Batch Method: EPA 7470A | Analysis Description: 7470 Mercury                           |
|                            | Laboratory: Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92586436031

METHOD BLANK: 3550196 Matrix: Water  
Associated Lab Samples: 92586436031

| Parameter | Units | Blank Result | Reporting Limit | MDL     | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|---------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00020         | 0.00013 | 02/16/22 13:25 |            |

LABORATORY CONTROL SAMPLE: 3550197

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0021     | 86        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3550198 3550199

| Parameter | Units | 3550198           |                 | 3550199   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|-----------|-------|-------------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|
|           |       | MS Spike Conc.    | MSD Spike Conc. | MS Result | MSD Result |          |           |              |        |         |      |
| Mercury   | mg/L  | 92586436031<br>ND | 0.0025          | 0.0025    | 0.0020     | 0.0023   | 78        | 93           | 75-125 | 18      | 20   |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

QC Batch: 681261

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92586436032, 92586436033

METHOD BLANK: 3564035

Matrix: Water

Associated Lab Samples: 92586436032, 92586436033

| Parameter | Units | Blank Result | Reporting Limit | MDL     | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|---------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00020         | 0.00013 | 02/28/22 14:00 |            |

LABORATORY CONTROL SAMPLE: 3564036

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0025     | 100       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3564037 3564038

| Parameter | Units | 3564037           |                 | 3564038   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Spike Conc.    | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |      |
| Mercury   | mg/L  | 92588620001<br>ND | 0.0025          | 0.0025    | 0.0025     | 97       | 97        | 75-125       | 0   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

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|                  |               |                       |  |
|------------------|---------------|-----------------------|--|
| QC Batch:        | 676439        | Analysis Method:      | SM 2540C-2015                                    |
| QC Batch Method: | SM 2540C-2015 | Analysis Description: | 2540C Total Dissolved Solids                     |
|                  |               | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006

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METHOD BLANK: 3540519 Matrix: Water  
Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 02/07/22 17:19 |            |

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LABORATORY CONTROL SAMPLE: 3540520

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 374        | 94        | 80-120       |            |

---

SAMPLE DUPLICATE: 3540521

| Parameter              | Units | 92585555019 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 180                | 181        | 1   | 25      |            |

---

SAMPLE DUPLICATE: 3540522

| Parameter              | Units | 92585920011 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 96.0               | 94.0       | 2   | 25      |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

QC Batch: 676566 Analysis Method: SM 2540C-2015  
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018

METHOD BLANK: 3541419 Matrix: Water  
Associated Lab Samples: 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 02/08/22 11:11 |            |

LABORATORY CONTROL SAMPLE: 3541420

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 390        | 98        | 80-120       |            |

SAMPLE DUPLICATE: 3541421

| Parameter              | Units | 92585920025 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 65.0               | 46.0       | 34  | 25      | D6         |

SAMPLE DUPLICATE: 3541422

| Parameter              | Units | 92586436013 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 102                | 103        | 1   | 25      |            |

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

QC Batch: 676886 Analysis Method: SM 2540C-2015  
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92586436019, 92586436020

METHOD BLANK: 3542886 Matrix: Water  
Associated Lab Samples: 92586436019, 92586436020

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 02/09/22 10:12 |            |

LABORATORY CONTROL SAMPLE: 3542887

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 374        | 94        | 80-120       |            |

SAMPLE DUPLICATE: 3542888

| Parameter              | Units | 92585920029 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 538                | 574        | 6   | 25      |            |

SAMPLE DUPLICATE: 3542889

| Parameter              | Units | 92585979010 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 1380               | 1350       | 2   | 25      |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

QC Batch: 677214 Analysis Method: SM 2540C-2015  
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92586436021, 92586436022, 92586436023, 92586436024, 92586436025, 92586436026

METHOD BLANK: 3544553 Matrix: Water  
Associated Lab Samples: 92586436021, 92586436022, 92586436023, 92586436024, 92586436025, 92586436026

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 02/11/22 10:42 |            |

LABORATORY CONTROL SAMPLE: 3544554

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 383        | 96        | 80-120       |            |

SAMPLE DUPLICATE: 3544555

| Parameter              | Units | 92586430002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | ND                 | ND         |     | 25      |            |

SAMPLE DUPLICATE: 3544556

| Parameter              | Units | 92586613010 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 225                | 217        | 4   | 25      |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

|                  |               |                       |  |
|------------------|---------------|-----------------------|--|
| QC Batch:        | 677216        | Analysis Method:      | SM 2540C-2015                                    |
| QC Batch Method: | SM 2540C-2015 | Analysis Description: | 2540C Total Dissolved Solids                     |
|                  |               | Laboratory:           | Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

METHOD BLANK: 3544560 Matrix: Water  
Associated Lab Samples: 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 02/11/22 11:39 |            |

LABORATORY CONTROL SAMPLE: 3544561

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 381        | 95        | 80-120       |            |

SAMPLE DUPLICATE: 3544562

| Parameter              | Units | 92586436027 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 162                | 168        | 4   | 25      |            |

SAMPLE DUPLICATE: 3544563

| Parameter              | Units | 92586613016 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 161                | 155        | 4   | 25      |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

|                                |  |
|--------------------------------|--|
| QC Batch: 680301               | Analysis Method: SM 2540C-2015                               |
| QC Batch Method: SM 2540C-2015 | Analysis Description: 2540C Total Dissolved Solids           |
|                                | Laboratory: Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92586436032, 92586436033

METHOD BLANK: 3559080 Matrix: Water

Associated Lab Samples: 92586436032, 92586436033

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 10.0            | 10.0 | 02/23/22 15:59 |            |

LABORATORY CONTROL SAMPLE: 3559081

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 400         | 354        | 88        | 80-120       |            |

SAMPLE DUPLICATE: 3559082

| Parameter              | Units | 92587881053 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | ND                 | ND         |     | 25      |            |

SAMPLE DUPLICATE: 3559083

| Parameter              | Units | 92589518001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 2270               | 2130       | 6   | 25      |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

QC Batch: 798119

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006

METHOD BLANK: 4240829

Matrix: Water

Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006

| Parameter                      | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|--------------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO3     | mg/L  | ND           | 5.0             | 1.8 | 02/10/22 14:33 |            |
| Alkalinity,Bicarbonate (CaCO3) | mg/L  | ND           | 5.0             | 1.8 | 02/10/22 14:33 |            |
| Alkalinity,Carbonate (CaCO3)   | mg/L  | ND           | 5.0             | 1.8 | 02/10/22 14:33 |            |

LABORATORY CONTROL SAMPLE & LCSD: 4240830

4240831

| Parameter                  | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|----------------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| Alkalinity, Total as CaCO3 | mg/L  | 40          | 40.3       | 39.9        | 101       | 100        | 90-110       | 1   | 20      |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4240832

4240833

| Parameter                  | Units | 92585727002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 2.8J               | 40             | 40              | 43.8      | 43.8       | 102      | 103       | 80-120       | 0   | 20      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4240834

4240835

| Parameter                  | Units | 10596422001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 29.9               | 40             | 40              | 69.2      | 69.5       | 98       | 99        | 80-120       | 0   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

QC Batch: 798366 Analysis Method: SM 2320B  
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Minneapolis  
Associated Lab Samples: 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018

METHOD BLANK: 4241914 Matrix: Water  
Associated Lab Samples: 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018

| Parameter                      | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|--------------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO3     | mg/L  | ND           | 5.0             | 1.8 | 02/10/22 19:52 |            |
| Alkalinity,Bicarbonate (CaCO3) | mg/L  | ND           | 5.0             | 1.8 | 02/10/22 19:52 |            |
| Alkalinity,Carbonate (CaCO3)   | mg/L  | ND           | 5.0             | 1.8 | 02/10/22 19:52 |            |

LABORATORY CONTROL SAMPLE & LCSD: 4241915 4241916

| Parameter                  | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|----------------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| Alkalinity, Total as CaCO3 | mg/L  | 40          | 41.9       | 42.2        | 105       | 105        | 90-110       | 1   | 20      |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4241917 4241918

| Parameter                  | Units | 10597082001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 23.0               | 40             | 40              | 62.8      | 63.0       | 100      | 100       | 80-120       | 0   | 20      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4241919 4241920

| Parameter                  | Units | 92586436012 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 76.7               | 40             | 40              | 116       | 116        | 98       | 99        | 80-120       | 0   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

QC Batch: 798367

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 92586436021, 92586436022, 92586436023, 92586436024, 92586436025

METHOD BLANK: 4241924

Matrix: Water

Associated Lab Samples: 92586436021, 92586436022, 92586436023, 92586436024, 92586436025

| Parameter                                   | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|---|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub>      | mg/L  | ND           | 5.0             | 1.8 | 02/10/22 19:24 |            |
| Alkalinity,Bicarbonate (CaCO <sub>3</sub> ) | mg/L  | ND           | 5.0             | 1.8 | 02/10/22 19:24 |            |
| Alkalinity,Carbonate (CaCO <sub>3</sub> )   | mg/L  | ND           | 5.0             | 1.8 | 02/10/22 19:24 |            |

LABORATORY CONTROL SAMPLE & LCSD: 4241925

4241926

| Parameter                              | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|--|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 40          | 42.6       | 42.3        | 106       | 106        | 90-110       | 1   | 20      |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4241927

4241928

| Parameter                              | Units | 10596573001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|--|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 133                | 40             | 40              | 173       | 172        | 100      | 100       | 80-120       | 0   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

QC Batch: 798903 Analysis Method: SM 2320B  
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Minneapolis  
Associated Lab Samples: 92586436019, 92586436020, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

METHOD BLANK: 4244463 Matrix: Water  
Associated Lab Samples: 92586436019, 92586436020, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

| Parameter                      | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|--------------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO3     | mg/L  | ND           | 5.0             | 1.8 | 02/15/22 15:58 |            |
| Alkalinity,Bicarbonate (CaCO3) | mg/L  | ND           | 5.0             | 1.8 | 02/15/22 15:58 |            |
| Alkalinity,Carbonate (CaCO3)   | mg/L  | ND           | 5.0             | 1.8 | 02/15/22 15:58 |            |

LABORATORY CONTROL SAMPLE & LCSD: 4244464 4244465

| Parameter                  | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|----------------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| Alkalinity, Total as CaCO3 | mg/L  | 40          | 40.1       | 40.6        | 100       | 102        | 90-110       | 1   | 20      |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4244466 4244467

| Parameter                  | Units | 10597383001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 22.2               | 40             | 40              | 62.0      | 62.0       | 100      | 100       | 80-120       | 0   | 20      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4244468 4244469

| Parameter                  | Units | 10597488002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 29.6               | 40             | 40              | 69.4      | 69.6       | 99       | 100       | 80-120       | 0   | 20      |      |

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**QUALITY CONTROL DATA**

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

QC Batch: 800675

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 92586436032, 92586436033

METHOD BLANK: 4252517

Matrix: Water

Associated Lab Samples: 92586436032, 92586436033

| Parameter                      | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|--------------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO3     | mg/L  | ND           | 5.0             | 1.8 | 02/25/22 11:20 |            |
| Alkalinity,Bicarbonate (CaCO3) | mg/L  | ND           | 5.0             | 1.8 | 02/25/22 11:20 |            |
| Alkalinity,Carbonate (CaCO3)   | mg/L  | ND           | 5.0             | 1.8 | 02/25/22 11:20 |            |

LABORATORY CONTROL SAMPLE & LCSD: 4252518

4252519

| Parameter                  | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|----------------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| Alkalinity, Total as CaCO3 | mg/L  | 40          | 42.1       | 42.4        | 105       | 106        | 90-110       | 1   | 20      |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4252520

4252521

| Parameter                  | Units | 10598316001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 31.9               | 40             | 40              | 71.6      | 72.2       | 99       | 101       | 80-120       | 1   | 20      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4252522

4252523

| Parameter                  | Units | 10598521001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|----------------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO3 | mg/L  | 288                | 40             | 40              | 325       | 328        | 93       | 98        | 80-120       | 1   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

QC Batch: 677743 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006, 92586436007, 92586436008, 92586436009, 92586436010

METHOD BLANK: 3547238 Matrix: Water  
Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006, 92586436007, 92586436008, 92586436009, 92586436010

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 02/12/22 16:11 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 02/12/22 16:11 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 02/12/22 16:11 |            |

LABORATORY CONTROL SAMPLE: 3547239

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 51.1       | 102       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.5        | 99        | 90-110       |            |
| Sulfate   | mg/L  | 50          | 50.2       | 100       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3547240 3547241

| Parameter | Units | 9258555014 |                | MSD             |        | MS     |       | MSD   |        | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|------------|----------------|-----------------|--------|--------|-------|-------|--------|--------------|-----|---------|------|
|           |       | Result     | MS Spike Conc. | MSD Spike Conc. | Result | Result | % Rec | % Rec |        |              |     |         |      |
| Chloride  | mg/L  | 4.3        | 50             | 50              | 60.1   | 60.2   | 112   | 112   | 90-110 | 0            | 10  | M1      |      |
| Fluoride  | mg/L  | ND         | 2.5            | 2.5             | 2.8    | 2.8    | 110   | 111   | 90-110 | 1            | 10  | M1      |      |
| Sulfate   | mg/L  | 6.1        | 50             | 50              | 62.6   | 62.4   | 113   | 113   | 90-110 | 0            | 10  | M1      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3547242 3547243

| Parameter | Units | 92586436001 |                | MSD             |        | MS     |       | MSD   |        | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-----------------|--------|--------|-------|-------|--------|--------------|-----|---------|------|
|           |       | Result      | MS Spike Conc. | MSD Spike Conc. | Result | Result | % Rec | % Rec |        |              |     |         |      |
| Chloride  | mg/L  | 1.2         | 50             | 50              | 57.3   | 57.5   | 112   | 113   | 90-110 | 0            | 10  | M1      |      |
| Fluoride  | mg/L  | ND          | 2.5            | 2.5             | 2.8    | 2.8    | 110   | 111   | 90-110 | 1            | 10  | M1      |      |
| Sulfate   | mg/L  | 0.93J       | 50             | 50              | 57.2   | 57.7   | 113   | 114   | 90-110 | 1            | 10  | M1      |      |

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

|                  |                        |                       |                                      |
|------------------|------------------------|-----------------------|--------------------------------------|
| QC Batch:        | 677747                 | Analysis Method:      | EPA 300.0 Rev 2.1 1993               |
| QC Batch Method: | EPA 300.0 Rev 2.1 1993 | Analysis Description: | 300.0 IC Anions                      |
|                  |                        | Laboratory:           | Pace Analytical Services - Asheville |

Associated Lab Samples: 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018, 92586436019, 92586436020

METHOD BLANK: 3547262 Matrix: Water  
Associated Lab Samples: 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018, 92586436019, 92586436020

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 02/12/22 23:09 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 02/12/22 23:09 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 02/12/22 23:09 |            |

LABORATORY CONTROL SAMPLE: 3547263

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 52.2       | 104       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.6        | 103       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 51.6       | 103       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3547264 3547265

| Parameter | Units | 92586436011 |                | 3547265         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual  |
|-----------|-------|-------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|-------|
|           |       | Result      | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |       |
| Chloride  | mg/L  | 0.76J       | 50             | 50              | 57.0      | 57.0     | 112       | 113          | 90-110 | 0       | 10 M1 |
| Fluoride  | mg/L  | ND          | 2.5            | 2.5             | 2.8       | 2.8      | 111       | 111          | 90-110 | 0       | 10 M1 |
| Sulfate   | mg/L  | 1.3         | 50             | 50              | 57.8      | 58.2     | 113       | 114          | 90-110 | 1       | 10 M1 |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3547266 3547267

| Parameter | Units | 92585200001 |                | 3547267         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual  |
|-----------|-------|-------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|-------|
|           |       | Result      | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |       |
| Chloride  | mg/L  | 43.4        | 50             | 50              | 98.7      | 98.5     | 111       | 110          | 90-110 | 0       | 10 M1 |
| Fluoride  | mg/L  | 0.058J      | 2.5            | 2.5             | 2.9       | 2.9      | 112       | 112          | 90-110 | 0       | 10 M1 |
| Sulfate   | mg/L  | 14.5        | 50             | 50              | 71.1      | 70.8     | 113       | 113          | 90-110 | 0       | 10 M1 |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

|   |  |
|---|--|
| QC Batch: 678003                        | Analysis Method: EPA 300.0 Rev 2.1 1993          |
| QC Batch Method: EPA 300.0 Rev 2.1 1993 | Analysis Description: 300.0 IC Anions            |
|   | Laboratory: Pace Analytical Services - Asheville |

Associated Lab Samples: 92586436021, 92586436022

METHOD BLANK: 3548358 Matrix: Water

Associated Lab Samples: 92586436021, 92586436022

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 02/14/22 05:52 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 02/14/22 05:52 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 02/14/22 05:52 |            |

LABORATORY CONTROL SAMPLE: 3548359

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 52.5       | 105       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.6        | 102       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 52.0       | 104       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3548360 3548361

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92587763018 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | ND          | 50     | 50          | 50          | 52.4      | 52.5       | 105      | 105       | 90-110       | 0   | 10      |      |
| Fluoride  | mg/L  | ND          | 2.5    | 2.5         | 2.5         | 2.6       | 2.6        | 104      | 105       | 90-110       | 0   | 10      |      |
| Sulfate   | mg/L  | ND          | 50     | 50          | 50          | 52.3      | 52.4       | 105      | 105       | 90-110       | 0   | 10      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3548362 3548363

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92585375006 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 9.3         | 9.3    | 50          | 50          | 61.7      | 62.1       | 105      | 105       | 90-110       | 1   | 10      |      |
| Fluoride  | mg/L  | 0.13        | 0.13   | 2.5         | 2.5         | 2.7       | 2.7        | 103      | 104       | 90-110       | 1   | 10      |      |
| Sulfate   | mg/L  | 70.0        | 70.0   | 50          | 50          | 103       | 104        | 67       | 68        | 90-110       | 1   | 10 M1   |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

|                  |                        |                       |                                      |
|------------------|------------------------|-----------------------|--------------------------------------|
| QC Batch:        | 678004                 | Analysis Method:      | EPA 300.0 Rev 2.1 1993               |
| QC Batch Method: | EPA 300.0 Rev 2.1 1993 | Analysis Description: | 300.0 IC Anions                      |
|                  |                        | Laboratory:           | Pace Analytical Services - Asheville |

Associated Lab Samples: 92586436023, 92586436024, 92586436025, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

METHOD BLANK: 3548365 Matrix: Water  
Associated Lab Samples: 92586436023, 92586436024, 92586436025, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 02/14/22 18:19 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 02/14/22 18:19 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 02/14/22 18:19 |            |

LABORATORY CONTROL SAMPLE: 3548366

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 49.8       | 100       | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.5        | 98        | 90-110       |            |
| Sulfate   | mg/L  | 50          | 48.6       | 97        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3548367 3548368

| Parameter | Units | 92586436023 |                 | 3548368   |                 | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-----------------|-----------|-----------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Result   | MSD Spike Conc. | MS Result | MSD Spike Conc. |          |           |              |     |         |      |
| Chloride  | mg/L  | 1.1         | 50              | 51.6      | 51.8            | 101      | 101       | 90-110       | 0   | 10      |      |
| Fluoride  | mg/L  | ND          | 2.5             | 2.6       | 2.6             | 103      | 104       | 90-110       | 1   | 10      |      |
| Sulfate   | mg/L  | 1.7         | 50              | 52.1      | 52.3            | 101      | 101       | 90-110       | 0   | 10      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3548369 3548370

| Parameter | Units | 92586807001 |                 | 3548370   |                 | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-----------------|-----------|-----------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Result   | MSD Spike Conc. | MS Result | MSD Spike Conc. |          |           |              |     |         |      |
| Chloride  | mg/L  | 664         | 50              | 700       | 708             | 72       | 88        | 90-110       | 1   | 10 M1   |      |
| Fluoride  | mg/L  | 0.69        | 2.5             | 3.4       | 3.4             | 106      | 110       | 90-110       | 2   | 10      |      |
| Sulfate   | mg/L  | 87.3        | 50              | 132       | 134             | 89       | 93        | 90-110       | 1   | 10 M1   |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

QC Batch: 680699 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92586436032, 92586436033

METHOD BLANK: 3561036 Matrix: Water  
Associated Lab Samples: 92586436032, 92586436033

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 02/25/22 01:54 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 02/25/22 01:54 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 02/25/22 01:54 |            |

LABORATORY CONTROL SAMPLE: 3561037

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 47.9       | 96        | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.5        | 100       | 90-110       |            |
| Sulfate   | mg/L  | 50          | 47.2       | 94        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3561040 3561041

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92588973012 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 19.4        | 50     | 50          | 70.5        | 71.6      | 102        | 104      | 90-110    | 1            | 10  |         |      |
| Fluoride  | mg/L  | ND          | 2.5    | 2.5         | 2.7         | 2.8       | 107        | 110      | 90-110    | 3            | 10  |         |      |
| Sulfate   | mg/L  | 94.0        | 50     | 50          | 138         | 137       | 88         | 87       | 90-110    | 0            | 10  | M1      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3561344 3561345

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92588973003 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 1.6         | 50     | 50          | 52.8        | 53.5      | 102        | 104      | 90-110    | 1            | 10  |         |      |
| Fluoride  | mg/L  | 0.052J      | 2.5    | 2.5         | 2.7         | 2.9       | 105        | 115      | 90-110    | 8            | 10  | M1      |      |
| Sulfate   | mg/L  | 53.5        | 50     | 50          | 98.8        | 99.1      | 90         | 91       | 90-110    | 0            | 10  |         |      |

