

NOTIFICATION OF COMPLIANCE
ALTERNATIVE CLOSURE
CERTIFICATON OF NO ALTERNATIVE CCR DISPOSAL CAPACITY
ANNUAL STATUS REPORT FOR 40 CFR § 257.103(a)(1) DEMONSTRATION
December 31, 2019
PLANT BOWEN ASH POND (AP-1)
GEORGIA POWER COMPANY

In accordance with 40 CFR 257.103(a)(1), on April 17, 2019, Georgia Power placed in the Operating Record a demonstration (“§ 257.103 Demonstration”) for AP-1 certifying that alternative disposal and treatment capacity for the coal combustion residual (CCR) flue gas desulfurization (FGD) waste streams produced by the four FGD systems at Plant Bowen and treated by the gypsum dewatering cells within AP-1 was not available. Georgia Power provided this demonstration because the gypsum dewatering cells must continue to be utilized within AP-1 after April 17, 2019 due to the absence of alternative sources for FGD wastewater treatment or disposal, on-site or off-site, and the lack of any alternative system for removal, storage and handling of gypsum solids. As stated in the §257.103 Demonstration, Georgia Power ceased sending all other non-CCR and CCR waste streams to AP-1 on or before April 17, 2019.

A new on-site FGD wastewater treatment system was selected as the treatment alternative for the FGD wastewater being treated by the gypsum dewatering cells in AP-1. Beginning in 2016, Georgia Power initiated a planning and design phase for the FGD wastewater treatment system. The new system was designed to treat the wastewater from the FGD systems to ensure a range of treatment requirements that varies with megawatt output and generating unit operation. In addition to the wastewater treatment system, a third gypsum dewatering belt and storage barn were included in the design as a method to provide removal of the solids from the waste stream prior to treatment of the water.

In accordance with 40 CFR 257.103(a)(1)(iv) and (c)(2), Georgia Power is providing this annual progress report documenting the current status of efforts taken to achieve the alternative disposal of FGD waste streams treated by the gypsum dewatering cells in AP-1. This document provides a description of any items required to be completed during construction, system start-up, and optimization of the treatment system and of actions taken to resolve these items. This annual report also provides justification for additional time needed beyond December 31, 2019, which was the initial estimated date of completion of alternative disposal capacity in the §257.103 Demonstration.

Progress on Alternative Disposal Capacity

Sitework for the on-site FGD wastewater treatment system initially began in the second quarter of 2017. Consistent with the schedule provided in the §257.103 Demonstration, procurement, manufacturing, delivery of equipment, and equipment installation began in 2018, however was not substantially completed until October 2019.

Construction on foundations for the significant equipment components of the system to be installed began in early 2018. Construction progressed and installation of equipment continued throughout 2018 and the beginning of the fourth quarter 2019. During the construction process, overall delays in system completion were experienced with design and fabrication, equipment delivery, and installation of key components, including the system clarifiers. This was compounded by performance issues in major equipment that did not allow the project to advance along the initial schedule. These delays in full system completion and turn-over have not allowed sufficient time to trouble shoot, start-up, test, calibrate, and commission the new system, including operating it under a range of different operating modes of the generating plant and the FGD systems.

Throughout the construction process, initial system and equipment check out and initial testing began on individual installed system components in May 2019. Due to unanticipated delays associated with equipment needed to supply necessary flows and the overall clarifier system completion, full system operational testing was not able to be initiated until November 2019, with the ability to reach full testing capacity in late December 2019. However, during this initial testing phase, testing was interrupted by multiple unforeseen equipment malfunctions, and equipment reliability issues. These unforeseen equipment issues are currently being diagnosed by the manufacturer of the equipment and are being evaluated for resolution. As an example, clarifier gear-box failure under heavy load conditions interrupted initial system performance trials due to downtime, investigation, and necessary repairs. This is a critical, complex, and uniquely designed component of the system. Due to the nature of the equipment failures, design modifications are required to address overall equipment reliability related to the clarifier systems. This will require the manufacturing of new equipment and replacement of the main drive units. Due to lead time on design and fabrication, this is estimated to be resolved in June 2020, with testing and final optimization to follow. For these reasons, it has been and remains necessary to continue to send FGD wastewater flows intermittently to the gypsum dewatering cells in AP-1 for treatment.

Additional Time Needed for System Optimization

Due to the delays, equipment performance, and malfunctions, all testing and system optimization work to date has not been completed and has not been representative of the range of operating conditions that the new system is expected to perform. For example, the system has not been operated under peak (maximum) FGD wastewater flows. As a result, optimization of the treatment system under sustained full load of the generating units, representing a summer peak-season plant-wide operational condition, has not been possible. In addition, during this testing period, continued calibration, proof that mechanical devices are

functioning to the manufacturer's warranty, and evaluation and optimization of the FGD wastewater treatment system is necessary.

As part of the testing, evaluation is also underway to determine whether additional redundancy is necessary to enhance the system's reliability. Redundancy may include additional storage capacity and/or supplemental systems to address overall clarifier reliability. As this evaluation is being performed and appropriate additional measures are incorporated into the FGD treatment process, there remains a possibility that waste streams produced may need to be intermittently sent to the gypsum dewatering cells for treatment.

For these reasons, additional time at Plant Bowen beyond December 31, 2019 is necessary to complete the installation, commissioning, start-up, testing, and optimization of the system. We anticipate that this process may be completed by December 2020. Once the alternative disposal capacity (FGD wastewater treatment system) performance optimization is complete, Georgia Power will file a Notice of Intent to Initiate Closure. Should the results of the evaluation of the system redundancy indicate a longer timeline to complete, an updated status report will be provided in the next annual report. Activities associated with preparation to close the ash pond (e.g. design and contractor procurement) are underway and will continue while the system optimization is being tested and confirmed.

I hereby certify that the information provided above is accurate to the best of my knowledge and that the gypsum dewatering cells within AP-1 must continue to accept the FGD waste streams (as needed during system operational trials) given the absence of feasible alternative sources of waste stream treatment or disposal on-site or off-site.



Aaron D. Mitchell

General Manager, Environmental Affairs

Attachment 1
FGD Wastewater

Task	2019					2020							
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NAD Annual Progress Report	★												★
FGD Treatment System Start-Up, Testing and Optimization													
FGD Mechanical Modifications; Gearboxes/Clarifiers													
FGD Treatment System Redundancy Evaluation Redundant													
System Design, Installation, Testing													

Bowen's Peak Generation Potential