

SAFETY EVALUATION BY THE OFFICE OF NEW REACTORS  
RELATED TO AMENDMENT NO. 33  
TO COMBINED LICENSE NOS. NPF-91 AND NPF-92  
SOUTHERN NUCLEAR OPERATING COMPANY, INC.  
GEORGIA POWER COMPANY OGLETHORPE POWER COMPANY  
MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA  
CITY OF DALTON, GEORGIA  
VOGTLE ELECTRIC GENERATING PLANT, UNITS 3 AND 4  
DOCKET NOS. 52-025 AND 52-026

1.0 INTRODUCTION

By letter dated November 20, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14324A969), Southern Nuclear Operating Company, Inc., (SNC/licensee) submitted license amendment request (LAR) 14-011 and requested that the U.S. Nuclear Regulatory Commission (NRC/Commission) amend the combined licenses (COLs) for Vogtle Electric Generating Plant (VEGP), Units 3 and 4, COL Nos. NPF-91 and NPF-92, respectively.

The proposed amendment would revise the VEGP Units 3 and 4 UFSAR by permitting 1) a deletion of WCAP-15847, "AP1000 Quality Assurance procedures Supporting NRC Review of AP1000 DCD Sections 18.2 and 18.8," from the Tier 2\* portion of the UFSAR in Table 1.6-1 and Section 18.2.7 and 2) a modification to an operational sequence analysis (OSA) task description in Section 18.5.1. The deletion of WCAP-15847 is requested because that WCAP identifies documents that were used to support the AP1000 Design Certification that have since been superseded or deleted. The change to the OSA task description is requested to correct the reactor mode for the valve testing during which this task will be analyzed. The proposed LAR involves changes to the approved VEGP Updated Final Safety Analysis Report (UFSAR) Tier 2\* information.

2.0 REGULATORY BASIS

As stated in the request, WCAP-15847 was written during the AP1000 Design Certification to compile the current versions of the pertinent procedures for transmittal to the NRC as examples of design procedures applicable to the AP1000. The procedures, which were issued between 1991 and 2002, no longer exist, are not currently used, or have been superseded by other

Westinghouse Electric Company procedures. The change to the OSA task relates to identifying “Mode 5” as the appropriate operating mode for the execution of this task. The OSA task “ADS [automatic depressurization system] valve testing during Mode 1” is proposed to be changed to identify Mode 5 as the appropriate mode for performance of this task. Both ADS valves in each line are normally closed during normal reactor operation. If one of these valves is opened (for example, for testing), the reactor coolant system (RCS) pressure boundary is not fully maintained. The ADS valves are tested during cold shutdowns (i.e., Mode 5) when the RCS pressure is reduced to atmospheric pressure. This avoids a potential loss-of-coolant accident caused by mispositioning a single valve during testing. Technical Specifications require verification that each ADS Stage 1, 2, and 3 valve strokes to its fully opened position during shutdown conditions (i.e., Mode 5).

The NRC staff considered the following regulatory requirements in reviewing the licensee’s proposed UFSAR changes.

Title 10 of the *Code of Federal Regulations* (10 CFR) Part 52.98(c)(1) states that if a COL references a certified design, then changes to or departures from the information within the scope of the referenced design certification rule are subject to the applicable change procedures in that rule.

The regulations in 10 CFR Part 52, Appendix D, Section III.B require a holder of a COL referencing 10 CFR Part 52, Appendix D to incorporate by reference and comply with the requirements of Appendix D, including certified information in Tier 2\* of the AP1000 Design Control Document (DCD). Section VIII.B.6a requires NRC approval for departures from Tier 2\* information. Because the proposed amendment request involves changes to Tier 2\* information, NRC approval is required before making the Tier 2\* changes addressed in this LAR.

### 3.0 TECHNICAL EVALUATION

#### 3.1 Deletion of Tier 2\* Reference, WCAP-14587 from the VEGP Units 3 and 4 UFSAR

The subject document was declared as Tier 2\* in Revision 15 of the AP1000 Design Control Document (DCD). Revision 19 is the current approved version of the AP1000 DCD as referenced in the Design Certification Rule for the AP1000 Design as contained in 10 CFR Part 52, Appendix D. WCAP-14587 is not used to support any of the staff’s safety conclusions in Revision 19 of the DCD. The subject document is obsolete and has been superseded by the documents supporting Revision 19 of the DCD. From a regulatory perspective, WCAP-14587 is a historical document. Accordingly, the staff concludes that deletion of WCAP-14587 from the VEGP Units 3 and 4 UFSAR is acceptable.

#### 3.2: Modification to an OSA task description

The OSA is an analysis technique used within the task analysis element of the Human Factors Engineering (HFE) design process to evaluate workload and timing requirements. The UFSAR, Section 18.5.1 lists a set of tasks to be analyzed using OSA. One of the tasks is described as, “ADS valve testing during Mode 1.” In accordance with 10 CFR 50.2 and ANS/ANSI 51.1 both ADS valves in each line are normally closed during normal reactor operation. If one of these valves is opened (for example, for testing), the RCS pressure boundary is not fully maintained in accordance with this criteria. Table 3.9-16 of the VEGP Units 3 and 4 UFSAR describes the valve inservice test requirements. Note 3 of this table applies to the ADS Stage 1, 2, and 3

valves. This note requires that these valves be closed to maintain the RCS pressure boundary. The valves are tested in Mode 5. The proposed change corrects the task description from Mode 1 to Mode 5. Thus the proposed change corrects an error and ensures technical consistency within the VEGP Units 3 and 4 UFSAR. Accordingly, the staff concludes the correction from Mode 1 to Mode 5 is acceptable.

#### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations in 10 CFR 50.91(b)(2), the Georgia State official was notified of the proposed issuance of the amendment. The State official had no comment.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20, "Standards for Protection Against Radiation." The NRC staff has determined that the amendment involves no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite. Also, there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (*Federal Register* on January 20, 2015 (80 FR 2752)). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need to be prepared in connection with the issuance of the amendment.

#### 6.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that there is reasonable assurance that (1) the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or the health and safety of the public. Therefore, the staff finds the changes proposed in this license amendment acceptable.

#### 7.0 REFERENCES

1. Request for License Amendment Request – HFE OSA Task Update and Removal of WCAP-15847 (LAR 14-011) letter from Southern Nuclear Operating Company (SNC), dated November 20, 2014 (ADAMS Accession No. ML14324A969)
2. NUREG-0711, Revision 2, "Human Factors Engineering Program Review Model," dated February 28, 2004 (ADAMS Accession No. ML12205A463)
3. NUREG-1793, "Final Safety Evaluation Report Related to Certification of the AP1000 Standard Design," dated August 5, 2011 (ADAMS Accession No. ML112061231)