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## QUALIFIERS

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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 - 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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Lab ID      | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|-----------------|----------|-------------------|------------------|
| 92586436001 | GWA-1     |                 |          |                   |                  |
| 92586436002 | GWA-2     |                 |          |                   |                  |
| 92586436003 | GWA-2R    |                 |          |                   |                  |
| 92586436004 | GWA-50    |                 |          |                   |                  |
| 92586436007 | GWA-3A    |                 |          |                   |                  |
| 92586436008 | GWC-5     |                 |          |                   |                  |
| 92586436009 | GWC-6     |                 |          |                   |                  |
| 92586436010 | GWC-6RZ   |                 |          |                   |                  |
| 92586436011 | GWC-7Z    |                 |          |                   |                  |
| 92586436012 | GWC-8Z    |                 |          |                   |                  |
| 92586436013 | GWC-8RR   |                 |          |                   |                  |
| 92586436014 | GWC-9     |                 |          |                   |                  |
| 92586436015 | GWC-12    |                 |          |                   |                  |
| 92586436016 | GWA-50R   |                 |          |                   |                  |
| 92586436019 | GWA-4RZ   |                 |          |                   |                  |
| 92586436021 | GWC-10    |                 |          |                   |                  |
| 92586436022 | GWC-10R   |                 |          |                   |                  |
| 92586436023 | GWC-11    |                 |          |                   |                  |
| 92586436024 | GWC-11R   |                 |          |                   |                  |
| 92586436025 | GWC-13RZ  |                 |          |                   |                  |
| 92586436026 | GWC-14Z   |                 |          |                   |                  |
| 92586436027 | GWC-15R   |                 |          |                   |                  |
| 92586436030 | GWC-15Z   |                 |          |                   |                  |
| 92586436032 | GWC-13    |                 |          |                   |                  |
| 92586436001 | GWA-1     | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436002 | GWA-2     | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436003 | GWA-2R    | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436004 | GWA-50    | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436005 | DUP-1     | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436006 | FB-1      | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436007 | GWA-3A    | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436008 | GWC-5     | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436009 | GWC-6     | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436010 | GWC-6RZ   | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436011 | GWC-7Z    | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436012 | GWC-8Z    | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436013 | GWC-8RR   | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436014 | GWC-9     | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436015 | GWC-12    | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436016 | GWA-50R   | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436017 | DUP-2     | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436018 | FB-2      | EPA 3010A       | 679147   | EPA 6010D         | 679327           |
| 92586436019 | GWA-4RZ   | EPA 3010A       | 679167   | EPA 6010D         | 679340           |
| 92586436020 | FB-3      | EPA 3010A       | 679167   | EPA 6010D         | 679340           |
| 92586436021 | GWC-10    | EPA 3010A       | 679167   | EPA 6010D         | 679340           |
| 92586436022 | GWC-10R   | EPA 3010A       | 679167   | EPA 6010D         | 679340           |
| 92586436023 | GWC-11    | EPA 3010A       | 679167   | EPA 6010D         | 679340           |
| 92586436024 | GWC-11R   | EPA 3010A       | 679167   | EPA 6010D         | 679340           |

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Lab ID      | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|-----------------|----------|-------------------|------------------|
| 92586436025 | GWC-13RZ  | EPA 3010A       | 679167   | EPA 6010D         | 679340           |
| 92586436026 | GWC-14Z   | EPA 3010A       | 679167   | EPA 6010D         | 679340           |
| 92586436027 | GWC-15R   | EPA 3010A       | 679167   | EPA 6010D         | 679340           |
| 92586436028 | DUP-3     | EPA 3010A       | 679167   | EPA 6010D         | 679340           |
| 92586436029 | FB-4      | EPA 3010A       | 679167   | EPA 6010D         | 679340           |
| 92586436030 | GWC-15Z   | EPA 3010A       | 679167   | EPA 6010D         | 679340           |
| 92586436031 | FB-5      | EPA 3010A       | 679167   | EPA 6010D         | 679340           |
| 92586436032 | GWC-13    | EPA 3010A       | 680899   | EPA 6010D         | 681055           |
| 92586436033 | FB-6      | EPA 3010A       | 680899   | EPA 6010D         | 681055           |
| 92586436001 | GWA-1     | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436002 | GWA-2     | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436003 | GWA-2R    | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436004 | GWA-50    | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436005 | DUP-1     | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436006 | FB-1      | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436007 | GWA-3A    | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436008 | GWC-5     | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436009 | GWC-6     | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436010 | GWC-6RZ   | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436011 | GWC-7Z    | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436012 | GWC-8Z    | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436013 | GWC-8RR   | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436014 | GWC-9     | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436015 | GWC-12    | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436016 | GWA-50R   | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436017 | DUP-2     | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436018 | FB-2      | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436019 | GWA-4RZ   | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436020 | FB-3      | EPA 3005A       | 679148   | EPA 6020B         | 679359           |
| 92586436021 | GWC-10    | EPA 3005A       | 679169   | EPA 6020B         | 679363           |
| 92586436022 | GWC-10R   | EPA 3005A       | 679169   | EPA 6020B         | 679363           |
| 92586436023 | GWC-11    | EPA 3005A       | 679169   | EPA 6020B         | 679363           |
| 92586436024 | GWC-11R   | EPA 3005A       | 679169   | EPA 6020B         | 679363           |
| 92586436025 | GWC-13RZ  | EPA 3005A       | 679169   | EPA 6020B         | 679363           |
| 92586436026 | GWC-14Z   | EPA 3005A       | 679169   | EPA 6020B         | 679363           |
| 92586436027 | GWC-15R   | EPA 3005A       | 679169   | EPA 6020B         | 679363           |
| 92586436028 | DUP-3     | EPA 3005A       | 679169   | EPA 6020B         | 679363           |
| 92586436029 | FB-4      | EPA 3005A       | 679169   | EPA 6020B         | 679363           |
| 92586436030 | GWC-15Z   | EPA 3005A       | 679169   | EPA 6020B         | 679363           |
| 92586436031 | FB-5      | EPA 3005A       | 679169   | EPA 6020B         | 679363           |
| 92586436032 | GWC-13    | EPA 3005A       | 680871   | EPA 6020B         | 681052           |
| 92586436033 | FB-6      | EPA 3005A       | 680871   | EPA 6020B         | 681052           |
| 92586436001 | GWA-1     | EPA 7470A       | 678396   | EPA 7470A         | 678613           |
| 92586436002 | GWA-2     | EPA 7470A       | 678396   | EPA 7470A         | 678613           |
| 92586436003 | GWA-2R    | EPA 7470A       | 678396   | EPA 7470A         | 678613           |
| 92586436004 | GWA-50    | EPA 7470A       | 678396   | EPA 7470A         | 678613           |

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

| Lab ID      | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|-----------------|----------|-------------------|------------------|
| 92586436005 | DUP-1     | EPA 7470A       | 678396   | EPA 7470A         | 678613           |
| 92586436006 | FB-1      | EPA 7470A       | 678396   | EPA 7470A         | 678613           |
| 92586436007 | GWA-3A    | EPA 7470A       | 678396   | EPA 7470A         | 678613           |
| 92586436008 | GWC-5     | EPA 7470A       | 678396   | EPA 7470A         | 678613           |
| 92586436009 | GWC-6     | EPA 7470A       | 678396   | EPA 7470A         | 678613           |
| 92586436010 | GWC-6RZ   | EPA 7470A       | 678396   | EPA 7470A         | 678613           |
| 92586436011 | GWC-7Z    | EPA 7470A       | 678396   | EPA 7470A         | 678613           |
| 92586436012 | GWC-8Z    | EPA 7470A       | 678396   | EPA 7470A         | 678613           |
| 92586436013 | GWC-8RR   | EPA 7470A       | 678396   | EPA 7470A         | 678613           |
| 92586436014 | GWC-9     | EPA 7470A       | 678396   | EPA 7470A         | 678613           |
| 92586436015 | GWC-12    | EPA 7470A       | 678396   | EPA 7470A         | 678613           |
| 92586436016 | GWA-50R   | EPA 7470A       | 678396   | EPA 7470A         | 678613           |
| 92586436017 | DUP-2     | EPA 7470A       | 678396   | EPA 7470A         | 678613           |
| 92586436018 | FB-2      | EPA 7470A       | 678399   | EPA 7470A         | 678663           |
| 92586436019 | GWA-4RZ   | EPA 7470A       | 678399   | EPA 7470A         | 678663           |
| 92586436020 | FB-3      | EPA 7470A       | 678399   | EPA 7470A         | 678663           |
| 92586436021 | GWC-10    | EPA 7470A       | 678399   | EPA 7470A         | 678663           |
| 92586436022 | GWC-10R   | EPA 7470A       | 678399   | EPA 7470A         | 678663           |
| 92586436023 | GWC-11    | EPA 7470A       | 678399   | EPA 7470A         | 678663           |
| 92586436024 | GWC-11R   | EPA 7470A       | 678399   | EPA 7470A         | 678663           |
| 92586436025 | GWC-13RZ  | EPA 7470A       | 678399   | EPA 7470A         | 678663           |
| 92586436026 | GWC-14Z   | EPA 7470A       | 678399   | EPA 7470A         | 678663           |
| 92586436027 | GWC-15R   | EPA 7470A       | 678399   | EPA 7470A         | 678663           |
| 92586436028 | DUP-3     | EPA 7470A       | 678399   | EPA 7470A         | 678663           |
| 92586436029 | FB-4      | EPA 7470A       | 678399   | EPA 7470A         | 678663           |
| 92586436030 | GWC-15Z   | EPA 7470A       | 678399   | EPA 7470A         | 678663           |
| 92586436031 | FB-5      | EPA 7470A       | 678404   | EPA 7470A         | 678664           |
| 92586436032 | GWC-13    | EPA 7470A       | 681261   | EPA 7470A         | 681332           |
| 92586436033 | FB-6      | EPA 7470A       | 681261   | EPA 7470A         | 681332           |
| 92586436001 | GWA-1     | SM 2540C-2015   | 676439   |                   |                  |
| 92586436002 | GWA-2     | SM 2540C-2015   | 676439   |                   |                  |
| 92586436003 | GWA-2R    | SM 2540C-2015   | 676439   |                   |                  |
| 92586436004 | GWA-50    | SM 2540C-2015   | 676439   |                   |                  |
| 92586436005 | DUP-1     | SM 2540C-2015   | 676439   |                   |                  |
| 92586436006 | FB-1      | SM 2540C-2015   | 676439   |                   |                  |
| 92586436007 | GWA-3A    | SM 2540C-2015   | 676566   |                   |                  |
| 92586436008 | GWC-5     | SM 2540C-2015   | 676566   |                   |                  |
| 92586436009 | GWC-6     | SM 2540C-2015   | 676566   |                   |                  |
| 92586436010 | GWC-6RZ   | SM 2540C-2015   | 676566   |                   |                  |
| 92586436011 | GWC-7Z    | SM 2540C-2015   | 676566   |                   |                  |
| 92586436012 | GWC-8Z    | SM 2540C-2015   | 676566   |                   |                  |
| 92586436013 | GWC-8RR   | SM 2540C-2015   | 676566   |                   |                  |
| 92586436014 | GWC-9     | SM 2540C-2015   | 676566   |                   |                  |
| 92586436015 | GWC-12    | SM 2540C-2015   | 676566   |                   |                  |
| 92586436016 | GWA-50R   | SM 2540C-2015   | 676566   |                   |                  |
| 92586436017 | DUP-2     | SM 2540C-2015   | 676566   |                   |                  |

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Lab ID      | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|-----------------|----------|-------------------|------------------|
| 92586436018 | FB-2      | SM 2540C-2015   | 676566   |                   |                  |
| 92586436019 | GWA-4RZ   | SM 2540C-2015   | 676886   |                   |                  |
| 92586436020 | FB-3      | SM 2540C-2015   | 676886   |                   |                  |
| 92586436021 | GWC-10    | SM 2540C-2015   | 677214   |                   |                  |
| 92586436022 | GWC-10R   | SM 2540C-2015   | 677214   |                   |                  |
| 92586436023 | GWC-11    | SM 2540C-2015   | 677214   |                   |                  |
| 92586436024 | GWC-11R   | SM 2540C-2015   | 677214   |                   |                  |
| 92586436025 | GWC-13RZ  | SM 2540C-2015   | 677214   |                   |                  |
| 92586436026 | GWC-14Z   | SM 2540C-2015   | 677214   |                   |                  |
| 92586436027 | GWC-15R   | SM 2540C-2015   | 677216   |                   |                  |
| 92586436028 | DUP-3     | SM 2540C-2015   | 677216   |                   |                  |
| 92586436029 | FB-4      | SM 2540C-2015   | 677216   |                   |                  |
| 92586436030 | GWC-15Z   | SM 2540C-2015   | 677216   |                   |                  |
| 92586436031 | FB-5      | SM 2540C-2015   | 677216   |                   |                  |
| 92586436032 | GWC-13    | SM 2540C-2015   | 680301   |                   |                  |
| 92586436033 | FB-6      | SM 2540C-2015   | 680301   |                   |                  |
| 92586436001 | GWA-1     | SM 2320B        | 798119   |                   |                  |
| 92586436002 | GWA-2     | SM 2320B        | 798119   |                   |                  |
| 92586436003 | GWA-2R    | SM 2320B        | 798119   |                   |                  |
| 92586436004 | GWA-50    | SM 2320B        | 798119   |                   |                  |
| 92586436005 | DUP-1     | SM 2320B        | 798119   |                   |                  |
| 92586436006 | FB-1      | SM 2320B        | 798119   |                   |                  |
| 92586436007 | GWA-3A    | SM 2320B        | 798366   |                   |                  |
| 92586436008 | GWC-5     | SM 2320B        | 798366   |                   |                  |
| 92586436009 | GWC-6     | SM 2320B        | 798366   |                   |                  |
| 92586436010 | GWC-6RZ   | SM 2320B        | 798366   |                   |                  |
| 92586436011 | GWC-7Z    | SM 2320B        | 798366   |                   |                  |
| 92586436012 | GWC-8Z    | SM 2320B        | 798366   |                   |                  |
| 92586436013 | GWC-8RR   | SM 2320B        | 798366   |                   |                  |
| 92586436014 | GWC-9     | SM 2320B        | 798366   |                   |                  |
| 92586436015 | GWC-12    | SM 2320B        | 798366   |                   |                  |
| 92586436016 | GWA-50R   | SM 2320B        | 798366   |                   |                  |
| 92586436017 | DUP-2     | SM 2320B        | 798366   |                   |                  |
| 92586436018 | FB-2      | SM 2320B        | 798366   |                   |                  |
| 92586436019 | GWA-4RZ   | SM 2320B        | 798903   |                   |                  |
| 92586436020 | FB-3      | SM 2320B        | 798903   |                   |                  |
| 92586436021 | GWC-10    | SM 2320B        | 798367   |                   |                  |
| 92586436022 | GWC-10R   | SM 2320B        | 798367   |                   |                  |
| 92586436023 | GWC-11    | SM 2320B        | 798367   |                   |                  |
| 92586436024 | GWC-11R   | SM 2320B        | 798367   |                   |                  |
| 92586436025 | GWC-13RZ  | SM 2320B        | 798367   |                   |                  |
| 92586436026 | GWC-14Z   | SM 2320B        | 798903   |                   |                  |
| 92586436027 | GWC-15R   | SM 2320B        | 798903   |                   |                  |
| 92586436028 | DUP-3     | SM 2320B        | 798903   |                   |                  |

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 1&2  
Pace Project No.: 92586436

| Lab ID      | Sample ID | QC Batch Method        | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|------------------------|----------|-------------------|------------------|
| 92586436029 | FB-4      | SM 2320B               | 798903   |                   |                  |
| 92586436030 | GWC-15Z   | SM 2320B               | 798903   |                   |                  |
| 92586436031 | FB-5      | SM 2320B               | 798903   |                   |                  |
| 92586436032 | GWC-13    | SM 2320B               | 800675   |                   |                  |
| 92586436033 | FB-6      | SM 2320B               | 800675   |                   |                  |
| 92586436001 | GWA-1     | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92586436002 | GWA-2     | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92586436003 | GWA-2R    | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92586436004 | GWA-50    | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92586436005 | DUP-1     | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92586436006 | FB-1      | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92586436007 | GWA-3A    | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92586436008 | GWC-5     | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92586436009 | GWC-6     | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92586436010 | GWC-6RZ   | EPA 300.0 Rev 2.1 1993 | 677743   |                   |                  |
| 92586436011 | GWC-7Z    | EPA 300.0 Rev 2.1 1993 | 677747   |                   |                  |
| 92586436012 | GWC-8Z    | EPA 300.0 Rev 2.1 1993 | 677747   |                   |                  |
| 92586436013 | GWC-8RR   | EPA 300.0 Rev 2.1 1993 | 677747   |                   |                  |
| 92586436014 | GWC-9     | EPA 300.0 Rev 2.1 1993 | 677747   |                   |                  |
| 92586436015 | GWC-12    | EPA 300.0 Rev 2.1 1993 | 677747   |                   |                  |
| 92586436016 | GWA-50R   | EPA 300.0 Rev 2.1 1993 | 677747   |                   |                  |
| 92586436017 | DUP-2     | EPA 300.0 Rev 2.1 1993 | 677747   |                   |                  |
| 92586436018 | FB-2      | EPA 300.0 Rev 2.1 1993 | 677747   |                   |                  |
| 92586436019 | GWA-4RZ   | EPA 300.0 Rev 2.1 1993 | 677747   |                   |                  |
| 92586436020 | FB-3      | EPA 300.0 Rev 2.1 1993 | 677747   |                   |                  |
| 92586436021 | GWC-10    | EPA 300.0 Rev 2.1 1993 | 678003   |                   |                  |
| 92586436022 | GWC-10R   | EPA 300.0 Rev 2.1 1993 | 678003   |                   |                  |
| 92586436023 | GWC-11    | EPA 300.0 Rev 2.1 1993 | 678004   |                   |                  |
| 92586436024 | GWC-11R   | EPA 300.0 Rev 2.1 1993 | 678004   |                   |                  |
| 92586436025 | GWC-13RZ  | EPA 300.0 Rev 2.1 1993 | 678004   |                   |                  |
| 92586436026 | GWC-14Z   | EPA 300.0 Rev 2.1 1993 | 678004   |                   |                  |
| 92586436027 | GWC-15R   | EPA 300.0 Rev 2.1 1993 | 678004   |                   |                  |
| 92586436028 | DUP-3     | EPA 300.0 Rev 2.1 1993 | 678004   |                   |                  |
| 92586436029 | FB-4      | EPA 300.0 Rev 2.1 1993 | 678004   |                   |                  |
| 92586436030 | GWC-15Z   | EPA 300.0 Rev 2.1 1993 | 678004   |                   |                  |
| 92586436031 | FB-5      | EPA 300.0 Rev 2.1 1993 | 678004   |                   |                  |
| 92586436032 | GWC-13    | EPA 300.0 Rev 2.1 1993 | 680699   |                   |                  |
| 92586436033 | FB-6      | EPA 300.0 Rev 2.1 1993 | 680699   |                   |                  |

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Document Name:  
**Sample Condition Upon Receipt (SCUR)**  
 Document No.:  
**F-CAR-CS-033-Rev.08**

Document Revised: November 15, 2021  
 Page 1 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: GA POWER

Project #: **WO# : 92586436**

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



92586436

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: JPE 2/17/12

Packing Material:  Bubble Wrap  Bubble Bags  None  Other  
 Thermometer:  IR Gun ID: 230 Type of Ice:  Wet  Blue  None

Biological Tissue Frozen?  Yes  No  N/A

Cooler Temp: 5.5 Correction Factor: Add/Subtract (°C) +2

Temp should be above freezing to 6°C  
 Samples out of temp criteria Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 5.7

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

|   |  |  | Comments/Discrepancy: |
|---|--|--|-----------------------|
| Chain of Custody Present?                   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  | 1.                    |
| Samples Arrived within Hold Time?           | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  | 2.                    |
| Short Hold Time Analysis (<72 hr.)?         | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A |  | 3.                    |
| Rush Turn Around Time Requested?            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A |  | 4.                    |
| Sufficient Volume?                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  | 5.                    |
| Correct Containers Used?                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  | 6.                    |
| -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 |  | 7.                    |
| Dissolved analysis: Samples Field Filtered? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  | 8.                    |
| Sample Labels Match COC?                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A |  | 9.                    |
| -Includes Date/Time/ID/Analysis Matrix:     | <u>WT</u>  |  |                       |
| Headspace in VOA Vials (>5-6mm)?            | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  | 10.                   |
| Trip Blank Present?                         | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  | 11.                   |
| Trip Blank Custody Seals Present?           | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |  |                       |

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

**CLIENT NOTIFICATION/RESOLUTION**

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_ Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_ Date: \_\_\_\_\_



Document Name:  
**Sample Condition Upon Receipt (SCUR)**  
 Document No.:  
**F-CAR-CS-033-Rev.08**

Document Revised: November 15, 2021  
 Page 2 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.  
 Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

Project #

**WO# : 92586436**

PM: NMG

Due Date: 02/18/22

CLIENT: GA-GA Power

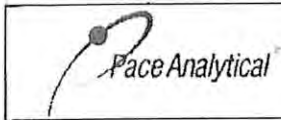
\*\*Bottom half of box is to list number of bottles

| Item# | BP4U-125 mL Plastic Unpreserved (N/A) (Cl-) | BP3U-250 mL Plastic Unpreserved (N/A) | BP2U-500 mL Plastic Unpreserved (N/A) | BP1U-1 liter Plastic Unpreserved (N/A) | BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-) | BP3N-250 mL plastic HNO3 (pH < 2) | BP4Z-125 mL Plastic Zn Acetate & NaOH (>9) | BP4B-125 mL Plastic NaOH (pH > 12) (Cl-) | WGfU-Wide-mouthed Glass jar Unpreserved | AG1U-1 liter Amber Unpreserved (N/A) (Cl-) | AG1H-1 liter Amber HCl (pH < 2) | AG3U-250 mL Amber Unpreserved (N/A) (Cl-) | AG1S-1 liter Amber H2SO4 (pH < 2) | AG3S-250 mL Amber H2SO4 (pH < 2) | AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-) | DG9H-40 mL VOA HCl (N/A) | VG9T-40 mL VOA Na2S2O3 (N/A) | VG9U-40 mL VOA Unpreserved (N/A) | DG9P-40 mL VOA H3PO4 (N/A) | VOAK (3 vials per kit)-5035 kit (N/A) | V/GK (3 vials per kit)-VPH/Gas kit (N/A) | SP5T-125 mL Sterile Plastic (N/A - lab) | SP2T-250 mL Sterile Plastic (N/A - lab) | BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7) | AG0U-100 mL Amber Unpreserved vials (N/A) | VSGU-20 mL Scintillation vials (N/A) | DG9U-40 mL Amber Unpreserved vials (N/A) |  |
|-------|---|---------------------------------------|---------------------------------------|--|--|-----------------------------------|--|--|---|--|---------------------------------|---|-----------------------------------|----------------------------------|--|--------------------------|------------------------------|----------------------------------|----------------------------|---------------------------------------|--|---|---|---|---|--------------------------------------|--|--|
| 1     | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 2     | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 3     | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 4     | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 5     | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 6     | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 7     | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 8     | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 9     | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 10    | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 11    | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 12    | 2   | 1                                     |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |

**pH Adjustment Log for Preserved Samples**

| Sample ID | Type of Preservative | pH upon receipt | Date preservation adjusted | Time preservation adjusted | Amount of Preservative added | Lot # |
|-----------|----------------------|-----------------|----------------------------|----------------------------|------------------------------|-------|
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |

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).



Document Name:  
Sample Condition Upon Receipt (SCUR)

Document No.:  
F-CAR-CS-033-Rev.08

Document Revised: November 15, 2021  
Page 2 of 2

Issuing Authority:  
Quality Office

**WO# : 92586436**

PM: NMG

Due Date: 02/18/22

CLIENT: GA-GA Power

Project #

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHG

\*\*Bottom half of box is to list number of bottles

| Item# | BP4U-125 mL Plastic Unpreserved (N/A) (Cl-) | BP3U-250 mL Plastic Unpreserved (N/A) | BP2U-500 mL Plastic Unpreserved (N/A) | BP1U-1 liter Plastic Unpreserved (N/A) | BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-) | BP3N-250 mL plastic HNO3 (pH < 2) | BP4Z-125 mL Plastic ZN Acetate & NaOH (>9) | BP4B-125 mL Plastic NaOH (pH > 12) (Cl-) | WGFU-Wide-mouthed Glass jar Unpreserved | AG1U-1 liter Amber Unpreserved (N/A) (Cl-) | AG1H-1 liter Amber HCl (pH < 2) | AG3U-250 mL Amber Unpreserved (N/A) (Cl-) | AG1S-1 liter Amber H2SO4 (pH < 2) | AG3S-250 mL Amber H2SO4 (pH < 2) | AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-) | DG9H-40 mL VOA HCl (N/A) | VG9T-40 mL VOA Na2SO3 (N/A) | VG9U-40 mL VOA Unpreserved (N/A) | DG9P-40 mL VOA H3PO4 (N/A) | VOAK (3 vials per kit)-S035 kit (N/A) | V/GK (3 vials per kit)-VPH/Gas kit (N/A) | SP5T-125 mL Sterile Plastic (N/A - lab) | SP2T-250 mL Sterile Plastic (N/A - lab) | BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7) | AG0U-100 mL Amber Unpreserved vials (N/A) | VSGU-20 mL Scintillation vials (N/A) | DG9U-40 mL Amber Unpreserved vials (N/A) |  |
|-------|---|---------------------------------------|---------------------------------------|--|--|-----------------------------------|--|--|---|--|---------------------------------|---|-----------------------------------|----------------------------------|--|--------------------------|-----------------------------|----------------------------------|----------------------------|---------------------------------------|--|---|---|---|---|--------------------------------------|--|--|
| 1     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 2     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 3     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 4     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 5     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 6     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 7     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 8     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 9     |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 10    |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 11    |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 12    |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |

**pH Adjustment Log for Preserved Samples**

| Sample ID | Type of Preservative | pH upon receipt | Date preservation adjusted | Time preservation adjusted | Amount of Preservative added | Lot # |
|-----------|----------------------|-----------------|----------------------------|----------------------------|------------------------------|-------|
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |

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.

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



|   |  |   |
|---|--|---|
| <b>Section A</b><br>Required Client Information           | <b>Section B</b><br>Required Project Information | <b>Section C</b><br>Invoice Information |
| Company: GA POWER   | Report To: Kristen Junkko                        | Attention: Southern Co                  |
| Address: 1003 Weatherstone Parkway<br>Woodstock, Ga 30188 | Copy To: Rhonda Quinn                            | Company Name                            |
| Email To: Kevin Stephenson@Resoluteenv.com                | Purchase Order No                                | Address                                 |
| Phone: (678)5489415                                       | Project Name: Plant Bowen Landfill Cell 1 & 2    | State: GA                               |
| Requested Due Date/TAT: 10 Day                            | Project Number                                   | Requested Analysis Filtered (Y/N)       |

|  |   |
|--|---|
| <b>Section D</b><br>Valid Matrix Codes   | <b>Section E</b><br>Valid Matrix Codes                  |
| DRINKING WATER<br>WATER<br>WASTE WATER<br>PRODUCT<br>SOIL/SOLID<br>OIL<br>WIRE<br>AIR<br>OTHER<br>TISSUE | DW<br>WT<br>WW<br>P<br>SL<br>OL<br>WP<br>AR<br>OT<br>TS |
| <b>SAMPLE ID</b><br>(A-Z, 0-9, /, )<br>Sample IDs MUST BE UNIQUE   |   |

| ITEM # | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G-GRAB C-COMP) | DATE    | TIME | DATE | TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives |                                |                  |     |      |   |          | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|--------|---------------------------------------|-----------------------------|---------|------|------|------|---------------------------|-----------------|---------------|--------------------------------|------------------|-----|------|---|----------|---------------|-----------------------------------|-------------------------|----------------------------|
|        |                                       |                             |         |      |      |      |                           |                 | Unpreserved   | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HCl | NaOH | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | Methanol |               |                                   |                         |                            |
| 1      | GWA-1                                 | WT G                        | 2/11/22 | 1456 |      |      |                           | 4               | 3             | 1                              |                  |     |      |   |          |               |                                   |                         | 7.52                       |
| 2      | GWA-2                                 | WT G                        | 2/11/22 | 1444 |      |      |                           | 4               | 3             | 1                              |                  |     |      |   |          |               |                                   |                         | 6.30                       |
| 3      | GWA-2R                                | WT G                        | 2/11/22 | 1545 |      |      |                           | 4               | 3             | 1                              |                  |     |      |   |          |               |                                   |                         | 6.62                       |
| 4      | GWA-3                                 |                             |         |      |      |      |                           |                 |               |                                |                  |     |      |   |          |               |                                   |                         |                            |
| 5      | GWA-4RZ                               |                             |         |      |      |      |                           |                 |               |                                |                  |     |      |   |          |               |                                   |                         |                            |
| 6      | GWA-5                                 |                             |         |      |      |      |                           |                 |               |                                |                  |     |      |   |          |               |                                   |                         |                            |
| 7      | GWA-6                                 |                             |         |      |      |      |                           |                 |               |                                |                  |     |      |   |          |               |                                   |                         |                            |
| 8      | GWA-6RZ                               |                             |         |      |      |      |                           |                 |               |                                |                  |     |      |   |          |               |                                   |                         |                            |
| 9      | GWA-7Z                                |                             |         |      |      |      |                           |                 |               |                                |                  |     |      |   |          |               |                                   |                         |                            |
| 10     | GWA-8Z                                |                             |         |      |      |      |                           |                 |               |                                |                  |     |      |   |          |               |                                   |                         |                            |
| 11     | GWA-8RR                               |                             |         |      |      |      |                           |                 |               |                                |                  |     |      |   |          |               |                                   |                         |                            |
| 12     | GWA-9                                 |                             |         |      |      |      |                           |                 |               |                                |                  |     |      |   |          |               |                                   |                         |                            |

|  |                                      |             |             |                                  |             |             |                          |
|--|--------------------------------------|-------------|-------------|----------------------------------|-------------|-------------|--------------------------|
| <b>ADDITIONAL COMMENTS</b>   | <b>RELINQUISHED BY / AFFILIATION</b> | <b>DATE</b> | <b>TIME</b> | <b>ACCEPTED BY / AFFILIATION</b> | <b>DATE</b> | <b>TIME</b> | <b>SAMPLE CONDITIONS</b> |
| State Metals include Sb, As, Ba, Be, Cd, Ga, Cr, Cu, Pb, Ni, Se, Ag, Tl, V, Zn, Co | William Locker                       | 2/14/22     | 0800        | Atoya Garner                     | 2/14/22     | 0800        |                          |
|  | Atoya Garner                         | 2/14/22     | 11:45       | Kyan Williams / Pace             | 2/14/22     | 1145        |                          |
|  | Kyan Williams / Pace                 | 2/14/22     | 1100        |                                  | 2/14/22     | 1100        |                          |

|   |   |  |
|---|---|--|
| <b>SAMPLER NAME AND SIGNATURE</b>                   | <b>PRINT Name of SAMPLER:</b> Meredith Dorean, Will Locker, Kevin Stephenson, Robert Muil | <b>DATE Signed (MM/DD/YYYY):</b> 2/11/22 |
| <b>SIGNATURE OF SAMPLER:</b> <i>Meredith Dorean</i> | <b>Temp in °C</b>   | <b>Received on Ice (Y/N)</b>             |
| <b>SIGNATURE OF SAMPLER:</b> <i>Will Locker</i>     | <b>Custody Sealed Cooler (Y/N)</b>  | <b>Samples Intact (Y/N)</b>              |





Section A  
Required Client Information:  
Company: GA Power

Section B  
Required Project Information:  
Report To: Kristen Jurinko

Section C  
Invoice Information:  
Attention: Southern Co.

Address: 1003 Weatherstone Parkway  
Copy To: Rhonda Quinn

Company Name: Southern Co.  
Address: Woodstock, Ga 30188

REGULATORY AGENCY  
NPDES  GROUND WATER  DRINKING WATER   
UST  RCRA  OTHER

Requested Due Date/TAT: 10 Day

Requested Analysis Filtered (Y/N)

Site Location: GA

State: GA

Requested Analysis Filtered (Y/N)

Requested Analysis Filtered (Y/N)

Requested Analysis Filtered (Y/N)

Requested Analysis Filtered (Y/N)

Requested Analysis Filtered (Y/N)

Requested Analysis Filtered (Y/N)

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Requested Analysis Filtered (Y/N)

Requested Analysis Filtered (Y/N)

Requested Analysis Filtered (Y/N)

Page: 2 of 3

**SAMPLE ID**  
AZ 09/1  
Sample IDs MUST BE UNIQUE

Valid Matrix Codes  
MATRIX CODE  
CODE  
DOMESTIC WATER DW  
WASTE WATER WW  
POTABLE WATER PW  
SOLIDIFIED S  
OK  
WASTE WATER W  
AIR AA  
OTHER OT  
TISSUE TS

| ITEM # | MATRIX CODE | SAMPLE TYPE (G=GRAB C=COMP) | DATE   | TIME | DATE | TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Unpreserved | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HCl | NaOH | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | Methanol | Other | Analysis Test | Y/N | Requested Analysis Filtered (Y/N) |  |
|--------|-------------|-----------------------------|--------|------|------|------|---------------------------|-----------------|-------------|--------------------------------|------------------|-----|------|---|----------|-------|---------------|-----|-----------------------------------|--|
| 1      | GWC-10-     |                             |        |      |      |      |                           | 4               |             |                                |                  |     |      |   |          |       |               |     |                                   |  |
| 2      | GWC-10R-    |                             |        |      |      |      |                           | 3               |             |                                |                  |     |      |   |          |       |               |     |                                   |  |
| 3      | GWC-11-     |                             |        |      |      |      |                           | 1               |             |                                |                  |     |      |   |          |       |               |     |                                   |  |
| 4      | GWC-11R-    |                             |        |      |      |      |                           |                 |             |                                |                  |     |      |   |          |       |               |     |                                   |  |
| 5      | GWC-12-     |                             |        |      |      |      |                           |                 |             |                                |                  |     |      |   |          |       |               |     |                                   |  |
| 6      | GWC-12-     |                             |        |      |      |      |                           |                 |             |                                |                  |     |      |   |          |       |               |     |                                   |  |
| 7      | GWC-13RZ-   |                             |        |      |      |      |                           |                 |             |                                |                  |     |      |   |          |       |               |     |                                   |  |
| 8      | GWC-14Z-    |                             |        |      |      |      |                           |                 |             |                                |                  |     |      |   |          |       |               |     |                                   |  |
| 9      | GWC-15Z-    |                             |        |      |      |      |                           |                 |             |                                |                  |     |      |   |          |       |               |     |                                   |  |
| 10     | GWC-16R-    |                             |        |      |      |      |                           |                 |             |                                |                  |     |      |   |          |       |               |     |                                   |  |
| 11     | GWA-50      | WT G                        | 2/1/22 | 1540 |      |      |                           |                 |             |                                |                  |     |      |   |          |       |               |     |                                   |  |
| 12     | GWA-50R-    |                             |        |      |      |      |                           |                 |             |                                |                  |     |      |   |          |       |               |     |                                   |  |

ADDITIONAL COMMENTS

Relinquished by / Affiliation: William Loaker

Accepted by / Affiliation: Atoya Garner

Date: 2/4/22 Time: 0800

Date: 2/4/22 Time: 1145

Date: 2/4/22 Time: 1900

Date: 2/4/22 Time: 1900

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Meredith Duncan, Will Loaker, Kevin Stephenson, Robert + Noull

SIGNATURE OF SAMPLER: Meredith Duncan

DATE Signed (MM/DD/YYYY): 2/1/22

Temp in °C  
Received on Ice (Y/N)  
Custody Sealed Cooler (Y/N)  
Samples Intact (Y/N)

Residual Chlorine (Y/N)

SAMPLE CONDITIONS

5.61

Pace Project No./ Lab I.D.



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A** Required Client Information: Company: GA Power, Address: 1003 Weatherstone Parkway, Woodstock, GA 30188

**Section B** Required Project Information: Report To: Kristen Jurmko, Copy To: Rhonda Quinn

**Section C** Invoice Information: Address: Southern Co., Company Name: Southern Co.

**Section D** Valid Matrix Codes: DRINKING WATER, WASTE WATER, WASTE WATER PRODUCT, SOL/SOLID, OK, WIPE, AIR, OTHER, TISSUE

Requested Date: 10 Day

Requested Analysis Filtered (Y/N)

REGULATORY AGENCY: NPDES, GROUND WATER, RCRA, OTHER

| ITEM # | Section D<br>Required Client Information | Valid Matrix Codes<br>MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives                  |                  |    |      |   |          | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | SAMPLE CONDITIONS |
|--------|--|---|-----------------------------|-----------|------|---------------------------|-----------------|--------------------------------|------------------|----|------|---|----------|---------------|-----------------------------------|-------------------------|-------------------|
|        |  |   |                             | DATE      | TIME |                           |                 | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HC | NaOH | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | Methanol |               |                                   |                         |                   |
| 1      | -DUP-1                                   | DUP-1   | WT G                        | 2/1/22    |      |                           | 4               |                                |                  |    |      |   |          |               |                                   |                         |                   |
| 2      | -DUP-2                                   | DUP-2   | WT G                        | 2/1/22    |      |                           | 3               |                                |                  |    |      |   |          |               |                                   |                         |                   |
| 3      | -DUP-3                                   | DUP-3   | WT G                        | 2/1/22    | 1600 |                           | 3               |                                |                  |    |      |   |          |               |                                   |                         |                   |
| 4      | -FBL F B-1                               | FBL F B-1   | WT G                        | 2/1/22    | 1600 |                           | 1               |                                |                  |    |      |   |          |               |                                   |                         |                   |
| 5      | -FBL                                     | FBL   |                             |           |      |                           |                 |                                |                  |    |      |   |          |               |                                   |                         |                   |
| 6      | -FBL                                     | FBL   |                             |           |      |                           |                 |                                |                  |    |      |   |          |               |                                   |                         |                   |
| 7      | -EQBL                                    | EQBL  |                             |           |      |                           |                 |                                |                  |    |      |   |          |               |                                   |                         |                   |
| 8      | -EQBL                                    | EQBL  |                             |           |      |                           |                 |                                |                  |    |      |   |          |               |                                   |                         |                   |
| 9      | -EQBL                                    | EQBL  |                             |           |      |                           |                 |                                |                  |    |      |   |          |               |                                   |                         |                   |
| 10     |  |   |                             |           |      |                           |                 |                                |                  |    |      |   |          |               |                                   |                         |                   |
| 11     |  |   |                             |           |      |                           |                 |                                |                  |    |      |   |          |               |                                   |                         |                   |
| 12     |  |   |                             |           |      |                           |                 |                                |                  |    |      |   |          |               |                                   |                         |                   |

Additional Comments: William Locker, Atoya Garner, Ryan Williams

Relinquished by / Affiliation: William Locker, Atoya Garner, Ryan Williams

Accepted by / Affiliation: Atoya Garner, Ryan Williams

Additional Comments: William Locker, Atoya Garner, Ryan Williams

Relinquished by / Affiliation: William Locker, Atoya Garner, Ryan Williams

Accepted by / Affiliation: Atoya Garner, Ryan Williams

DATE SIGNED: 2/1/22

DATE SIGNED (IMMEDIATELY): 2/1/22

SIGNATURE OF SAMPLER: Meredith Duncan, William Locker, Kevin Stephenson, Robert Moll

Temp in °C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

|   |  |   |
|---|--|---|
| <b>Section A</b><br>Required Client Information           | <b>Section B</b><br>Required Project Information | <b>Section C</b><br>Invoice Information |
| Company: GA Power   | Report To: Kristen Juriniko                      | Attention: Southern Co                  |
| Address: 1003 Weatherstone Parkway<br>Woodstock, Ga 30188 | Copy To: Rhonda Qurnm                            | Company Name:                           |
| Email To: Kevin.Stephenson@Resoluteenv.com                | Purchase Order No:                               | Address:                                |
| Phone: (678)5489415                                       | Project Name: Plant Bowen Landfill               | Pace Quote Reference:                   |
| Requested Due Date/TAT: 10 Day                            | Project Number:                                  | Trace Project Manager:                  |
|   | Cells 1 and 2                                    | Trace Profile #: 2928                   |

|                          |                                |                                       |  |
|--------------------------|--------------------------------|---------------------------------------|--|
| <b>REGULATORY AGENCY</b> | NPDES <input type="checkbox"/> | GROUND WATER <input type="checkbox"/> | DRINKING WATER <input checked="" type="checkbox"/> |
|                          | UST <input type="checkbox"/>   | RCCA <input type="checkbox"/>         | OTHER <input type="checkbox"/>                     |
| Site Location:           | GA                             | STATE:                                |  |

| ITEM # | Section D<br>Required Client Information | Valid Matrix Codes<br>MATRIX CODE | COLLECTED |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | SAMPLE CONDITIONS |
|--------|--|-----------------------------------|-----------|------|---------------------------|-----------------|---------------|---------------|-----------------------------------|-------------------------|-------------------|
|        |  |                                   | DATE      | TIME |                           |                 |               |               |                                   |                         |                   |
| 1      | -GWA-1                                   |                                   |           |      |                           |                 |               |               |                                   |                         |                   |
| 2      | -GWA-2                                   |                                   |           |      |                           |                 |               |               |                                   |                         |                   |
| 3      | -GWA-2R                                  |                                   |           |      |                           |                 |               |               |                                   |                         |                   |
| 4      | GWA-3A                                   |                                   | 6/11/08   |      |                           |                 |               |               |                                   |                         |                   |
| 5      | -GWA-4RZ                                 |                                   |           |      |                           |                 |               |               |                                   |                         |                   |
| 6      | GWC-5                                    |                                   | 6/11/08   | 1134 |                           | 4               | 3             | 1             |                                   |                         | 5.90              |
| 7      | GWC-6                                    |                                   | 6/11/08   | 1522 |                           | 4               | 3             | 1             |                                   |                         | 7.40              |
| 8      | GWC-6RZ                                  |                                   | 6/11/08   | 1400 |                           | 4               | 3             | 1             |                                   |                         | 6.80              |
| 9      | GWC-7Z                                   |                                   | 6/11/08   | 1215 |                           | 4               | 3             | 1             |                                   |                         | 7.54              |
| 10     | GWC-8Z                                   |                                   | 6/11/08   | 1424 |                           | 4               | 3             | 1             |                                   |                         | 8.92              |
| 11     | GWC-8RR                                  |                                   | 6/11/08   | 1616 |                           | 4               | 3             | 1             |                                   |                         | 8.13              |
| 12     | GWC-9                                    |                                   | 6/11/08   | 1502 |                           | 4               | 3             | 1             |                                   |                         | 4.81              |

| ADDITIONAL COMMENTS |      | RELINQUISHED BY / AFFILIATION |       | ACCEPTED BY / AFFILIATION |      | SAMPLE CONDITIONS |                       |
|---------------------|------|-------------------------------|-------|---------------------------|------|-------------------|-----------------------|
| DATE                | TIME | DATE                          | TIME  | DATE                      | TIME | Temp in °C        | Received on Ice (Y/N) |
| 2/4/22              | 0800 | 2/4/22                        | 11:45 | 2/4/22                    | 0800 |                   |                       |
| 2/4/22              | 1900 | 2/4/22                        | 1900  | 2/4/22                    | 1145 |                   |                       |

|   |  |        |  |        |  |        |  |
|---|--|--------|--|--------|--|--------|--|
| SAMPLER NAME AND SIGNATURE                  |  | DATE   |  | DATE   |  | DATE   |  |
| PRINT Name of SAMPLER: William Lauber       |  | 2/4/22 |  | 2/4/22 |  | 2/4/22 |  |
| SIGNATURE of SAMPLER: <i>William Lauber</i> |  | 1900   |  | 1900   |  | 1900   |  |
| PRINT Name of SAMPLER: Ryan Williams / Pa   |  | 2/4/22 |  | 2/4/22 |  | 2/4/22 |  |
| SIGNATURE of SAMPLER: <i>Ryan Williams</i>  |  | 1900   |  | 1900   |  | 1900   |  |

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020(rev 07 15-Feb-2007)



CHAIN-OF-CUSTODY / Analytical Request Document  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company GA Power, Address 1003 Weatherstone Parkway, Woodstock, Ga 30188, Contact Kevin Stephenson@Resoluteenv.com, Phone (678)5489415, Fax, Requested Due Date/TAT: 10 Day

Section B Required Project Information: Report To Kristen Juritko, Copy To Rhonda Quinn, Purchase Order No., Project Name Plant Bowen Landfill Cells land 2, Project Number

Section C Invoice Information: Attention Southern Co., Company Name, Address, Contact Nicole D'oleo, Reference, Site Profile # 2928, Regulatory Agency: NPDES, GROUND WATER, DRINKING WATER, UST, RCRA, OTHER, State GA

SAMPLE ID (AZ, 091, A) Sample IDs MUST BE UNIQUE

Table with columns: ITEM #, Section D Required Client Information, Valid Matrix Codes, MATRIX CODE, SAMPLE TYPE, DATE, TIME, SAMPLE TEMP AT COLLECTION, # OF CONTAINERS, Preservatives, Analysis Test, Requested Analysis Filtered (Y/N), Residual Chlorine (Y/N), and SAMPLE CONDITIONS.

Section D Additional Comments: William Lanker, Atoya Garner, Ryan Williams / Pace, Date 2/4/22, Time 0800, Accepted by Ryan Williams / Pace, Date 2/4/22, Time 1145

SAMPLER NAME AND SIGNATURE: PRINT Name of SAMPLER: Robert M.L. Lanker, Murchell Duncan, SIGNATURE of SAMPLER: [Signatures], DATE Signed (MM/DD/YYYY): 02/02/22

Temp in °C, Received on Ice (Y/N), Custody Sealed Cooler (Y/N), Samples Intact (Y/N)



**CHAIN-OF-CUSTODY / Analytical Request Document**  
 The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

|  |   |  |
|--|---|--|
| <b>Section A</b><br>Required Client Information:<br>Company: GA Power<br>Address: 1003 Weatherstone Parkway<br>Woodstock, Ga 30188 | <b>Section B</b><br>Required Project Information:<br>Report To: Kristen Junnko<br>Copy To: Rhonda Quinn<br>Purchase Order No. _____ | <b>Section C</b><br>Invoice Information:<br>Attention: Southern Co.<br>Company Name: _____<br>Address: _____<br>Face Quote: _____<br>Face Project: _____<br>Face Project Manager: _____<br>Face Profile #: 2928                                  |
| Phone: (678)5489415<br>Requested Due Date/TAT: 10 Day  | Project Name: Plant Bowen Landfill<br>Project Number: _____   | REGULATORY AGENCY:<br><input type="checkbox"/> NPDES<br><input type="checkbox"/> GROUND WATER<br><input type="checkbox"/> UST<br><input type="checkbox"/> RCRA<br><input checked="" type="checkbox"/> OTHER<br>Site Location: _____<br>STATE: GA |

| ITEM # | Section D<br>Required Client Information | Valid Matrix Codes<br>MATRIX CODE<br><small>DOMESTIC WATER DW<br/>WASTEWATER WW<br/>WASTE WATER WWV<br/>PRODUCT P<br/>SEWAGE S<br/>OIL OIL<br/>WIRE AW<br/>AIR AT<br/>OTHER OT<br/>TISSUE TS</small> | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) |
|--------|--|--|---------------------------------------|-----------------------------|-----------|------|---------------------------|-----------------|---------------|---------------|-----------------------------------|-------------------------|
|        |  |  |                                       |                             | DATE      | TIME |                           |                 |               |               |                                   |                         |
| 1      | -BPP-1                                   |  |                                       |                             |           |      |                           |                 |               |               |                                   |                         |
| 2      | DUP-2                                    |  |                                       |                             |           |      |                           |                 |               |               |                                   |                         |
| 3      | -BPP-3                                   |  |                                       |                             |           |      |                           |                 |               |               |                                   |                         |
| 4      | <del>FB-2</del> FB-2                     |  | UT 6                                  | 2/12/14                     |           |      | 4                         | 3               | 1             |               |                                   |                         |
| 5      | -FBL-                                    |  |                                       |                             |           |      |                           |                 |               |               |                                   |                         |
| 6      | -FBL-                                    |  |                                       |                             |           |      |                           |                 |               |               |                                   |                         |
| 7      | -EGBL-                                   |  |                                       |                             |           |      |                           |                 |               |               |                                   |                         |
| 8      | -EGBL-                                   |  |                                       |                             |           |      |                           |                 |               |               |                                   |                         |
| 9      | -EGBL-                                   |  |                                       |                             |           |      |                           |                 |               |               |                                   |                         |
| 10     |  |  |                                       |                             |           |      |                           |                 |               |               |                                   |                         |
| 11     |  |  |                                       |                             |           |      |                           |                 |               |               |                                   |                         |
| 12     |  |  |                                       |                             |           |      |                           |                 |               |               |                                   |                         |

|  |  |
|--|--|
| <b>ADDITIONAL COMMENTS</b><br>Data Means include Sd As Ba, Ba, Ca, Cd, Cr, Cu, Pb, Ni, Se<br>JE, Ti, V, Zn, Co | <b>RELINQUISHED BY / AFFILIATION</b><br>William Locker<br>Ayoja Garner<br>Lyn Williams / Rae |
| <b>DATE</b>  | <b>TIME</b>  |
| 2/4/22   | 0800   |
| 2/4/22   | 1145   |
| 2/4/22   | 1900   |

|  |             |
|--|-------------|
| <b>ACCEPTED BY / AFFILIATION</b><br>Ayoja Garner<br>Lyn Williams / Rae | <b>DATE</b> |
|  | <b>TIME</b> |
|  | 2/4/22 0800 |
|  | 2/4/22 1145 |
|  | 2/4/22 1900 |

|   |                                  |
|---|----------------------------------|
| <b>SAMPLER NAME AND SIGNATURE</b>                                   |                                  |
| PRINT Name of SAMPLER: Kristin Junnko, William Locker, Rhonda Quinn | DATE Signed (MM/DD/YY): 02/02/22 |
| SIGNATURE of SAMPLER: <i>[Handwritten Signature]</i>                |                                  |



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A** Required Client Information: **Section B** Required Project Information: **Section C** Invoice Information

Company: GA Power  
 Address: 1003 Weatherstone Parkway  
 City: Rhonda Quinn  
 State: GA  
 Attention: Southern Co.  
 Company Name: Southern Co.  
 Project Name: Plant Bowen Landfill Cells 1 & 2  
 Project Number: 2928  
 Requested Analysis Filtered (Y/N):  
 NPDES  GROUND WATER  DRINKING WATER   
 UST  RCRA  OTHER   
 Site Location: GA  
 STATE: GA

| ITEM # | Section D<br>Required Client Information | Valid Matrix Codes<br>MATRIX CODE | DATE   | TIME | DATE | TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives |                                |                  |     |      |   | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|--------|--|-----------------------------------|--------|------|------|------|---------------------------|-----------------|---------------|--------------------------------|------------------|-----|------|---|---------------|-----------------------------------|-------------------------|----------------------------|
|        |  |                                   |        |      |      |      |                           |                 | Unpreserved   | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HCl | NaOH | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> |               |                                   |                         |                            |
| 1      | -GWA-1-                                  |                                   |        |      |      |      |                           |                 |               |                                |                  |     |      |   |               |                                   |                         |                            |
| 2      | -GWA-2-                                  |                                   |        |      |      |      |                           |                 |               |                                |                  |     |      |   |               |                                   |                         |                            |
| 3      | -GWA-2R-                                 |                                   |        |      |      |      |                           |                 |               |                                |                  |     |      |   |               |                                   |                         |                            |
| 4      | -GWA-3-                                  |                                   |        |      |      |      |                           |                 |               |                                |                  |     |      |   |               |                                   |                         |                            |
| 5      | GWA-4RZ                                  | MT G                              | 2/3/22 | 1055 |      |      |                           | 4               | 3             | 1                              |                  |     |      |   |               |                                   | 7.20                    |                            |
| 6      | -GWA-5-                                  |                                   |        |      |      |      |                           |                 |               |                                |                  |     |      |   |               |                                   |                         |                            |
| 7      | -GWA-6-                                  |                                   |        |      |      |      |                           |                 |               |                                |                  |     |      |   |               |                                   |                         |                            |
| 8      | -GWA-6RZ-                                |                                   |        |      |      |      |                           |                 |               |                                |                  |     |      |   |               |                                   |                         |                            |
| 9      | -GWA-7Z-                                 |                                   |        |      |      |      |                           |                 |               |                                |                  |     |      |   |               |                                   |                         |                            |
| 10     | -GWA-8Z-                                 |                                   |        |      |      |      |                           |                 |               |                                |                  |     |      |   |               |                                   |                         |                            |
| 11     | -GWA-8RR-                                |                                   |        |      |      |      |                           |                 |               |                                |                  |     |      |   |               |                                   |                         |                            |
| 12     | -GWA-9-                                  |                                   |        |      |      |      |                           |                 |               |                                |                  |     |      |   |               |                                   |                         |                            |

Relinquished by / Affiliation: William Laaker  
 Date: 2/4/22  
 Time: 0800  
 Accepted by / Affiliation: Atoya Garner  
 Date: 2/4/22  
 Time: 0800  
 Relinquished by / Affiliation: Ryan Williams  
 Date: 2/4/22  
 Time: 11:45  
 Accepted by / Affiliation: Ryan Williams  
 Date: 2/4/22  
 Time: 1146

Additional Comments: Site Metals include Sn, As, Ba, Ba, Cd, Cr, Cr, Cu, Pb, Ni, Se, Zn, V, Zn, Co

Temp in °C: \_\_\_\_\_  
 Received on Ice (Y/N): \_\_\_\_\_  
 Custody Sealed Cooler (Y/N): \_\_\_\_\_  
 Samples Intact (Y/N): \_\_\_\_\_

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.  
 F-ALL-Q-020rev 07, 15-Feb-2007



|  |  |   |                             |  |  |
|--|--|---|-----------------------------|--|--|
| <b>Section A</b><br>Requested Client Information:<br>Company: GA Power<br>Address: 1003 Weatherstone Parkway<br>City: Woodstock, Ga 30188<br>Contact: Kevin. Stephenson@Resoluteenv.com<br>Phone: (878)5489415<br>Fax: [Blank]<br>Requested Due Date/TAT: 10 Day |  | <b>Section B</b><br>Required Project Information:<br>Report To: Kristen Juritko<br>Copy To: Rhonda Quinn<br>Purchase Order No.: [Blank] |                             | <b>Section C</b><br>Invoice Information:<br>Attention: Southern Co.<br>Company Name: [Blank]<br>Address: [Blank]<br>Site Code: [Blank]<br>Project Name: Plant Bowen Landfill Cells 1 & 2<br>Project Manager: Nicole D'oleo<br>Pace Profile #: 2928 |  |
| <b>REGULATORY AGENCY</b><br><input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER<br><input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER                            |  |   | Site Location: GA<br>STATE: |  |  |

| ITEM # | Section D<br>Required Client Information | Valid Matrix Codes<br>MATRIX CODE<br>DRINKING WATER DW<br>WASTE WATER WW<br>WASTE WATER PRODUCT P<br>SOLID S<br>SOLID S<br>WIPES WIP<br>WIPES WIP<br>OTHER OT<br>TISSUE TS | MATR X CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |      |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No./ Lab ID. |
|--------|--|--|---------------------------------------|-----------------------------|-----------|------|------|---------------------------|-----------------|---------------|---------------|-----------------------------------|-------------------------|---------------------------|
|        |  |  |                                       |                             | DATE      | TIME | DATE |                           |                 |               |               |                                   |                         |                           |
| 1      | -BWP-4                                   |  |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |                           |
| 2      | -BWP-2                                   |  |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |                           |
| 3      | -BWP-2                                   |  |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |                           |
| 4      | -FBL FB-3                                |  | WT G                                  | 2/3/22                      | 1200      |      |      | 4                         | 3               | 1             |               |                                   |                         |                           |
| 5      | -FBL                                     |  |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |                           |
| 6      | -FBL                                     |  |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |                           |
| 7      | -EQBL                                    |  |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |                           |
| 8      | -EQBL                                    |  |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |                           |
| 9      | -EQBL                                    |  |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |                           |
| 10     |  |  |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |                           |
| 11     |  |  |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |                           |
| 12     |  |  |                                       |                             |           |      |      |                           |                 |               |               |                                   |                         |                           |

|   |  |                       |                     |  |                       |                     |  |
|---|--|-----------------------|---------------------|--|-----------------------|---------------------|--|
| <b>ADDITIONAL COMMENTS</b><br>(Site Metals include Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, Tl, V, Zn, Co) | <b>RELINQUISHED BY / AFFILIATION</b><br>William Leaker | <b>DATE</b><br>2/4/22 | <b>TIME</b><br>0800 | <b>ACCEPTED BY / AFFILIATION</b><br>Atoya Garner | <b>DATE</b><br>2/4/22 | <b>TIME</b><br>0800 | <b>SAMPLE CONDITIONS</b><br>Received on Ice (Y/N)<br>Custody Sealed Cooler (Y/N)<br>Samples Intact (Y/N) |
|---|--|-----------------------|---------------------|--|-----------------------|---------------------|--|

|  |  |                                  |
|--|--|----------------------------------|
| <b>SAMPLER NAME AND SIGNATURE</b><br>PRINT Name of SAMPLER: Meredith Dorton, Will Leaker<br>SIGNATURE of SAMPLER: <i>Meredith Dorton</i>   |  | DATE Signed (MM/DD/YY): 02/03/22 |
| <b>SAMPLER NAME AND SIGNATURE</b><br>PRINT Name of SAMPLER: Kevin Stephenson, Robert Mull<br>SIGNATURE of SAMPLER: <i>Kevin Stephenson</i> |  | DATE Signed (MM/DD/YY): 02/03/22 |

**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

|   |  |  |
|---|--|--|
| <b>Sample Condition Upon Receipt</b><br>Courier: <input type="checkbox"/> Commercial <input type="checkbox"/> Fed Ex <input type="checkbox"/> Pace <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Other: _____ <input type="checkbox"/> Client | <b>Client Name:</b><br><u>GA Power</u>     | <b>Project #:</b><br><b>WO# : 92586436</b> |
| <b>Custody Seal Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Seals Intact?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   | <b>PM:</b> _____ <b>Due Date:</b> 02/18/22 | <b>CLIENT:</b> GA-GA Power                 |

Date/Initials Person Examining Contents: JPE 2/8/22

**Packing Material:**  Bubble Wrap  Bubble Bags  None  Other  
**Thermometer:**  IR Gun ID: 083    **Type of Ice:**  Wet  Blue  None  
**Cooler Temp:** 1.1    **Correction Factor:** Add/Subtract (°C) +2

**Biological Tissue Frozen?**  
 Yes  No  N/A

Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

**Cooler Temp Corrected (°C):** 1.3  
**USDA Regulated Soil** (  N/A, water sample)  
 Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

|   |  | Comments/Discrepancy: |
|---|--|-----------------------|
| Chain of Custody Present?                   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 1                     |
| Samples Arrived within Hold Time?           | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 2.                    |
| Short Hold Time Analysis (<72 hr.)?         | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 3.                    |
| Rush Turn Around Time Requested?            | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 4. <u>10 DAYS</u>     |
| Sufficient Volume?                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 5                     |
| Correct Containers Used?                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 6                     |
| -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 | 7.                    |
| Dissolved analysis: Samples Field Filtered? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 8.                    |
| Sample Labels Match COC?                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 9                     |
| -Includes Date/Time/ID/Analysis Matrix:     | <u>W</u>   |                       |
| Headspace in VOA Vials (>5-6mm)?            | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 10.                   |
| Trip Blank Present?                         | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 11.                   |
| Trip Blank Custody Seals Present?           | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |                       |

COMMENTS/SAMPLE DISCREPANCY \_\_\_\_\_ Field Data Required?  Yes  No

Lot ID of split containers: \_\_\_\_\_

CLIENT NOTIFICATION/RESOLUTION \_\_\_\_\_

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_ Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_ Date: \_\_\_\_\_



\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHG

\*\*Bottom half of box is to list number of bottles

Project #

**WO# : 92586436**

PM: NMG

Due Date: 02/18/22

CLIENT: GA-GA Power

| Item# | BP4U-125 mL Plastic Unpreserved (N/A) (Cl-) | BP3U-250 mL Plastic Unpreserved (N/A) | BP2U-500 mL Plastic Unpreserved (N/A) | BP1U-1 liter Plastic Unpreserved (N/A) | BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-) | BP3N-250 mL plastic HNO3 (pH < 2) | BP4Z-125 mL Plastic ZN Acetate & NaOH (>9) | BP4B-125 mL Plastic NaOH (pH > 12) (Cl-) | WGFU-Wide-mouthed Glass jar Unpreserved | AG1U-1 liter Amber Unpreserved (N/A) (Cl-) | AG1H-1 liter Amber HCl (pH < 2) | AG3U-250 mL Amber Unpreserved (N/A) (Cl-) | AG1S-1 liter Amber H2SO4 (pH < 2) | AG3S-250 mL Amber H2SO4 (pH < 2) | AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-) | DG9H-40 mL VOA HCl (N/A) | VG9T-40 mL VOA Na2S2O3 (N/A) | VG9U-40 mL VOA Unpreserved (N/A) | DG9P-40 mL VOA H3PO4 (N/A) | VOAK (3 vials per kit)-5035 kit (N/A) | V/GK (3 vials per kit)-VPH/Gas kit (N/A) | SP5T-125 mL Sterile Plastic (N/A - lab) | SP2T-250 mL Sterile Plastic (N/A - lab) | BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7) | AG0U-100 mL Amber Unpreserved vials (N/A) | V5GU-20 mL Scintillation vials (N/A) | DG9U-40 mL Amber Unpreserved vials (N/A) |  |
|-------|---|---------------------------------------|---------------------------------------|--|--|-----------------------------------|--|--|---|--|---------------------------------|---|-----------------------------------|----------------------------------|--|--------------------------|------------------------------|----------------------------------|----------------------------|---------------------------------------|--|---|---|---|---|--------------------------------------|--|--|
| 1     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 2     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 3     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 4     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 5     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 6     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 7     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 8     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 9     |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 10    |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 11    |   | 2                                     | 1                                     |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |
| 12    |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |

**pH Adjustment Log for Preserved Samples**

| Sample ID | Type of Preservative | pH upon receipt | Date preservation adjusted | Time preservation adjusted | Amount of Preservative added | Lot # |
|-----------|----------------------|-----------------|----------------------------|----------------------------|------------------------------|-------|
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |

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.





# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

|   |  |  |
|---|--|--|
| <b>Section A</b><br>Required Client Information           | <b>Section B</b><br>Required Project Information | <b>Section C</b><br>Invoice Information  |
| Company: GA Power   | Report To: Kristen Jurinko                       | Attention: Southern Co   |
| Address: 1003 Weatherstone Parkway<br>Woodstock, Ga 30188 | Copy To: Rhonda Quirin                           | Company Name:  |
| Contact: Kevin. Stephenson@Resoluteenv.com                | Purchase Order No:                               | Address:   |
| Phone: (678)5489415 Fax:                                  | Project Name: Plant Bowen Landfill Cells 1 and 2 | Reference: Nicole D'oleo   |
| Requested Due Date/AT: 10 Day                             | Project Number:                                  | Price Profile #: 2928  |
| <b>REGULATORY AGENCY</b>                                  |  | NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> |
|   |  | UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>         |
| Site Location   |  | STATE: GA  |

| ITEM # | Section D<br>Required Client Information | Valid Matrix Codes<br>MATRIX CODES                      | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives |      |             |                                |                  |     | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|--------|--|---|---------------------------------------|-----------------------------|-----------|------|---------------------------|-----------------|---------------|------|-------------|--------------------------------|------------------|-----|---------------|-----------------------------------|-------------------------|----------------------------|
|        |  |   |                                       |                             | DATE      | TIME |                           |                 | DATE          | TIME | Unpreserved | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HCl |               |                                   |                         |                            |
| 1      | -BPP-1                                   | DW<br>WT<br>P<br>SL<br>CL<br>WV<br>WP<br>AR<br>OT<br>TS |                                       |                             | 2/4/22    | 1315 |                           | 4               | 3             | 1    |             |                                |                  |     |               |                                   |                         |                            |
| 2      | -BPP-2                                   |   |                                       |                             | 2/4/22    | 1315 |                           | 4               | 3             | 1    |             |                                |                  |     |               |                                   |                         |                            |
| 3      | -DUP-3                                   |   |                                       |                             | 2/4/22    | 1315 |                           | 4               | 3             | 1    |             |                                |                  |     |               |                                   |                         |                            |
| 4      | -FB-4                                    |   |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |               |                                   |                         |                            |
| 5      | -FB-                                     |   |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |               |                                   |                         |                            |
| 6      | -FB-                                     |   |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |               |                                   |                         |                            |
| 7      | -FB-                                     |   |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |               |                                   |                         |                            |
| 8      | -FB-                                     |   |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |               |                                   |                         |                            |
| 9      | -FB-                                     |   |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |               |                                   |                         |                            |
| 10     | -FB-                                     |   |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |               |                                   |                         |                            |
| 11     |  |   |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |               |                                   |                         |                            |
| 12     |  |   |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |               |                                   |                         |                            |

|                            |                                      |                                  |
|----------------------------|--------------------------------------|----------------------------------|
| <b>ADDITIONAL COMMENTS</b> | <b>RELINQUISHED BY / AFFILIATION</b> | <b>ACCEPTED BY / AFFILIATION</b> |
|                            | William Leaker                       | Atoya Garner                     |
|                            | Atoya Garner                         | Ryan Williams / Pace             |
|                            | Ryan Williams / Pace                 | Ryan Williams / Pace             |

|  |  |   |
|--|--|---|
| <b>DATE SIGNED</b>                           | <b>DATE SIGNED</b>                             | <b>DATE SIGNED</b>                            |
| 2/4/22                                       | 2/8/22   | 2/8/22  |
| <b>PRINT Name of SAMPLER:</b> William Leaker | <b>PRINT Name of SAMPLER:</b> Kevin Stephenson | <b>PRINT Name of SAMPLER:</b> Meredith Durson |
| <b>SIGNATURE of SAMPLER:</b>                 | <b>SIGNATURE of SAMPLER:</b>                   | <b>SIGNATURE of SAMPLER:</b>                  |
|  |  |   |

|                          |                       |                             |
|--------------------------|-----------------------|-----------------------------|
| Temp in °C               | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) |
|                          |                       |                             |
| <b>SAMPLE CONDITIONS</b> |                       |                             |
| Samples Intact (Y/N)     |                       |                             |
|                          |                       |                             |



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A** Required Client Information: **Section B** Required Project Information: **Section C** Invoice Information:  
 Company: GA Power Report To: Kristen Jurinko Attention: Southern Co.  
 Address: 1003 Weatherstone Parkway Copy To: Rhonda Quinn  
 Woodstock, Ga 30188  
 Purchase Order No.:  
 Project Name: Plant Bowen Landfill Call's Land 2  
 Project Number:  
 Reference: Nicole D'oleo  
 Manager:  
 Pace Profile #: 2928  
 Company Name:  
 Address:  
 Pace Guide:  
 Reference:  
 Manager:  
 Pace Profile #: 2928  
 REGULATORY AGENCY: NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER   
 Site Location: STATE: GA

**Section D** Required Client Information: **Valid Matrix Codes**  
 MATRIX CODE (see valid codes to left)  
 SAMPLE TYPE (G=GRAB C=COMP)  
 DATE TIME DATE TIME  
 SAMPLE TEMP AT COLLECTION  
 # OF CONTAINERS  
 Unpreserved  
 H<sub>2</sub>SO<sub>4</sub>  
 HNO<sub>3</sub>  
 HCl  
 NaOH  
 Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
 Methanol  
 Other  
 Analysis Test Y/N  
 Metals + State Metals  
 Cl, F, SO<sub>4</sub>  
 Total/Carb/Bicarb Alk  
 TDS  
 Residual Chlorine (Y/N)  
 Pace Project No./ Lab I.D.

| ITEM # | Section D<br>Required Client Information              | Valid Matrix Codes<br>MATRIX CODE<br>(see valid codes to left) | SAMPLE TYPE<br>(G=GRAB C=COMP) | COLLECTED |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives |      |                                |                  |     |      |   | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|--------|---|--|--------------------------------|-----------|------|---------------------------|-----------------|---------------|------|--------------------------------|------------------|-----|------|---|---------------|-----------------------------------|-------------------------|----------------------------|
|        |   |  |                                | DATE      | TIME |                           |                 | DATE          | TIME | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HCl | NaOH | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> |               |                                   |                         |                            |
| 1      | -GWG-10-<br>Sample IDs MUST BE UNIQUE<br>(A-Z, 0-9/.) | DW<br>WT<br>WW<br>P<br>SL<br>OL<br>W/P<br>AR<br>OT<br>TS       |                                |           |      |                           |                 |               |      |                                |                  |     |      |   |               |                                   |                         |                            |
| 2      | -GWG-10R  |  |                                |           |      |                           |                 |               |      |                                |                  |     |      |   |               |                                   |                         |                            |
| 3      | -GWG-11   |  |                                |           |      |                           |                 |               |      |                                |                  |     |      |   |               |                                   |                         |                            |
| 4      | -GWG-11R  |  |                                |           |      |                           |                 |               |      |                                |                  |     |      |   |               |                                   |                         |                            |
| 5      | -GWG-12   |  |                                |           |      |                           |                 |               |      |                                |                  |     |      |   |               |                                   |                         |                            |
| 6      | -GWG-12R  |  |                                |           |      |                           |                 |               |      |                                |                  |     |      |   |               |                                   |                         |                            |
| 7      | -GWG-13RZ   |  |                                |           |      |                           |                 |               |      |                                |                  |     |      |   |               |                                   |                         |                            |
| 8      | -GWG-14Z  |  |                                |           |      |                           |                 |               |      |                                |                  |     |      |   |               |                                   |                         |                            |
| 9      | -GWG-15Z  |  |                                | 2/7/22    | 1013 |                           | 4               | 3             | 1    |                                |                  |     |      |   |               |                                   |                         | 7.83                       |
| 10     | -GWG-15R  |  |                                |           |      |                           |                 |               |      |                                |                  |     |      |   |               |                                   |                         |                            |
| 11     | -GWA-50   |  |                                |           |      |                           |                 |               |      |                                |                  |     |      |   |               |                                   |                         |                            |
| 12     | -GWA-50R  |  |                                |           |      |                           |                 |               |      |                                |                  |     |      |   |               |                                   |                         |                            |

Additional Comments: William Laker  
 Atoya Garner  
 Ryan Williams / Pace  
 Relinquished by / Affiliation: William Laker  
 Date: 2/8/22  
 Time: 0800  
 Accepted by / Affiliation: Atoya Garner  
 Date: 2/8/22  
 Time: 0800  
 Date: 2/9/22  
 Time: 0948  
 Date: 2/9/22  
 Time: 0948

Sampler Name and Signature: William Laker  
 Date Signed (MM/DD/YY): 2/7/22  
 Signature of Sampler: *William Laker*



# CHAIN-OF-CUSTODY / Analytical Request Document

|  |  |  |                            |  |  |
|--|--|--|----------------------------|--|--|
| <b>Section A</b><br>Required Client Information:<br>Company: GA Power<br>Address: 1003 Weatherstone Parkway<br>Woodstock, Ga 30188<br>Mail To: Kevin. Stephenson@resoluteenv.com<br>Phone: (678)5489415<br>Requested Due Date/TAT: 10 Day        |  | <b>Section B</b><br>Required Project Information:<br>Report To: Kristen Junnko<br>Copy To: Rhonda Quirin<br>Purchase Order No.:<br>Project Name: Plant Bowen Landfill<br>Project Number: |                            | <b>Section C</b><br>Invoice Information:<br>Attention: Southern Co.<br>Company Name:<br>Address:<br>Pace Guide Reference<br>Pace Project Manager<br>Pace Profile #: 2928 |  |
| <b>REGULATORY AGENCY</b><br>NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/><br>UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> |  |  | Site Location<br>STATE: GA |  |  |

| ITEM # | Section D<br>Required Client Information | Valid Matrix Codes<br>MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|--------|--|---|-----------------------------|-----------|------|---------------------------|-----------------|---------------|---------------|-----------------------------------|-------------------------|----------------------------|
|        |  |   |                             | DATE      | TIME |                           |                 |               |               |                                   |                         |                            |
| 1      | -BPP-1                                   | -BPP-1  |                             | 2/7/22    | 1130 | 4                         | 3               | 1             | X             | X                                 | X                       |                            |
| 2      | -BPP-2                                   | -BPP-2  |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 3      | -BPP-3                                   | -BPP-3  |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 4      | -FBP-FB-5                                | -FBP-FB-5   |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 5      | -FBP-                                    | -FBP-   |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 6      | -FBP-                                    | -FBP-   |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 7      | -EBP-                                    | -EBP-   |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 8      | -EBP-                                    | -EBP-   |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 9      | -EBP-                                    | -EBP-   |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 10     |  |   |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 11     |  |   |                             |           |      |                           |                 |               |               |                                   |                         |                            |
| 12     |  |   |                             |           |      |                           |                 |               |               |                                   |                         |                            |

**ADDITIONAL COMMENTS:**  
 William Looker  
 Atoya Garner  
 Ryan Williams Pace

| RELINQUISHED BY / AFFILIATION | DATE   | TIME | ACCEPTED BY / AFFILIATION | DATE   | TIME |
|-------------------------------|--------|------|---------------------------|--------|------|
| William Looker                | 2/8/22 | 0800 | Atoya Garner              | 2/8/22 | 0800 |
| Atoya Garner                  | 2/8/22 | 8:10 | Ryan Williams Pace        | 2/8/22 | 0810 |
| Ryan Williams Pace            | 2/8/22 | 0949 |                           | 2/8/22 | 0949 |

**SAMPLER NAME AND SIGNATURE**  
 PRINT Name of SAMPLER: William Looker Meredith Duncan  
 SIGNATURE of SAMPLER: *[Signatures]*  
 DATE Signed (MM/DD/YY): 2/7/22

|            |                       |                             |                      |
|------------|-----------------------|-----------------------------|----------------------|
| Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|            |                       |                             |                      |

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project #:

**WO#: 92586436**

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

PM: NMG Due Date: 02/18/22  
 CLIENT: GA-GA Power

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 2/18/22  
COA

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Thermometer:  If Gun ID: 083  Wet  Blue  None

Yes  No  N/A

Cooler Temp: 3.1 Correction Factor: Add/Subtract (°C) +0.2

Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.3

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  
 Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

|   |  | Comments/Discrepancy: |
|---|--|-----------------------|
| Chain of Custody Present?                   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 1.                    |
| Samples Arrived within Hold Time?           | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 2.                    |
| Short Hold Time Analysis (<72 hr.)?         | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 3.                    |
| Rush Turn Around Time Requested?            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 4.                    |
| Sufficient Volume?                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 5.                    |
| Correct Containers Used?                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 6.                    |
| -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 | 7.                    |
| Dissolved analysis: Samples Field Filtered? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 8.                    |
| Sample Labels Match COC?                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 9.                    |
| -Includes Date/Time/ID/Analysis Matrix:     | <u>W</u>   |                       |
| Headspace in VOA Vials (>5-6mm)?            | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 10.                   |
| Trip Blank Present?                         | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 11.                   |
| Trip Blank Custody Seals Present?           | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |                       |

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

**WO# : 92586436**

PM: NMG

Due Date: 02/18/22

CLIENT: GA-GA Power

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

\*\*Bottom half of box is to list number of bottles

| Item# | BP4U-125 mL Plastic Unpreserved (N/A) (Cl-) | BP3U-250 mL Plastic Unpreserved (N/A) | BP2U-500 mL Plastic Unpreserved (N/A) | BP1U-1 liter Plastic Unpreserved (N/A) | BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-) | BP3N-250 mL plastic HNO3 (pH < 2) | BP4Z-125 mL Plastic ZN Acetate & NaOH (>9) | BP4B-125 mL Plastic NaOH (pH > 12) (Cl-) | WGFU-Wide-mouthed Glass jar Unpreserved | AG1U-1 liter Amber Unpreserved (N/A) (Cl-) | AG1H-1 liter Amber HCl (pH < 2) | AG3U-250 mL Amber Unpreserved (N/A) (Cl-) | AG1S-1 liter Amber H2SO4 (pH < 2) | AG3S-250 mL Amber H2SO4 (pH < 2) | AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-) | DG9H-40 mL VOA HCl (N/A) | VG9T-40 mL VOA Na2SO3 (N/A) | VG9U-40 mL VOA Unpreserved (N/A) | DG9P-40 mL VOA H3PO4 (N/A) | VOAK (3 vials per kit)-5035 kit (N/A) | V/GK (3 vials per kit)-VPH/Gas kit (N/A) | SP5T-125 mL Sterile Plastic (N/A - lab) | SP2T-250 mL Sterile Plastic (N/A - lab) |  | BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7) | AG6U-100 mL Amber Unpreserved vials (N/A) | VSGU-20 mL Scintillation vials (N/A) | DG9U-40 mL Amber Unpreserved vials (N/A) |  |  |
|-------|---|---------------------------------------|---------------------------------------|--|--|-----------------------------------|--|--|---|--|---------------------------------|---|-----------------------------------|----------------------------------|--|--------------------------|-----------------------------|----------------------------------|----------------------------|---------------------------------------|--|---|---|--|---|---|--------------------------------------|--|--|--|
| 1     |   | 2                                     | 1                                     |  |  | 15                                |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |  |   |   |                                      |  |  |  |
| 2     |   | 2                                     | 1                                     |  |  | 15                                |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |  |   |   |                                      |  |  |  |
| 3     |   |                                       |                                       |  |  | 1                                 |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |  |   |   |                                      |  |  |  |
| 4     |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |  |   |   |                                      |  |  |  |
| 5     |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |  |   |   |                                      |  |  |  |
| 6     |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |  |   |   |                                      |  |  |  |
| 7     |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |  |   |   |                                      |  |  |  |
| 8     |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |  |   |   |                                      |  |  |  |
| 9     |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |  |   |   |                                      |  |  |  |
| 10    |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |  |   |   |                                      |  |  |  |
| 11    |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |  |   |   |                                      |  |  |  |
| 12    |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                             |                                  |                            |                                       |  |   |   |  |   |   |                                      |  |  |  |

**pH Adjustment Log for Preserved Samples**

| Sample ID | Type of Preservative | pH upon receipt | Date preservation adjusted | Time preservation adjusted | Amount of Preservative added | Lot # |
|-----------|----------------------|-----------------|----------------------------|----------------------------|------------------------------|-------|
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |

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).

*Kevin Stephenson*  
GA POWER

**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page **2** of **3**

|  |   |  |   |   |              |
|--|---|--|---|---|--------------|
| <b>Section A</b><br>Required Client Information  |   | <b>Section B</b><br>Required Project Information |   | <b>Section C</b><br>Invoice Information |              |
| Company  | GA Power  | Report To  | Kristen Jurmko  | Attention                               | Southern Co  |
| Address  | 1003 Weatherstone Parkway<br>Woodstock Ga 30188 | Copy To  | Rhonda Quinn  | Company Name                            |              |
| Email To   | Kevin Stephenson@resoluteenv.com                | Purchase Order No                                |   | Address                                 |              |
| Phone  | (678)5489415 Fax                                | Project Name                                     | Plant Bowen Landfill  | Price Quote Reference                   |              |
| Requested Due Date/TAT:  | 10 Day  | Project Number                                   |   | Price Project Manager                   | Nicole Doleo |
|  |   |  |   | Price Profile #                         | 2928         |
| <b>REGULATORY AGENCY</b>   |   |  | <b>Requested Analysis Filtered (Y/N)</b>  |   |              |
| <input type="checkbox"/> NPDES<br><input type="checkbox"/> GROUND WATER<br><input type="checkbox"/> UST<br><input type="checkbox"/> RCRA<br><input type="checkbox"/> OTHER |   |  | <input type="checkbox"/> Metals + State Metals<br><input type="checkbox"/> Cl F SO4<br><input type="checkbox"/> Total/Carb/B-carb Alk<br><input type="checkbox"/> TDS |   |              |
| Site Location STATE: GA  |   |  | Residual Chlorine (Y/N)   |   |              |

| ITEM # | Valid Matrix Codes<br>Drinking Water<br>WATER<br>WASTE WATER<br>PRODUCT<br>SOLID/SLURRY<br>SIL<br>WET<br>MUD<br>OTHER<br>TISSUE | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives |      |             |                                |                  |     |      | Analysis Test | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No./Lab I.D. |
|--------|---|---------------------------------------|-----------------------------|-----------|------|---------------------------|-----------------|---------------|------|-------------|--------------------------------|------------------|-----|------|---------------|-----------------------------------|-------------------------|---------------------------|
|        |   |                                       |                             | DATE      | TIME |                           |                 | DATE          | TIME | Unpreserved | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HCl | NaOH |               |                                   |                         |                           |
| 1      | -GWA-10   |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |      |               |                                   |                         |                           |
| 2      | -GWA-10R  |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |      |               |                                   |                         |                           |
| 3      | -GWA-11   |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |      |               |                                   |                         |                           |
| 4      | -GWA-11R  |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |      |               |                                   |                         |                           |
| 5      | -GWA-12   |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |      |               |                                   |                         |                           |
| 6      | -GWA-12R  |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |      |               |                                   |                         |                           |
| 7      | -GWA-13RZ   |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |      |               |                                   |                         |                           |
| 8      | -GWA-14Z  |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |      |               |                                   |                         |                           |
| 9      | -GWA-15Z  |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |      |               |                                   |                         |                           |
| 10     | -GWA-15R  |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |      |               |                                   |                         |                           |
| 11     | -GWA-50   |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |      |               |                                   |                         |                           |
| 12     | -GWA-50R  |                                       |                             |           |      |                           |                 |               |      |             |                                |                  |     |      |               |                                   |                         |                           |

**ADDITIONAL COMMENTS**  
State Metals include Sb, Ar, Ba, Be, Cd, Ca, Cr, Cu, Pb, Ni, Sr, Ag, Tl, V, Zn, Co

RELINQUISHED BY / AFFILIATION: *Kevin Stephenson* 2/18/22  
DATE: 2/18/22  
TIME: 11:56

ACCEPTED BY / AFFILIATION: *Angela* 2/18/22  
DATE: 2/18/22  
TIME: 09:58

**SAMPLER NAME AND SIGNATURE**  
PRINT Name of SAMPLER: Kevin Stephenson, William Locker  
SIGNATURE of SAMPLER: *Kevin Stephenson*  
DATE Signed (MM/DD/YYYY): 2/17/22

Temp in °C: \_\_\_\_\_  
Received on Ice (Y/N): \_\_\_\_\_  
Custody Sealed Cooler (Y/N): \_\_\_\_\_  
Samples Intact (Y/N): \_\_\_\_\_



*Kevin Stephenson*

**CHAIN-OF-CUSTODY / Analytical Request Document**  
 The Chain of Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: **3** of **3**

|  |  |  |  |   |               |
|--|--|--|--|---|---------------|
| <b>Section A</b><br>Required Client Information  |  | <b>Section B</b><br>Required Project Information |  | <b>Section C</b><br>Invoice Information |               |
| Company  | GA Power   | Report To  | Kristen Juniko                                 | Attention                               | Southern Co   |
| Address  | 1003 Weatherstone Parkway<br>Woodstock, Ga 30188 | Copy To  | Rhonda Quinn                                   | Company Name                            |               |
| Email To   | Kevin Stephenson@Resoluteenv.com                 | Purchase Order No                                |  | Address                                 |               |
| Phone  | (678)5489415                                     | Project Name                                     | Plant Bowen Landfill                           | Price Quote Reference                   |               |
| Requested Due Date/TAT:  | 10 Day   | Project Number                                   |  | Price Project Manager                   | Nicole D'oleo |
|  |  |  |  | Price Project #                         | 2928          |
| <b>REGULATORY AGENCY</b>   |  |  | <b>Requested Analysis Filled (Y/N)</b>         |   |               |
| NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> |  |  | Metals + Semi Metals <input type="checkbox"/>  |   |               |
| UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>                    |  |  | CI F SO4 <input type="checkbox"/>              |   |               |
| Site Location: <u>GA</u>   |  |  | Total/Carb/Bicarb Alk <input type="checkbox"/> |   |               |
|  |  |  | TDS <input type="checkbox"/>                   |   |               |

| ITEM # | Section D<br>Required Client Information | Valid Matrix Codes<br>MATRIX CODE<br>DATE TIME | COLLECTED |      | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives |      |             |                                |                  |     | Analysis Test | Requested Analysis Filled (Y/N) | Residual Chlorine (Y/N) | Page Project No./ Lab I.D. |
|--------|--|--|-----------|------|---------------------------|-----------------|---------------|------|-------------|--------------------------------|------------------|-----|---------------|---------------------------------|-------------------------|----------------------------|
|        |  |  | DATE      | TIME |                           |                 | DATE          | TIME | Unpreserved | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HCl |               |                                 |                         |                            |
| 1      | -BUP-4                                   |  |           |      |                           |                 |               |      |             |                                |                  |     |               |                                 |                         |                            |
| 2      | -BUP-2                                   |  |           |      |                           |                 |               |      |             |                                |                  |     |               |                                 |                         |                            |
| 3      | -BUP-3                                   |  |           |      |                           |                 |               |      |             |                                |                  |     |               |                                 |                         |                            |
| 4      | -FB-6                                    |  | 2/17/22   | 1340 |                           | 4               | 3             | 1    |             |                                |                  |     |               |                                 |                         |                            |
| 5      | -FB-                                     |  |           |      |                           |                 |               |      |             |                                |                  |     |               |                                 |                         |                            |
| 6      | -FB-                                     |  |           |      |                           |                 |               |      |             |                                |                  |     |               |                                 |                         |                            |
| 7      | -FB-                                     |  |           |      |                           |                 |               |      |             |                                |                  |     |               |                                 |                         |                            |
| 8      | -FB-                                     |  |           |      |                           |                 |               |      |             |                                |                  |     |               |                                 |                         |                            |
| 9      | -FB-                                     |  |           |      |                           |                 |               |      |             |                                |                  |     |               |                                 |                         |                            |
| 10     |  |  |           |      |                           |                 |               |      |             |                                |                  |     |               |                                 |                         |                            |
| 11     |  |  |           |      |                           |                 |               |      |             |                                |                  |     |               |                                 |                         |                            |
| 12     |  |  |           |      |                           |                 |               |      |             |                                |                  |     |               |                                 |                         |                            |

|  |  |  |  |  |  |                                  |  |                              |  |                                    |  |
|--|--|--|--|--|--|----------------------------------|--|------------------------------|--|------------------------------------|--|
| <b>RELIQUISHED BY / AFFILIATION</b>                            |  | <b>DATE</b>  |  | <b>TIME</b>                            |  | <b>ACCEPTED BY / AFFILIATION</b> |  | <b>DATE</b>                  |  | <b>TIME</b>                        |  |
| <i>Kevin Stephenson - Invt</i>                                 |  | 2/18/22  |  | 0852                                   |  | <i>Kevin Stephenson - Invt</i>   |  | 2/17/22                      |  | 0952                               |  |
| <b>SAMPLER NAME AND SIGNATURE</b>                              |  | <b>DATE SIGNED (MM/DD/YY)</b>                        |  | <b>TIME</b>                            |  | <b>DATE SIGNED (MM/DD/YY)</b>    |  | <b>TIME</b>                  |  | <b>TEMP IN °C</b>                  |  |
| <i>Kevin Stephenson</i>  |  | 2/18/22  |  | 11:50                                  |  | <i>William Leaber</i>            |  | 2/17/22                      |  |                                    |  |
| <b>PRINT NAME OF SAMPLER:</b> Kevin Stephenson, William Leaber |  | <b>SIGNATURE OF SAMPLER:</b> <i>Kevin Stephenson</i> |  | <b>DATE SIGNED (MM/DD/YY):</b> 2/17/22 |  | <b>TEMP IN °C</b>                |  | <b>RECEIVED ON ICE (Y/N)</b> |  | <b>CUSTODY SEALED COOLER (Y/N)</b> |  |
|  |  |  |  |  |  |                                  |  |                              |  |                                    |  |

April 19, 2022

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92597519

Dear Joju Abraham:

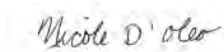
Enclosed are the analytical results for sample(s) received by the laboratory on April 06, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Minneapolis

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

Sincerely,



Nicole D'Oleo  
nicole.d'oleo@pacelabs.com  
(704)875-9092  
Project Manager

Enclosures

cc: Michelle Barker, WOOD E&I  
Kristen Jurinko  
Ms. Lauren Petty, Southern Company  
Rhonda Quinn, WOOD E&I  
Greg Wrenn, WOOD E&I



## REPORT OF LABORATORY ANALYSIS

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

## CERTIFICATIONS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92597519

### Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414  
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab

A2LA Certification #: 2926.01\*  
Alabama Certification #: 40770  
Alaska Contaminated Sites Certification #: 17-009\*  
Alaska DW Certification #: MN00064  
Arizona Certification #: AZ0014\*  
Arkansas DW Certification #: MN00064  
Arkansas WW Certification #: 88-0680  
California Certification #: 2929  
Colorado Certification #: MN00064  
Connecticut Certification #: PH-0256  
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137  
Florida Certification #: E87605\*  
Georgia Certification #: 959  
Hawaii Certification #: MN00064  
Idaho Certification #: MN00064  
Illinois Certification #: 200011  
Indiana Certification #: C-MN-01  
Iowa Certification #: 368  
Kansas Certification #: E-10167  
Kentucky DW Certification #: 90062  
Kentucky WW Certification #: 90062  
Louisiana DEQ Certification #: AI-03086\*  
Louisiana DW Certification #: MN00064  
Maine Certification #: MN00064\*  
Maryland Certification #: 322  
Michigan Certification #: 9909  
Minnesota Certification #: 027-053-137\*  
Minnesota Dept of Ag Approval: via MN 027-053-137  
Minnesota Petrofund Registration #: 1240\*  
Mississippi Certification #: MN00064

Missouri Certification #: 10100  
Montana Certification #: CERT0092  
Nebraska Certification #: NE-OS-18-06  
Nevada Certification #: MN00064  
New Hampshire Certification #: 2081\*  
New Jersey Certification #: MN002  
New York Certification #: 11647\*  
North Carolina DW Certification #: 27700  
North Carolina WW Certification #: 530  
North Dakota Certification (A2LA) #: R-036  
North Dakota Certification (MN) #: R-036  
Ohio DW Certification #: 41244  
Ohio VAP Certification (1700) #: CL101  
Ohio VAP Certification (1800) #: CL110\*  
Oklahoma Certification #: 9507\*  
Oregon Primary Certification #: MN300001  
Oregon Secondary Certification #: MN200001\*  
Pennsylvania Certification #: 68-00563\*  
Puerto Rico Certification #: MN00064  
South Carolina Certification #:74003001  
Tennessee Certification #: TN02818  
Texas Certification #: T104704192\*  
Utah Certification #: MN00064\*  
Vermont Certification #: VT-027053137  
Virginia Certification #: 460163\*  
Washington Certification #: C486\*  
West Virginia DEP Certification #: 382  
West Virginia DW Certification #: 9952 C  
Wisconsin Certification #: 999407970  
Wyoming UST Certification #: via A2LA 2926.01  
USDA Permit #: P330-19-00208  
\*Please Note: Applicable air certifications are denoted with an asterisk (\*).

### Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006  
9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001  
South Carolina Drinking Water Cert. #: 99006003  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Louisiana DoH Drinking Water #: LA029  
Virginia/VELAP Certification #: 460221

### Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712  
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

### Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812  
North Carolina Certification #: 381

## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92597519

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**Pace Analytical Services Peachtree Corners**  
South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92597519

---

| Lab ID      | Sample ID | Matrix | Date Collected | Date Received  |
|-------------|-----------|--------|----------------|----------------|
| 92597519001 | GWA-36A   | Water  | 04/06/22 11:46 | 04/06/22 14:10 |
| 92597519002 | FB-1      | Water  | 04/06/22 12:20 | 04/06/22 14:10 |

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|------------------------|----------|-------------------|------------|
| 92597519001 | GWA-36A   | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2320B               | AB3      | 3                 | PASI-M     |
|             |           | SM 2540C-2011          | ZMC      | 1                 | PASI-A     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |
| 92597519002 | FB-1      | EPA 6010D              | KH       | 5                 | PASI-GA    |
|             |           | EPA 6020B              | CW1      | 15                | PASI-GA    |
|             |           | EPA 7470A              | VB       | 1                 | PASI-GA    |
|             |           | SM 2320B               | AB3      | 3                 | PASI-M     |
|             |           | SM 2540C-2011          | ZMC      | 1                 | PASI-A     |
|             |           | EPA 300.0 Rev 2.1 1993 | CDC      | 3                 | PASI-A     |

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

PASI-M = Pace Analytical Services - Minneapolis

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

| Lab Sample ID<br>Method | Client Sample ID<br>Parameters               | Result       | Units      | Report Limit | Analyzed       | Qualifiers |
|-------------------------|--|--------------|------------|--------------|----------------|------------|
| <b>92597519001</b>      | <b>GWA-36A</b>                               |              |            |              |                |            |
|                         | Performed by                                 | CUSTOME<br>R |            |              | 04/06/22 15:49 |            |
|                         | pH   | 6.82         | Std. Units |              | 04/06/22 15:49 |            |
| EPA 6010D               | Zinc   | 0.012J       | mg/L       | 0.020        | 04/07/22 21:01 |            |
| EPA 6010D               | Potassium                                    | 1.6          | mg/L       | 0.20         | 04/07/22 21:01 |            |
| EPA 6010D               | Sodium                                       | 1.2          | mg/L       | 1.0          | 04/07/22 21:01 |            |
| EPA 6010D               | Calcium                                      | 48.7         | mg/L       | 1.0          | 04/07/22 21:01 | M1         |
| EPA 6010D               | Magnesium                                    | 24.4         | mg/L       | 0.050        | 04/07/22 21:01 | M1         |
| EPA 6020B               | Arsenic                                      | 0.0018J      | mg/L       | 0.0050       | 04/11/22 17:06 |            |
| EPA 6020B               | Barium                                       | 0.041        | mg/L       | 0.0050       | 04/11/22 17:06 |            |
| EPA 6020B               | Beryllium                                    | 0.000061J    | mg/L       | 0.00050      | 04/11/22 17:06 |            |
| EPA 6020B               | Boron  | 0.032J       | mg/L       | 0.040        | 04/11/22 17:06 |            |
| SM 2320B                | Alkalinity, Total as CaCO <sub>3</sub>       | 192          | mg/L       | 5.0          | 04/16/22 12:20 |            |
| SM 2320B                | Alkalinity, Bicarbonate (CaCO <sub>3</sub> ) | 192          | mg/L       | 5.0          | 04/16/22 12:20 |            |
| SM 2540C-2011           | Total Dissolved Solids                       | 238          | mg/L       | 25.0         | 04/07/22 15:39 |            |
| EPA 300.0 Rev 2.1 1993  | Chloride                                     | 2.4          | mg/L       | 1.0          | 04/08/22 06:55 |            |
| EPA 300.0 Rev 2.1 1993  | Sulfate                                      | 21.2         | mg/L       | 1.0          | 04/08/22 06:55 |            |
| <b>92597519002</b>      | <b>FB-1</b>                                  |              |            |              |                |            |
| EPA 6020B               | Antimony                                     | 0.0013J      | mg/L       | 0.0030       | 04/11/22 17:30 |            |
| EPA 6020B               | Arsenic                                      | 0.0016J      | mg/L       | 0.0050       | 04/11/22 17:30 |            |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92597519

| Sample: GWA-36A      Lab ID: 92597519001      Collected: 04/06/22 11:46      Received: 04/06/22 14:10      Matrix: Water |           |            |              |          |    |                |                |           |      |
|--|-----------|------------|--------------|----------|----|----------------|----------------|-----------|------|
| Parameters   | Results   | Units      | Report Limit | MDL      | DF | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |           |            |              |          |    |                |                |           |      |
| Analytical Method: Pace Analytical Services - Charlotte  |           |            |              |          |    |                |                |           |      |
| Performed by   | CUSTOMER  |            |              |          | 1  |                | 04/06/22 15:49 |           |      |
| pH   | 6.82      | Std. Units |              |          | 1  |                | 04/06/22 15:49 |           |      |
| <b>6010D ATL ICP</b>   |           |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 6010D      Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA      |           |            |              |          |    |                |                |           |      |
| Zinc   | 0.012J    | mg/L       | 0.020        | 0.0085   | 1  | 04/07/22 10:57 | 04/07/22 21:01 | 7440-66-6 |      |
| Potassium  | 1.6       | mg/L       | 0.20         | 0.15     | 1  | 04/07/22 10:57 | 04/07/22 21:01 | 7440-09-7 |      |
| Sodium   | 1.2       | mg/L       | 1.0          | 0.58     | 1  | 04/07/22 10:57 | 04/07/22 21:01 | 7440-23-5 |      |
| Calcium  | 48.7      | mg/L       | 1.0          | 0.12     | 1  | 04/07/22 10:57 | 04/07/22 21:01 | 7440-70-2 | M1   |
| Magnesium  | 24.4      | mg/L       | 0.050        | 0.012    | 1  | 04/07/22 10:57 | 04/07/22 21:01 | 7439-95-4 | M1   |
| <b>6020 MET ICPMS</b>  |           |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 6020B      Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA      |           |            |              |          |    |                |                |           |      |
| Antimony   | ND        | mg/L       | 0.0030       | 0.00078  | 1  | 04/11/22 12:02 | 04/11/22 17:06 | 7440-36-0 |      |
| Arsenic  | 0.0018J   | mg/L       | 0.0050       | 0.0011   | 1  | 04/11/22 12:02 | 04/11/22 17:06 | 7440-38-2 |      |
| Barium   | 0.041     | mg/L       | 0.0050       | 0.00067  | 1  | 04/11/22 12:02 | 04/11/22 17:06 | 7440-39-3 |      |
| Beryllium  | 0.000061J | mg/L       | 0.00050      | 0.000054 | 1  | 04/11/22 12:02 | 04/11/22 17:06 | 7440-41-7 |      |
| Boron  | 0.032J    | mg/L       | 0.040        | 0.0086   | 1  | 04/11/22 12:02 | 04/11/22 17:06 | 7440-42-8 |      |
| Cadmium  | ND        | mg/L       | 0.00050      | 0.00011  | 1  | 04/11/22 12:02 | 04/11/22 17:06 | 7440-43-9 |      |
| Chromium   | ND        | mg/L       | 0.0050       | 0.0011   | 1  | 04/11/22 12:02 | 04/11/22 17:06 | 7440-47-3 |      |
| Cobalt   | ND        | mg/L       | 0.0050       | 0.00039  | 1  | 04/11/22 12:02 | 04/11/22 17:06 | 7440-48-4 |      |
| Copper   | ND        | mg/L       | 0.0050       | 0.00050  | 1  | 04/11/22 12:02 | 04/11/22 17:06 | 7440-50-8 |      |
| Lead   | ND        | mg/L       | 0.0010       | 0.00089  | 1  | 04/11/22 12:02 | 04/11/22 17:06 | 7439-92-1 |      |
| Nickel   | ND        | mg/L       | 0.0050       | 0.00071  | 1  | 04/11/22 12:02 | 04/11/22 17:06 | 7440-02-0 |      |
| Selenium   | ND        | mg/L       | 0.0050       | 0.0014   | 1  | 04/11/22 12:02 | 04/11/22 17:06 | 7782-49-2 |      |
| Silver   | ND        | mg/L       | 0.0050       | 0.00044  | 1  | 04/11/22 12:02 | 04/11/22 17:06 | 7440-22-4 |      |
| Thallium   | ND        | mg/L       | 0.0010       | 0.00018  | 1  | 04/11/22 12:02 | 04/11/22 17:06 | 7440-28-0 |      |
| Vanadium   | ND        | mg/L       | 0.010        | 0.0019   | 1  | 04/11/22 12:02 | 04/11/22 17:06 | 7440-62-2 |      |
| <b>7470 Mercury</b>  |           |            |              |          |    |                |                |           |      |
| Analytical Method: EPA 7470A      Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA      |           |            |              |          |    |                |                |           |      |
| Mercury  | ND        | mg/L       | 0.00020      | 0.00013  | 1  | 04/18/22 10:15 | 04/18/22 13:15 | 7439-97-6 |      |
| <b>2320B Alkalinity</b>  |           |            |              |          |    |                |                |           |      |
| Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |           |            |              |          |    |                |                |           |      |
| Alkalinity, Total as CaCO <sub>3</sub>   | 192       | mg/L       | 5.0          | 1.8      | 1  |                | 04/16/22 12:20 |           |      |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> )   | 192       | mg/L       | 5.0          | 1.8      | 1  |                | 04/16/22 12:20 |           |      |
| Alkalinity, Carbonate (CaCO <sub>3</sub> )   | ND        | mg/L       | 5.0          | 1.8      | 1  |                | 04/16/22 12:20 |           |      |
| <b>2540C Total Dissolved Solids</b>  |           |            |              |          |    |                |                |           |      |
| Analytical Method: SM 2540C-2011<br>Pace Analytical Services - Asheville   |           |            |              |          |    |                |                |           |      |
| Total Dissolved Solids   | 238       | mg/L       | 25.0         | 25.0     | 1  |                | 04/07/22 15:39 |           |      |

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

**Sample: GWA-36A**      **Lab ID: 92597519001**      Collected: 04/06/22 11:46      Received: 04/06/22 14:10      Matrix: Water

| Parameters                                | Results | Units | Report |       |    | Prepared | Analyzed       | CAS No.    | Qual |
|---|---------|-------|--------|-------|----|----------|----------------|------------|------|
|   |         |       | Limit  | MDL   | DF |          |                |            |      |
| <b>300.0 IC Anions 28 Days</b>            |         |       |        |       |    |          |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993 |         |       |        |       |    |          |                |            |      |
| Pace Analytical Services - Asheville      |         |       |        |       |    |          |                |            |      |
| Chloride                                  | 2.4     | mg/L  | 1.0    | 0.60  | 1  |          | 04/08/22 06:55 | 16887-00-6 |      |
| Fluoride                                  | ND      | mg/L  | 0.10   | 0.050 | 1  |          | 04/08/22 06:55 | 16984-48-8 |      |
| Sulfate                                   | 21.2    | mg/L  | 1.0    | 0.50  | 1  |          | 04/08/22 06:55 | 14808-79-8 |      |

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### ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92597519

| Sample: <b>FB-1</b>                          |                | Lab ID: <b>92597519002</b>   |         | Collected: 04/06/22 12:20 | Received: 04/06/22 14:10 | Matrix: Water  |                |            |      |  |
|--|----------------|--|---------|---------------------------|--------------------------|----------------|----------------|------------|------|--|
| Parameters                                   | Results        | Units  | Report  |                           |                          | Prepared       | Analyzed       | CAS No.    | Qual |  |
|  |                |  | Limit   | MDL                       | DF                       |                |                |            |      |  |
| <b>6010D ATL ICP</b>                         |                | Analytical Method: EPA 6010D Preparation Method: EPA 3010A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |  |
| Zinc   | ND             | mg/L   | 0.020   | 0.0085                    | 1                        | 04/07/22 10:57 | 04/07/22 21:21 | 7440-66-6  |      |  |
| Potassium                                    | ND             | mg/L   | 0.20    | 0.15                      | 1                        | 04/07/22 10:57 | 04/07/22 21:21 | 7440-09-7  |      |  |
| Sodium                                       | ND             | mg/L   | 1.0     | 0.58                      | 1                        | 04/07/22 10:57 | 04/07/22 21:21 | 7440-23-5  |      |  |
| Calcium                                      | ND             | mg/L   | 1.0     | 0.12                      | 1                        | 04/07/22 10:57 | 04/07/22 21:21 | 7440-70-2  |      |  |
| Magnesium                                    | ND             | mg/L   | 0.050   | 0.012                     | 1                        | 04/07/22 10:57 | 04/07/22 21:21 | 7439-95-4  |      |  |
| <b>6020 MET ICPMS</b>                        |                | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |  |
| Antimony                                     | <b>0.0013J</b> | mg/L   | 0.0030  | 0.00078                   | 1                        | 04/11/22 12:02 | 04/11/22 17:30 | 7440-36-0  |      |  |
| Arsenic                                      | <b>0.0016J</b> | mg/L   | 0.0050  | 0.0011                    | 1                        | 04/11/22 12:02 | 04/11/22 17:30 | 7440-38-2  |      |  |
| Barium                                       | ND             | mg/L   | 0.0050  | 0.00067                   | 1                        | 04/11/22 12:02 | 04/11/22 17:30 | 7440-39-3  |      |  |
| Beryllium                                    | ND             | mg/L   | 0.00050 | 0.000054                  | 1                        | 04/11/22 12:02 | 04/11/22 17:30 | 7440-41-7  |      |  |
| Boron  | ND             | mg/L   | 0.040   | 0.0086                    | 1                        | 04/11/22 12:02 | 04/11/22 17:30 | 7440-42-8  |      |  |
| Cadmium                                      | ND             | mg/L   | 0.00050 | 0.00011                   | 1                        | 04/11/22 12:02 | 04/11/22 17:30 | 7440-43-9  |      |  |
| Chromium                                     | ND             | mg/L   | 0.0050  | 0.0011                    | 1                        | 04/11/22 12:02 | 04/11/22 17:30 | 7440-47-3  |      |  |
| Cobalt                                       | ND             | mg/L   | 0.0050  | 0.00039                   | 1                        | 04/11/22 12:02 | 04/11/22 17:30 | 7440-48-4  |      |  |
| Copper                                       | ND             | mg/L   | 0.0050  | 0.00050                   | 1                        | 04/11/22 12:02 | 04/11/22 17:30 | 7440-50-8  |      |  |
| Lead   | ND             | mg/L   | 0.0010  | 0.00089                   | 1                        | 04/11/22 12:02 | 04/11/22 17:30 | 7439-92-1  |      |  |
| Nickel                                       | ND             | mg/L   | 0.0050  | 0.00071                   | 1                        | 04/11/22 12:02 | 04/11/22 17:30 | 7440-02-0  |      |  |
| Selenium                                     | ND             | mg/L   | 0.0050  | 0.0014                    | 1                        | 04/11/22 12:02 | 04/11/22 17:30 | 7782-49-2  |      |  |
| Silver                                       | ND             | mg/L   | 0.0050  | 0.00044                   | 1                        | 04/11/22 12:02 | 04/11/22 17:30 | 7440-22-4  |      |  |
| Thallium                                     | ND             | mg/L   | 0.0010  | 0.00018                   | 1                        | 04/11/22 12:02 | 04/11/22 17:30 | 7440-28-0  |      |  |
| Vanadium                                     | ND             | mg/L   | 0.010   | 0.0019                    | 1                        | 04/11/22 12:02 | 04/11/22 17:30 | 7440-62-2  |      |  |
| <b>7470 Mercury</b>                          |                | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |         |                           |                          |                |                |            |      |  |
| Mercury                                      | ND             | mg/L   | 0.00020 | 0.00013                   | 1                        | 04/18/22 10:15 | 04/18/22 13:18 | 7439-97-6  |      |  |
| <b>2320B Alkalinity</b>                      |                | Analytical Method: SM 2320B<br>Pace Analytical Services - Minneapolis  |         |                           |                          |                |                |            |      |  |
| Alkalinity, Total as CaCO <sub>3</sub>       | ND             | mg/L   | 5.0     | 1.8                       | 1                        |                | 04/16/22 12:26 |            |      |  |
| Alkalinity, Bicarbonate (CaCO <sub>3</sub> ) | ND             | mg/L   | 5.0     | 1.8                       | 1                        |                | 04/16/22 12:26 |            |      |  |
| Alkalinity, Carbonate (CaCO <sub>3</sub> )   | ND             | mg/L   | 5.0     | 1.8                       | 1                        |                | 04/16/22 12:26 |            |      |  |
| <b>2540C Total Dissolved Solids</b>          |                | Analytical Method: SM 2540C-2011<br>Pace Analytical Services - Asheville                                       |         |                           |                          |                |                |            |      |  |
| Total Dissolved Solids                       | ND             | mg/L   | 25.0    | 25.0                      | 1                        |                | 04/07/22 15:39 |            |      |  |
| <b>300.0 IC Anions 28 Days</b>               |                | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |         |                           |                          |                |                |            |      |  |
| Chloride                                     | ND             | mg/L   | 1.0     | 0.60                      | 1                        |                | 04/08/22 07:11 | 16887-00-6 |      |  |
| Fluoride                                     | ND             | mg/L   | 0.10    | 0.050                     | 1                        |                | 04/08/22 07:11 | 16984-48-8 |      |  |
| Sulfate                                      | ND             | mg/L   | 1.0     | 0.50                      | 1                        |                | 04/08/22 07:11 | 14808-79-8 |      |  |

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92597519

QC Batch: 690039      Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A      Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92597519001, 92597519002

METHOD BLANK: 3605646      Matrix: Water  
Associated Lab Samples: 92597519001, 92597519002

| Parameter | Units | Blank Result | Reporting Limit | MDL    | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|--------|----------------|------------|
| Calcium   | mg/L  | ND           | 1.0             | 0.12   | 04/07/22 20:37 |            |
| Magnesium | mg/L  | ND           | 0.050           | 0.012  | 04/07/22 20:37 |            |
| Potassium | mg/L  | ND           | 0.20            | 0.15   | 04/07/22 20:37 |            |
| Sodium    | mg/L  | ND           | 1.0             | 0.58   | 04/07/22 20:37 |            |
| Zinc      | mg/L  | ND           | 0.020           | 0.0085 | 04/07/22 20:37 |            |

LABORATORY CONTROL SAMPLE: 3605647

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Calcium   | mg/L  | 1           | 1.0        | 102       | 80-120       |            |
| Magnesium | mg/L  | 1           | 1.1        | 106       | 80-120       |            |
| Potassium | mg/L  | 1           | 1.0        | 103       | 80-120       |            |
| Sodium    | mg/L  | 1           | 1.0        | 103       | 80-120       |            |
| Zinc      | mg/L  | 1           | 1.0        | 104       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605728      3605729

| Parameter | Units | MS                 |             | MSD         |       | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|-------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92597519001 Result | Spike Conc. | Spike Conc. | Conc. |           |            |          |           |              |     |         |      |
| Calcium   | mg/L  | 48.7               | 1           | 1           | 48.4  | 49.3      | -27        | 68       | 75-125    | 2            | 20  | M1      |      |
| Magnesium | mg/L  | 24.4               | 1           | 1           | 24.7  | 25.4      | 30         | 102      | 75-125    | 3            | 20  | M1      |      |
| Potassium | mg/L  | 1.6                | 1           | 1           | 2.6   | 2.6       | 99         | 101      | 75-125    | 1            | 20  |         |      |
| Sodium    | mg/L  | 1.2                | 1           | 1           | 2.2   | 2.2       | 103        | 105      | 75-125    | 1            | 20  |         |      |
| Zinc      | mg/L  | 0.012J             | 1           | 1           | 1.1   | 1.1       | 105        | 105      | 75-125    | 1            | 20  |         |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92597519

|                            |  |
|----------------------------|--|
| QC Batch: 690695           | Analysis Method: EPA 6020B                                   |
| QC Batch Method: EPA 3005A | Analysis Description: 6020 MET                               |
|                            | Laboratory: Pace Analytical Services - Peachtree Corners, GA |

Associated Lab Samples: 92597519001, 92597519002

METHOD BLANK: 3609206 Matrix: Water

Associated Lab Samples: 92597519001, 92597519002

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Antimony  | mg/L  | ND           | 0.0030          | 0.00078  | 04/11/22 16:54 |            |
| Arsenic   | mg/L  | ND           | 0.0050          | 0.0011   | 04/11/22 16:54 |            |
| Barium    | mg/L  | ND           | 0.0050          | 0.00067  | 04/11/22 16:54 |            |
| Beryllium | mg/L  | ND           | 0.00050         | 0.000054 | 04/11/22 16:54 |            |
| Boron     | mg/L  | ND           | 0.040           | 0.0086   | 04/11/22 16:54 |            |
| Cadmium   | mg/L  | ND           | 0.00050         | 0.00011  | 04/11/22 16:54 |            |
| Chromium  | mg/L  | ND           | 0.0050          | 0.0011   | 04/11/22 16:54 |            |
| Cobalt    | mg/L  | ND           | 0.0050          | 0.00039  | 04/11/22 16:54 |            |
| Copper    | mg/L  | ND           | 0.0050          | 0.00050  | 04/11/22 16:54 |            |
| Lead      | mg/L  | ND           | 0.0010          | 0.00089  | 04/11/22 16:54 |            |
| Nickel    | mg/L  | ND           | 0.0050          | 0.00071  | 04/11/22 16:54 |            |
| Selenium  | mg/L  | ND           | 0.0050          | 0.0014   | 04/11/22 16:54 |            |
| Silver    | mg/L  | ND           | 0.0050          | 0.00044  | 04/11/22 16:54 |            |
| Thallium  | mg/L  | ND           | 0.0010          | 0.00018  | 04/11/22 16:54 |            |
| Vanadium  | mg/L  | ND           | 0.010           | 0.0019   | 04/11/22 16:54 |            |

LABORATORY CONTROL SAMPLE: 3609207

| 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         | 0.094      | 94        | 80-120       |            |
| Barium    | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Beryllium | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |
| Boron     | mg/L  | 1           | 1.1        | 105       | 80-120       |            |
| Cadmium   | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |
| Chromium  | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Cobalt    | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |
| Copper    | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |
| Lead      | mg/L  | 0.1         | 0.093      | 93        | 80-120       |            |
| Nickel    | mg/L  | 0.1         | 0.095      | 95        | 80-120       |            |
| Selenium  | mg/L  | 0.1         | 0.094      | 94        | 80-120       |            |
| Silver    | mg/L  | 0.1         | 0.099      | 99        | 80-120       |            |
| Thallium  | mg/L  | 0.1         | 0.093      | 93        | 80-120       |            |
| Vanadium  | mg/L  | 0.1         | 0.096      | 96        | 80-120       |            |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

| Parameter | Units | 3609208               |                      | 3609209               |              | MS<br>Result | MSD<br>Result | MS<br>% Rec | MSD<br>% Rec | % Rec<br>Limits | Max<br>RPD | RPD | Qual |
|-----------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|-----|------|
|           |       | 92597519001<br>Result | MS<br>Spike<br>Conc. | MSD<br>Spike<br>Conc. | MS<br>Result |              |               |             |              |                 |            |     |      |
| Antimony  | mg/L  | ND                    | 0.1                  | 0.1                   | 0.099        | 0.10         | 99            | 100         | 75-125       | 1               | 20         |     |      |
| Arsenic   | mg/L  | 0.0018J               | 0.1                  | 0.1                   | 0.096        | 0.096        | 95            | 94          | 75-125       | 0               | 20         |     |      |
| Barium    | mg/L  | 0.041                 | 0.1                  | 0.1                   | 0.14         | 0.14         | 100           | 100         | 75-125       | 0               | 20         |     |      |
| Beryllium | mg/L  | 0.000061J             | 0.1                  | 0.1                   | 0.10         | 0.11         | 103           | 111         | 75-125       | 7               | 20         |     |      |
| Boron     | mg/L  | 0.032J                | 1                    | 1                     | 1.1          | 1.2          | 102           | 112         | 75-125       | 9               | 20         |     |      |
| Cadmium   | mg/L  | ND                    | 0.1                  | 0.1                   | 0.095        | 0.096        | 95            | 96          | 75-125       | 1               | 20         |     |      |
| Chromium  | mg/L  | ND                    | 0.1                  | 0.1                   | 0.10         | 0.10         | 100           | 100         | 75-125       | 0               | 20         |     |      |
| Cobalt    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.097        | 0.098        | 97            | 98          | 75-125       | 1               | 20         |     |      |
| Copper    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.095        | 0.097        | 94            | 96          | 75-125       | 2               | 20         |     |      |
| Lead      | mg/L  | ND                    | 0.1                  | 0.1                   | 0.094        | 0.096        | 94            | 96          | 75-125       | 2               | 20         |     |      |
| Nickel    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.096        | 0.097        | 96            | 97          | 75-125       | 1               | 20         |     |      |
| Selenium  | mg/L  | ND                    | 0.1                  | 0.1                   | 0.094        | 0.096        | 93            | 96          | 75-125       | 3               | 20         |     |      |
| Silver    | mg/L  | ND                    | 0.1                  | 0.1                   | 0.098        | 0.10         | 98            | 100         | 75-125       | 2               | 20         |     |      |
| Thallium  | mg/L  | ND                    | 0.1                  | 0.1                   | 0.094        | 0.095        | 94            | 95          | 75-125       | 1               | 20         |     |      |
| Vanadium  | mg/L  | ND                    | 0.1                  | 0.1                   | 0.10         | 0.10         | 102           | 101         | 75-125       | 1               | 20         |     |      |

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

QC Batch: 691983

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92597519001, 92597519002

METHOD BLANK: 3615683

Matrix: Water

Associated Lab Samples: 92597519001, 92597519002

| Parameter | Units | Blank Result | Reporting Limit | MDL     | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|---------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00020         | 0.00013 | 04/18/22 12:42 |            |

LABORATORY CONTROL SAMPLE: 3615684

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0026     | 102       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3615685 3615686

| Parameter | Units | 3615685        |                 | 3615686   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual  |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|-------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |       |
| Mercury   | mg/L  | ND             | 0.0025          | 0.0024    | 0.0037     | 96       | 148       | 75-125       | 42  | 20      | M1,R1 |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92597519

QC Batch: 809654 Analysis Method: SM 2320B  
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Minneapolis  
Associated Lab Samples: 92597519001, 92597519002

METHOD BLANK: 4296151 Matrix: Water  
Associated Lab Samples: 92597519001, 92597519002

| Parameter                                   | Units | Blank Result | Reporting Limit | MDL | Analyzed       | Qualifiers |
|---|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO <sub>3</sub>      | mg/L  | ND           | 5.0             | 1.8 | 04/16/22 10:19 |            |
| Alkalinity,Bicarbonate (CaCO <sub>3</sub> ) | mg/L  | ND           | 5.0             | 1.8 | 04/16/22 10:19 |            |
| Alkalinity,Carbonate (CaCO <sub>3</sub> )   | mg/L  | ND           | 5.0             | 1.8 | 04/16/22 10:19 |            |

LABORATORY CONTROL SAMPLE & LCSD: 4296152 4296153

| Parameter                              | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|--|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 40          | 43.4       | 43.2        | 109       | 108        | 90-110       | 0   | 20      |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4296154 4296155

| Parameter                              | Units | 10603644007 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|--|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 596                | 40             | 40              | 638       | 638        | 104      | 104       | 80-120       | 0   | 20      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4296156 4296157

| Parameter                              | Units | 10604355001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|--|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Alkalinity, Total as CaCO <sub>3</sub> | mg/L  | 27.3               | 40             | 40              | 67.8      | 68.0       | 101      | 102       | 80-120       | 0   | 20      |      |

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### QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92597519

QC Batch: 689939 Analysis Method: SM 2540C-2011  
QC Batch Method: SM 2540C-2011 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92597519001, 92597519002

METHOD BLANK: 3605276 Matrix: Water  
Associated Lab Samples: 92597519001, 92597519002

| Parameter              | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|------------------------|-------|--------------|-----------------|------|----------------|------------|
| Total Dissolved Solids | mg/L  | ND           | 25.0            | 25.0 | 04/07/22 15:36 |            |

LABORATORY CONTROL SAMPLE: 3605277

| Parameter              | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L  | 250         | 262        | 105       | 90-110       |            |

SAMPLE DUPLICATE: 3605278

| Parameter              | Units | 92597190001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 2310               | 1800       | 25  | 25      | H1         |

SAMPLE DUPLICATE: 3605279

| Parameter              | Units | 92596970004 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L  | 642                | 638        | 1   | 25      |            |

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**QUALITY CONTROL DATA**

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

QC Batch: 690113 Analysis Method: EPA 300.0 Rev 2.1 1993  
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92597519001, 92597519002

METHOD BLANK: 3606393 Matrix: Water

Associated Lab Samples: 92597519001, 92597519002

| Parameter | Units | Blank Result | Reporting Limit | MDL   | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60  | 04/08/22 00:47 |            |
| Fluoride  | mg/L  | ND           | 0.10            | 0.050 | 04/08/22 00:47 |            |
| Sulfate   | mg/L  | ND           | 1.0             | 0.50  | 04/08/22 00:47 |            |

LABORATORY CONTROL SAMPLE: 3606394

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 49.7       | 99        | 90-110       |            |
| Fluoride  | mg/L  | 2.5         | 2.5        | 99        | 90-110       |            |
| Sulfate   | mg/L  | 50          | 48.8       | 98        | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606395 3606396

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92596921010 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | 12.7        | 50     | 50          | 64.6        | 64.6      | 104        | 104      | 90-110    | 0            | 10  |         |      |
| Fluoride  | mg/L  | ND          | 2.5    | 2.5         | 3.0         | 3.0       | 117        | 117      | 90-110    | 0            | 10  | M1      |      |
| Sulfate   | mg/L  | 84.8        | 50     | 50          | 128         | 124       | 86         | 79       | 90-110    | 3            | 10  | M1      |      |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606397 3606398

| Parameter | Units | MS          |        | MSD         |             | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | 92596921017 | Result | Spike Conc. | Spike Conc. |           |            |          |           |              |     |         |      |
| Chloride  | mg/L  | ND          | 50     | 50          | 50.3        | 51.0      | 100        | 102      | 90-110    | 2            | 10  |         |      |
| Fluoride  | mg/L  | ND          | 2.5    | 2.5         | 2.5         | 2.6       | 101        | 102      | 90-110    | 2            | 10  |         |      |
| Sulfate   | mg/L  | ND          | 50     | 50          | 49.5        | 50.4      | 99         | 101      | 90-110    | 2            | 10  |         |      |

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**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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 - 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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

H1 Analysis conducted outside the EPA method holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: BOWEN LF CELLS 3&4  
Pace Project No.: 92597519

| Lab ID      | Sample ID | QC Batch Method        | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|------------------------|----------|-------------------|------------------|
| 92597519001 | GWA-36A   |                        |          |                   |                  |
| 92597519001 | GWA-36A   | EPA 3010A              | 690039   | EPA 6010D         | 690107           |
| 92597519002 | FB-1      | EPA 3010A              | 690039   | EPA 6010D         | 690107           |
| 92597519001 | GWA-36A   | EPA 3005A              | 690695   | EPA 6020B         | 690794           |
| 92597519002 | FB-1      | EPA 3005A              | 690695   | EPA 6020B         | 690794           |
| 92597519001 | GWA-36A   | EPA 7470A              | 691983   | EPA 7470A         | 692272           |
| 92597519002 | FB-1      | EPA 7470A              | 691983   | EPA 7470A         | 692272           |
| 92597519001 | GWA-36A   | SM 2320B               | 809654   |                   |                  |
| 92597519002 | FB-1      | SM 2320B               | 809654   |                   |                  |
| 92597519001 | GWA-36A   | SM 2540C-2011          | 689939   |                   |                  |
| 92597519002 | FB-1      | SM 2540C-2011          | 689939   |                   |                  |
| 92597519001 | GWA-36A   | EPA 300.0 Rev 2.1 1993 | 690113   |                   |                  |
| 92597519002 | FB-1      | EPA 300.0 Rev 2.1 1993 | 690113   |                   |                  |

**REPORT OF LABORATORY ANALYSIS**

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**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: G A Power

Project #:

**WO# : 92597519**



Courier:  Commercial  Fed Ex  Pace  UPS  USPS  Other:  Client

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 4/6/22  
COH

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?  Yes  No  N/A

Thermometer:  IR Gun ID: 083 Type of Ice:  Wet  Blue  None

Cooler Temp: 3.0 Correction Factor: Add/Subtract (°C) +0.2

Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.2

USDA Regulated Soil (  N/A, water sample)  
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

| Chain of Custody Present?                        | Yes                                 | No                                  | N/A                                 | 1.  | Comments/Discrepancy: |
|--|-------------------------------------|-------------------------------------|-------------------------------------|-----|-----------------------|
| Samples Arrived within Hold Time?                | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 2.  |                       |
| Short Hold Time Analysis (<72 hr.)?              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 3.  |                       |
| Rush Turn Around Time Requested?                 | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 4.  |                       |
| Sufficient Volume?                               | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 5.  |                       |
| Correct Containers Used?                         | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 6.  |                       |
| -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"/>            | 7.  |                       |
| Dissolved analysis: Samples Field Filtered?      | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 8.  |                       |
| Sample Labels Match COC?                         | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 9.  |                       |
| -Includes Date/Time/ID/Analysis Matrix: <u>W</u> |                                     |                                     |                                     |     |                       |
| Headspace in VOA Vials (>5-6mm)?                 | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 10. |                       |
| Trip Blank Present?                              | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 11. |                       |
| Trip Blank Custody Seals Present?                | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |     |                       |

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

CLIENT NOTIFICATION/RESOLUTION

Lot ID of split containers:

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_ Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_ Date: \_\_\_\_\_



Document Name:  
Sample Condition Upon Receipt (SCUR)

Document No.:  
F-CAR-CS-033-Rev.08

Document Revised: November 15, 2021  
Page 2 of 2

Issuing Authority:  
Pace Carolinas Quality Office

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

**WO#: 92597519**

PM: NMG

Due Date: 04/20/22

CLIENT: GA-GA Power

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

\*\*Bottom half of box is to list number of bottles

| Item# | BP4U-125 mL Plastic Unpreserved (N/A) (Cl-) | BP3U-250 mL Plastic Unpreserved (N/A) | BP2U-500 mL Plastic Unpreserved (N/A) | BP1U-1 liter Plastic Unpreserved (N/A) | BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-) | BP3N-250 mL plastic HNO3 (pH < 2) | BP4Z-125 mL Plastic 2N Acetate & NaOH (>9) | BP4B-125 mL Plastic NaOH (pH > 12) (Cl-) | WGFLU-Wide-mouthed Glass jar Unpreserved | AG1U-1 liter Amber Unpreserved (N/A) (Cl-) | AG1H-1 liter Amber HCl (pH < 2) | AG3U-250 mL Amber Unpreserved (N/A) (Cl-) | AG1S-1 liter Amber H2SO4 (pH < 2) | AG3S-250 mL Amber H2SO4 (pH < 2) | AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-) | DG9H-40 mL VOA HCl (N/A) | VG9T-40 mL VOA Na2S2O3 (N/A) | VG9U-40 mL VOA Unpreserved (N/A) | DG9P-40 mL VOA H3PO4 (N/A) | VOAK (3 vials per kit)-5035 kit (N/A) | V/GK (3 vials per kit)-VPH/Gas kit (N/A) | SP5T-125 mL Sterile Plastic (N/A - lab) | SP2T-250 mL Sterile Plastic (N/A - lab) | BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7) | AG0U-100 mL Amber Unpreserved vials (N/A) | VSGU-20 mL Scintillation vials (N/A) | DG9U-40 mL Amber Unpreserved vials (N/A) |  |  |
|-------|---|---------------------------------------|---------------------------------------|--|--|-----------------------------------|--|--|--|--|---------------------------------|---|-----------------------------------|----------------------------------|--|--------------------------|------------------------------|----------------------------------|----------------------------|---------------------------------------|--|---|---|---|---|--------------------------------------|--|--|--|
| 1     |   | 2                                     | 1                                     |  |  | 1                                 |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 2     |   | 2                                     | 1                                     |  |  | 1                                 |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 3     |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 4     |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 5     |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 6     |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 7     |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 8     |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 9     |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 10    |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 11    |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |
| 12    |   |                                       |                                       |  |  |                                   |  |  |  |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |

**pH Adjustment Log for Preserved Samples**

| Sample ID | Type of Preservative | pH upon receipt | Date preservation adjusted | Time preservation adjusted | Amount of Preservative added | Lot # |
|-----------|----------------------|-----------------|----------------------------|----------------------------|------------------------------|-------|
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |

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.

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A** Required Client Information: **Section B** Required Project Information: **Section C** Invoice Information:

|   |  |                                       |
|---|--|---------------------------------------|
| Company: Georgia Power                                    | Report To: Kristen Jurinko                   | Attention: Southern Co.               |
| Address: 1003 Weatherstone Parkway<br>Woodstock, GA 30188 | Copy To: Rhonda Quinn                        | Company Name:                         |
| Email To: kevin.stephenson@resoluteenv.com                | Purchase Order #:                            | Address:                              |
| Phone: (678) 548-9415 Fax:                                | Project Name: Plant Bowen Landfill Cells 3&4 | Price Quote:                          |
| Requested Due Date: Standard                              | Project Number:                              | Price Project Manager: Nicole D'Olivo |
|   |  | Price Profile #: 2928                 |
|   |  | Regulatory Agency                     |
|   |  | State / Location                      |

| ITEM # | MATRIX  | CODE | COLLECTED  |          | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives |      |     |      |         |          |       | Analyses Test | Y/N | Requested Analytes Filtered (Y/N) | Residual Chlorine (Y/N) | pH |                       |
|--------|---------|------|------------|----------|---------------------------|-----------------|---------------|------|-----|------|---------|----------|-------|---------------|-----|-----------------------------------|-------------------------|----|-----------------------|
|        |         |      | START DATE | END DATE |                           |                 | H2SO4         | HNO3 | HCl | NaOH | Na2S2O3 | Methanol | Other |               |     |                                   |                         |    | Metals + State Metals |
| 1      | GWA-36A |      | WT G       | 4/6/22   | 1146                      | 4               | 3             | 1    |     |      |         |          |       |               |     |                                   |                         |    |                       |
| 2      | FB - 1  |      | WT G       | 4/6/22   | 1220                      | 4               | 3             | 1    |     |      |         |          |       |               |     |                                   |                         |    |                       |
| 3      |         |      |            |          |                           |                 |               |      |     |      |         |          |       |               |     |                                   |                         |    |                       |
| 4      |         |      |            |          |                           |                 |               |      |     |      |         |          |       |               |     |                                   |                         |    |                       |
| 5      |         |      |            |          |                           |                 |               |      |     |      |         |          |       |               |     |                                   |                         |    |                       |
| 6      |         |      |            |          |                           |                 |               |      |     |      |         |          |       |               |     |                                   |                         |    |                       |
| 7      |         |      |            |          |                           |                 |               |      |     |      |         |          |       |               |     |                                   |                         |    |                       |
| 8      |         |      |            |          |                           |                 |               |      |     |      |         |          |       |               |     |                                   |                         |    |                       |
| 9      |         |      |            |          |                           |                 |               |      |     |      |         |          |       |               |     |                                   |                         |    |                       |
| 10     |         |      |            |          |                           |                 |               |      |     |      |         |          |       |               |     |                                   |                         |    |                       |
| 11     |         |      |            |          |                           |                 |               |      |     |      |         |          |       |               |     |                                   |                         |    |                       |
| 12     |         |      |            |          |                           |                 |               |      |     |      |         |          |       |               |     |                                   |                         |    |                       |

|                               |  |        |      |                           |  |        |      |
|-------------------------------|--|--------|------|---------------------------|--|--------|------|
| RELINQUISHED BY / AFFILIATION |  | DATE   | TIME | ACCEPTED BY / AFFILIATION |  | DATE   | TIME |
| William Laaker                |  | 4/6/22 | 1410 | OWD                       |  | 4/6/22 | 1410 |

State Metals include Sb, As, Ba, Be, Cd, Ca, Cr, Cu, Pb, Ni, Se, Ag, Tl, V, Zn, Co

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: William Laaker

SIGNATURE of SAMPLER: *William Laaker*

DATE Signed: 4/6/22

TEMP in C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

May 04, 2022

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: BOWEN LANDFILL  
Pace Project No.: 92601912

Dear Joju Abraham:

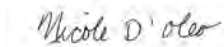
Enclosed are the analytical results for sample(s) received by the laboratory on April 29, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

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

Sincerely,



Nicole D'Oleo  
nicole.d'oleo@pacelabs.com  
(704)875-9092  
Project Manager

Enclosures

cc: Michelle Barker, WOOD E&I  
Kristen Jurinko  
Ms. Lauren Petty, Southern Company  
Rhonda Quinn, WOOD E&I  
Greg Wrenn, WOOD E&I



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BOWEN LANDFILL

Pace Project No.: 92601912

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### **Pace Analytical Services Charlotte**

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BOWEN LANDFILL

Pace Project No.: 92601912

| Lab ID      | Sample ID | Matrix | Date Collected | Date Received  |
|-------------|-----------|--------|----------------|----------------|
| 92601912001 | GWC-5     | Water  | 04/28/22 10:52 | 04/29/22 10:15 |
| 92601912002 | GWC-12    | Water  | 04/28/22 12:05 | 04/29/22 10:15 |
| 92601912003 | GWC-48    | Water  | 04/28/22 10:45 | 04/29/22 10:15 |
| 92601912004 | FB-1      | Water  | 04/28/22 12:40 | 04/29/22 10:15 |

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BOWEN LANDFILL

Pace Project No.: 92601912

| Lab ID      | Sample ID | Method                 | Analysts | Analytes Reported |
|-------------|-----------|------------------------|----------|-------------------|
| 92601912001 | GWC-5     | EPA 6020B              | CW1      | 1                 |
| 92601912002 | GWC-12    | EPA 6020B              | CW1      | 1                 |
| 92601912003 | GWC-48    | EPA 7470A              | VB       | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 1                 |
| 92601912004 | FB-1      | EPA 6020B              | CW1      | 2                 |
|             |           | EPA 7470A              | VB       | 1                 |
|             |           | EPA 300.0 Rev 2.1 1993 | JCM      | 1                 |

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BOWEN LANDFILL

Pace Project No.: 92601912

| Lab Sample ID<br>Method | Client Sample ID<br>Parameters | Result  | Units      | Report Limit | Analyzed       | Qualifiers |
|-------------------------|--------------------------------|---------|------------|--------------|----------------|------------|
| <b>92601912001</b>      | <b>GWC-5</b>                   |         |            |              |                |            |
|                         | Performed by                   | CUSTOME |            |              | 04/29/22 15:15 |            |
|                         |                                | R       |            |              |                |            |
|                         | pH                             | 5.78    | Std. Units |              | 04/29/22 15:15 |            |
| EPA 6020B               | Beryllium                      | 0.00078 | mg/L       | 0.00050      | 05/03/22 16:17 |            |
| <b>92601912002</b>      | <b>GWC-12</b>                  |         |            |              |                |            |
|                         | Performed by                   | CUSTOME |            |              | 04/29/22 15:15 |            |
|                         |                                | R       |            |              |                |            |
|                         | pH                             | 6.33    | Std. Units |              | 04/29/22 15:15 |            |
| EPA 6020B               | Cadmium                        | 0.00067 | mg/L       | 0.00050      | 05/03/22 16:23 |            |
| <b>92601912003</b>      | <b>GWC-48</b>                  |         |            |              |                |            |
|                         | Performed by                   | CUSTOME |            |              | 04/29/22 15:15 |            |
|                         |                                | R       |            |              |                |            |
|                         | pH                             | 5.00    | Std. Units |              | 04/29/22 15:15 |            |
| EPA 7470A               | Mercury                        | 0.00040 | mg/L       | 0.00020      | 05/03/22 13:09 |            |
| EPA 300.0 Rev 2.1 1993  | Chloride                       | 5.0     | mg/L       | 1.0          | 04/30/22 14:13 |            |

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BOWEN LANDFILL

Pace Project No.: 92601912

| Sample: GWC-5  |                 | Lab ID: 92601912001 |              | Collected: 04/28/22 10:52 | Received: 04/29/22 10:15 | Matrix: Water  |                |           |      |
|--|-----------------|---------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method:<br>Pace Analytical Services - Charlotte   |                 |                     |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1                        |                | 04/29/22 15:15 |           |      |
| pH   | <b>5.78</b>     | Std. Units          |              |                           | 1                        |                | 04/29/22 15:15 |           |      |
| <b>6020 MET ICPMS</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |                          |                |                |           |      |
| Beryllium  | <b>0.00078</b>  | mg/L                | 0.00050      | 0.000054                  | 1                        | 05/03/22 10:14 | 05/03/22 16:17 | 7440-41-7 |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BOWEN LANDFILL

Pace Project No.: 92601912

| Sample: GWC-12   |                 | Lab ID: 92601912002 |              | Collected: 04/28/22 12:05 | Received: 04/29/22 10:15 | Matrix: Water  |                |           |      |
|--|-----------------|---------------------|--------------|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters   | Results         | Units               | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.   | Qual |
| <b>Field Data</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method:<br>Pace Analytical Services - Charlotte   |                 |                     |              |                           |                          |                |                |           |      |
| Performed by   | <b>CUSTOMER</b> |                     |              |                           | 1                        |                | 04/29/22 15:15 |           |      |
| pH   | <b>6.33</b>     | Std. Units          |              |                           | 1                        |                | 04/29/22 15:15 |           |      |
| <b>6020 MET ICPMS</b>  |                 |                     |              |                           |                          |                |                |           |      |
| Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |                 |                     |              |                           |                          |                |                |           |      |
| Cadmium  | <b>0.00067</b>  | mg/L                | 0.00050      | 0.00011                   | 1                        | 05/03/22 10:14 | 05/03/22 16:23 | 7440-43-9 |      |

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## ANALYTICAL RESULTS

Project: BOWEN LANDFILL

Pace Project No.: 92601912

**Sample: GWC-48**      **Lab ID: 92601912003**      Collected: 04/28/22 10:45      Received: 04/29/22 10:15      Matrix: Water

| Parameters  | Results         | Units      | Report<br>Limit | MDL     | DF | Prepared       | Analyzed       | CAS No.    | Qual |
|---|-----------------|------------|-----------------|---------|----|----------------|----------------|------------|------|
| <b>Field Data</b>   |                 |            |                 |         |    |                |                |            |      |
| Analytical Method:<br>Pace Analytical Services - Charlotte  |                 |            |                 |         |    |                |                |            |      |
| Performed by  | <b>CUSTOMER</b> |            |                 |         | 1  |                | 04/29/22 15:15 |            |      |
| pH  | <b>5.00</b>     | Std. Units |                 |         | 1  |                | 04/29/22 15:15 |            |      |
| <b>7470 Mercury</b>   |                 |            |                 |         |    |                |                |            |      |
| Analytical Method: EPA 7470A    Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |                 |            |                 |         |    |                |                |            |      |
| Mercury   | <b>0.00040</b>  | mg/L       | 0.00020         | 0.00013 | 1  | 05/03/22 08:00 | 05/03/22 13:09 | 7439-97-6  |      |
| <b>300.0 IC Anions 28 Days</b>  |                 |            |                 |         |    |                |                |            |      |
| Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                                 |                 |            |                 |         |    |                |                |            |      |
| Chloride  | <b>5.0</b>      | mg/L       | 1.0             | 0.60    | 1  |                | 04/30/22 14:13 | 16887-00-6 |      |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BOWEN LANDFILL

Pace Project No.: 92601912

| Sample: FB-1                   |         | Lab ID: 92601912004  |              | Collected: 04/28/22 12:40 | Received: 04/29/22 10:15 | Matrix: Water  |                |            |      |
|--------------------------------|---------|--|--------------|---------------------------|--------------------------|----------------|----------------|------------|------|
| Parameters                     | Results | Units  | Report Limit | MDL                       | DF                       | Prepared       | Analyzed       | CAS No.    | Qual |
| <b>6020 MET ICPMS</b>          |         | Analytical Method: EPA 6020B Preparation Method: EPA 3005A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Beryllium                      | ND      | mg/L   | 0.00050      | 0.000054                  | 1                        | 05/03/22 10:14 | 05/03/22 16:29 | 7440-41-7  |      |
| Cadmium                        | ND      | mg/L   | 0.00050      | 0.00011                   | 1                        | 05/03/22 10:14 | 05/03/22 16:29 | 7440-43-9  |      |
| <b>7470 Mercury</b>            |         | Analytical Method: EPA 7470A Preparation Method: EPA 7470A<br>Pace Analytical Services - Peachtree Corners, GA |              |                           |                          |                |                |            |      |
| Mercury                        | ND      | mg/L   | 0.00020      | 0.00013                   | 1                        | 05/03/22 08:00 | 05/03/22 13:11 | 7439-97-6  |      |
| <b>300.0 IC Anions 28 Days</b> |         | Analytical Method: EPA 300.0 Rev 2.1 1993<br>Pace Analytical Services - Asheville                              |              |                           |                          |                |                |            |      |
| Chloride                       | ND      | mg/L   | 1.0          | 0.60                      | 1                        |                | 04/30/22 14:27 | 16887-00-6 |      |

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BOWEN LANDFILL

Pace Project No.: 92601912

QC Batch: 695563

Analysis Method: EPA 6020B

QC Batch Method: EPA 3005A

Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92601912001, 92601912002, 92601912004

METHOD BLANK: 3632873

Matrix: Water

Associated Lab Samples: 92601912001, 92601912002, 92601912004

| Parameter | Units | Blank Result | Reporting Limit | MDL      | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|----------|----------------|------------|
| Beryllium | mg/L  | ND           | 0.00050         | 0.000054 | 05/03/22 14:49 |            |
| Cadmium   | mg/L  | ND           | 0.00050         | 0.00011  | 05/03/22 14:49 |            |

LABORATORY CONTROL SAMPLE: 3632874

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Beryllium | mg/L  | 0.1         | 0.10       | 101       | 80-120       |            |
| Cadmium   | mg/L  | 0.1         | 0.10       | 100       | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3632875 3632876

| Parameter | Units | 92595615001 |                | 3632876         |           | MS % Rec | MSD % Rec | % Rec Limits | RPD    | Max RPD | Qual |
|-----------|-------|-------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|
|           |       | Result      | MS Spike Conc. | MSD Spike Conc. | MS Result |          |           |              |        |         |      |
| Beryllium | mg/L  | 0.063J ug/L | 0.1            | 0.1             | 0.10      | 0.10     | 101       | 102          | 75-125 | 0       | 20   |
| Cadmium   | mg/L  | ND          | 0.1            | 0.1             | 0.10      | 0.11     | 101       | 106          | 75-125 | 5       | 20   |

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BOWEN LANDFILL

Pace Project No.: 92601912

QC Batch: 695457

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92601912003, 92601912004

METHOD BLANK: 3632603

Matrix: Water

Associated Lab Samples: 92601912003, 92601912004

| Parameter | Units | Blank Result | Reporting Limit | MDL     | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|---------|----------------|------------|
| Mercury   | mg/L  | ND           | 0.00020         | 0.00013 | 05/03/22 12:16 |            |

LABORATORY CONTROL SAMPLE: 3632604

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury   | mg/L  | 0.0025      | 0.0024     | 95        | 80-120       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3632605 3632606

| Parameter | Units | 3632605        |                 | 3632606   |            | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
|           |       | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result |          |           |              |     |         |      |
| Mercury   | mg/L  | ND             | 0.0025          | 0.00099   | 0.00089    | 39       | 35        | 75-125       | 10  | 20      | M1   |

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### QUALITY CONTROL DATA

Project: BOWEN LANDFILL  
Pace Project No.: 92601912

QC Batch: 695206 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92601912003, 92601912004

METHOD BLANK: 3631421 Matrix: Water

Associated Lab Samples: 92601912003, 92601912004

| Parameter | Units | Blank Result | Reporting Limit | MDL  | Analyzed       | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Chloride  | mg/L  | ND           | 1.0             | 0.60 | 04/30/22 13:45 |            |

LABORATORY CONTROL SAMPLE: 3631422

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride  | mg/L  | 50          | 51.0       | 102       | 90-110       |            |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3631423 3631424

| Parameter | Units | 92601535009 |            | 3631423   |            | 3631424   |            | % Rec Limits | RPD    | Max RPD | Qual  |
|-----------|-------|-------------|------------|-----------|------------|-----------|------------|--------------|--------|---------|-------|
|           |       | MS Result   | MSD Result | MS Result | MSD Result | MS Result | MSD Result |              |        |         |       |
| Chloride  | mg/L  | 92.1        | 50         | 50        | 123        | 123       | 63         | 61           | 90-110 | 1       | 10 M1 |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3631425 3631426

| Parameter | Units | 92601782003 |            | 3631425   |            | 3631426   |            | % Rec Limits | RPD    | Max RPD | Qual |
|-----------|-------|-------------|------------|-----------|------------|-----------|------------|--------------|--------|---------|------|
|           |       | MS Result   | MSD Result | MS Result | MSD Result | MS Result | MSD Result |              |        |         |      |
| Chloride  | mg/L  | 1.7         | 50         | 50        | 53.9       | 54.7      | 104        | 106          | 90-110 | 1       | 10   |

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BOWEN LANDFILL

Pace Project No.: 92601912

---

### 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 - 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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE


Project: BOWEN LANDFILL

Pace Project No.: 92601912

| Lab ID      | Sample ID | QC Batch Method        | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|------------------------|----------|-------------------|------------------|
| 92601912001 | GWC-5     |                        |          |                   |                  |
| 92601912002 | GWC-12    |                        |          |                   |                  |
| 92601912003 | GWC-48    |                        |          |                   |                  |
| 92601912001 | GWC-5     | EPA 3005A              | 695563   | EPA 6020B         | 695646           |
| 92601912002 | GWC-12    | EPA 3005A              | 695563   | EPA 6020B         | 695646           |
| 92601912004 | FB-1      | EPA 3005A              | 695563   | EPA 6020B         | 695646           |
| 92601912003 | GWC-48    | EPA 7470A              | 695457   | EPA 7470A         | 695609           |
| 92601912004 | FB-1      | EPA 7470A              | 695457   | EPA 7470A         | 695609           |
| 92601912003 | GWC-48    | EPA 300.0 Rev 2.1 1993 | 695206   |                   |                  |
| 92601912004 | FB-1      | EPA 300.0 Rev 2.1 1993 | 695206   |                   |                  |

### REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

|   |   |   |
|---|---|---|
|  | Document Name:<br><b>Sample Condition Upon Receipt (SCUR)</b> | Document Revised: November 15, 2021<br>Page 1 of 2  |
|   | Document No.:<br>F-CAR-CS-033-Rev.08                          | Issuing Authority:<br>Pace Carolinas Quality Office |

**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name:

*GA Power*

Project #:

**WO#: 92601912**

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



Custody Seal Present?  Yes  No    Seals Intact?  Yes  No

Date/Initials Person Examining Contents: *4/29/22*  
*COJ*

Packing Material:  Bubble Wrap  Bubble Bags  None  Other  
 Thermometer:  IR Gun ID: *214*    Type of Ice:  Wet  Blue  None

Biological Tissue Frozen?  Yes  No  N/A

Cooler Temp: *3.3*    Correction Factor: Add/Subtract (°C) *+0.1*

Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): *3.4*

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

**Comments/Discrepancy:**

|   |   |    |
|---|---|----|
| Chain of Custody Present?                   | <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 1  |
| Samples Arrived within Hold Time?           | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            | 2  |
| Short Hold Time Analysis (<72 hr.)?         | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A            | 3  |
| Rush Turn Around Time Requested?            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A            | 4  |
| Sufficient Volume?                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            | 5  |
| Correct Containers Used?                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            | 6  |
| -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            | 7  |
| Dissolved analysis: Samples Field Filtered? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A            | 8  |
| Sample Labels Match COC?                    | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A            | 9  |
| -Includes Date/Time/ID/Analysis Matrix:     | <i>W</i>  |    |
| Headspace in VOA Vials (>5-6mm)?            | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A            | 10 |
| Trip Blank Present?                         | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A            | 11 |
| Trip Blank Custody Seals Present?           | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A            |    |

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_ Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_ Date: \_\_\_\_\_



Document Name:  
**Sample Condition Upon Receipt (SCUR)**  
 Document No:  
**F-CAR-CS-033-Rev.08**

Document Revised: November 15, 2021  
 Page 2 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

\*\*Bottom half of box is to list number of bottles

Project #

**WO# : 92601912**

PM: NMG

Due Date: 05/06/22

CLIENT: GA-GA Power

| Item# | BP4U-125 mL Plastic Unpreserved (N/A) (Cl-) | BP3U-250 mL Plastic Unpreserved (N/A) | BP2U-500 mL Plastic Unpreserved (N/A) | BP1U-1 liter Plastic Unpreserved (N/A) | BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-) | BP3N-250 mL plastic HNO3 (pH < 2) | BP4Z-125 mL Plastic Zn Acetate & NaOH (>9) | BP4B-125 mL Plastic NaOH (pH > 12) (Cl-) | WGFU-Wide-mouthed Glass jar Unpreserved | AG1U-1 liter Amber Unpreserved (N/A) (Cl-) | AG1H-1 liter Amber HCl (pH < 2) | AG3U-250 mL Amber Unpreserved (N/A) (Cl-) | AG1S-1 liter Amber H2SO4 (pH < 2) | AG3S-250 mL Amber H2SO4 (pH < 2) | AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-) | DG9H-40 mL VOA HCl (N/A) | VG9T-40 mL VOA Na2S2O3 (N/A) | VG9U-40 mL VOA Unpreserved (N/A) | DG9P-40 mL VOA H3PO4 (N/A) | VOAK (3 vials per kit)-5035 kit (N/A) | V/GK (3 vials per kit)-VPH/Gas kit (N/A) | SP5T-125 mL Sterile Plastic (N/A - lab) | SP2T-250 mL Sterile Plastic (N/A - lab) | BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7) | AG0U-100 mL Amber Unpreserved vials (N/A) | VSGU-20 mL Scintillation vials (N/A) | DG9U-40 mL Amber Unpreserved vials (N/A) |  |  |  |
|-------|---|---------------------------------------|---------------------------------------|--|--|-----------------------------------|--|--|---|--|---------------------------------|---|-----------------------------------|----------------------------------|--|--------------------------|------------------------------|----------------------------------|----------------------------|---------------------------------------|--|---|---|---|---|--------------------------------------|--|--|--|--|
| 1     |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |  |
| 2     |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |  |
| 3     |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |  |
| 4     |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |  |
| 5     |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |  |
| 6     |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |  |
| 7     |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |  |
| 8     |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |  |
| 9     |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |  |
| 10    |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |  |
| 11    |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |  |
| 12    |   |                                       |                                       |  |  |                                   |  |  |   |  |                                 |   |                                   |                                  |  |                          |                              |                                  |                            |                                       |  |   |   |   |   |                                      |  |  |  |  |

**pH Adjustment Log for Preserved Samples**

| Sample ID | Type of Preservative | pH upon receipt | Date preservation adjusted | Time preservation adjusted | Amount of Preservative added | Lot # |
|-----------|----------------------|-----------------|----------------------------|----------------------------|------------------------------|-------|
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |
|           |                      |                 |                            |                            |                              |       |

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).



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Marner Road Atlanta, GA 30339  
 Email: [kjurnink@southemco.com](mailto:kjurnink@southemco.com)  
 Phone: 4708990633  
 Requested Due Date: 5 Day TAT

Section B Required Project Information: Report To: Kristen Jurinko, Florida Guinn  
 Copy To:  
 Purchase Order #:  
 Project Name: Plant Bowen Landfill  
 Project #:

Section C Invoice Information: Attention: Company Name:  
 Address: Face Guide:  
 Face Project Manager:  
 Face Profile #: 315

Regulatory Agency: State / Location: GA

Requested Analysis Returned (Y/N)

| ITEM # | MATRIX | CODE | COLLECTED  |          | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives |       |      |     |      |         | Analyses Test | Y/N | Residual Chlorine (Y/N) | PH      |
|--------|--------|------|------------|----------|---------------------------|-----------------|---------------|-------|------|-----|------|---------|---------------|-----|-------------------------|---------|
|        |        |      | START DATE | END DATE |                           |                 | Unpreserved   | H2SO4 | HNO3 | HCl | NaOH | Na2S2O3 |               |     |                         |         |
| 1      | GWC-5  | DW   | 4/23/22    | 1052     |                           | 1               |               |       |      |     |      |         |               |     |                         | PH 5.78 |
| 2      | GWC-12 | WW   | 4/23/22    | 1205     |                           | 1               |               |       |      |     |      |         |               |     |                         | PH 6.33 |
| 3      | GWC-48 | SL   | 4/23/22    | 1045     |                           | 2               |               |       |      |     |      |         | X             |     |                         | PH 5.00 |
| 4      | FB-1   | WP   | 4/23/22    | 1240     |                           | 2               |               |       |      |     |      |         | X             |     |                         |         |
| 5      |        | AR   |            |          |                           |                 |               |       |      |     |      |         |               |     |                         |         |
| 6      |        | CT   |            |          |                           |                 |               |       |      |     |      |         |               |     |                         |         |
| 7      |        | TS   |            |          |                           |                 |               |       |      |     |      |         |               |     |                         |         |
| 8      |        |      |            |          |                           |                 |               |       |      |     |      |         |               |     |                         |         |
| 9      |        |      |            |          |                           |                 |               |       |      |     |      |         |               |     |                         |         |
| 10     |        |      |            |          |                           |                 |               |       |      |     |      |         |               |     |                         |         |
| 11     |        |      |            |          |                           |                 |               |       |      |     |      |         |               |     |                         |         |
| 12     |        |      |            |          |                           |                 |               |       |      |     |      |         |               |     |                         |         |

| REACQUISISHED BY / AFFILIATION | DATE    | TIME | ACCEPTED BY / AFFILIATION | DATE    | TIME | SAMPLE CONDITIONS |
|--------------------------------|---------|------|---------------------------|---------|------|-------------------|
| William Laeker                 | 4/23/22 | 1015 | Van William Pate          | 4/29/22 | 1015 |                   |
| Kyran Williams Pate            | 4/23/22 | 1306 | Charles Pate              | 4/29/22 | 1305 |                   |

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: William Laeker Meredith Duncan Kevin Stephenson

SIGNATURE of SAMPLER: *[Signatures]*

DATE signed: 4/28/22

TEMP in C

Received on ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)