



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NEW REACTORS  
RELATED TO EXEMPTIONS AND AMENDMENT NOS. 154 AND 153  
TO THE COMBINED LICENSE NOS. NPF-91 AND NPF-92  
SOUTHERN NUCLEAR OPERATING COMPANY, INC.  
GEORGIA POWER COMPANY  
OGLETHORPE POWER CORPORATION  
MEAG POWER SPVM, LLC  
MEAG POWER SPVJ, LLC  
MEAG POWER SPVP, LLC  
CITY OF DALTON, GEORGIA  
VOGTLE ELECTRIC GENERATING PLANT UNITS 3 AND 4  
DOCKET NOS. 52-025 AND 52-026

1.0 INTRODUCTION

By application dated August 30, 2018, ((Agencywide Documents Access and Management System (ADAMS) Accession No. ML18242A039), the Southern Nuclear Operating Company (SNC) requested that the Nuclear Regulatory Commission (NRC) amend Vogtle Electric Generating Plant (VEGP) Units 3 and 4, Combined License (COL) Numbers NPF-91 and NPF-92, respectively.

The License Amendment Request (LAR) 18-024 proposed changes in the form of departures from the generic AP1000 Design Control Document (DCD) Tier 1 and Tier 2 information in the VEGP COL plant-specific Tier 1 plant-specific Design Control Document (PS-DCD) and the Tier 2 Updated Final Safety Analysis Report (UFSAR) to reflect revision of the description and scope of the Initial Test Program (ITP) to remove component testing as a separately identified program or phase of the ITP. Additionally, preoperational and startup test specifications were proposed to be removed from the ITP. The amendment also proposed corresponding changes to the COL license conditions that referenced UFSAR sections impacted by the changes. The changes align plant-specific Tier 1, Section 3.4 descriptions for ITP with Regulatory Guide (RG) 1.68, "Initial Test Programs for Water-Cooled Nuclear Power Plants," Revision 3. These changes involve a revision to Section 2.D(10) and 2.D(12) of the COL conditions for VEGP Units 3 and 4 and, UFSAR Table 13.4-201 and Section 14.2.

Pursuant to Section 52.63(b)(1) of Title 10 of the *Code of Federal Regulations* (10 CFR), SNC also requested an exemption from the provisions of 10 CFR Part 52, Appendix D, "Design Certification Rule for the AP1000 Design," Section III.B, "Scope and Contents." The requested

exemption would allow a departure from the corresponding portions of the certified information in Tier 1 of the generic DCD.<sup>1</sup> In order to modify the UFSAR (the PS-DCD) Tier 1 information, the NRC must find SNC's exemption request included in its submittal for the LAR to be acceptable. The staff's review of the exemption request, as well as the LAR, is included in this safety evaluation.

## 2.0 REGULATORY EVALUATION

SNC requested an amendment and exemption to the current licensing basis documents to revise the description and scope of the ITP to remove component testing as a separately identified program or phase of the ITP. In addition, the licensee is requesting the removal of preoperational and startup test specifications from the ITP. The requested amendment requires changes to the UFSAR in the form of departures from the incorporated plant-specific DCD Tier 2 information and involves changes to related plant-specific Tier 1 information with corresponding changes to the associated COL information.

The staff considered the following regulatory requirements in reviewing the LAR that included the proposed changes:

Appendix D, Section VIII.A.4 to 10 CFR Part 52 states that exemptions from Tier 1 information are governed by the requirements in 10 CFR 52.63(b)(1) and 10 CFR 52.98(f). It also states that the Commission will deny such a request if it finds that the design change will result in a significant decrease in the level of safety otherwise provided by the design.

Appendix D, Section VIII.B.5.a allows an applicant or licensee who references this appendix to depart from Tier 2 information, without prior NRC approval, unless the proposed departure involves a change to or departure from Tier 1 information, Tier 2\* information, or the Technical Specifications, or requires a license amendment under paragraphs B.5.b or B.5.c of the section.

10 CFR 52.63(b)(1) allows the licensee who references a design certification rule to request NRC approval for an exemption from one or more elements of the certification information. The Commission may only grant such a request if it determines that the exemption will comply with the requirements of 10 CFR 52.7, which, in turn, points to the requirements listed in 10 CFR 50.12 for specific exemptions. In addition to the factors listed in 10 CFR 52.7, the Commission shall consider whether the special circumstances outweigh any decrease in safety that may result from the reduction in standardization caused by the exemption. Therefore, any exemption from the Tier 1 information certified by Appendix D to 10 CFR Part 52 must meet the requirements of 10 CFR 50.12, 52.7, and 52.63(b)(1).

10 CFR 52.98(f) requires NRC approval for any modification to, addition to, or deletion from the terms and conditions of a COL. These activities involve changes to the associated PS-DCD Tier 1 information as well as changes to COL conditions. Therefore, NRC approval is required prior to making the plant specific proposed changes in this license amendment request.

The specific NRC technical requirement applicable to LAR 18-024 is 10 CFR 52.79(a)(28)

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<sup>1</sup> While SNC describes the requested exemption as being from Section III.B of 10 CFR Part 52, Appendix D, the entirety of the exemption pertains to proposed departures from Tier 1 information in the PS-DCD. In the remainder of this evaluation, the NRC will refer to the exemption as an exemption from Tier 1 information to match the language of Section VIII.A.4 of 10 CFR Part 52, Appendix D, which specifically governs the granting of exemptions from Tier 1 information.

which requires plans for preoperational testing and initial operations.

### 3.0 TECHNICAL EVALUATION

#### 3.1 TECHNICAL EVALUATION OF THE REQUESTED CHANGES

The information presented by SNC in LAR 18-024 was evaluated by the staff for its completeness, quality, and clarity. SNC proposed an amendment to the current licensing basis documents to revise the description and scope of the ITP to remove component testing as a separately identified program or phase of the ITP. The changes do not affect the conformance with RG 1.68, Revision 3, nor conformance with the regulations for safety analysis report content in 10 CFR 52.79(a)(28), which calls for preoperational and startup testing programs. In addition, SNC is requesting the removal of preoperational and startup test specifications from the ITP. These test specifications are not required in RG 1.68, Revision 3.

The proposed amendment requires changes to the UFSAR in the form of departures from the incorporated plant-specific DCD Tier 2 information and involves changes to related plant-specific Tier 1 information with corresponding changes to the associated COL information.

##### 3.1.2 Removal of Component Test Phase from ITP

SNC requested an exemption to allow for departures from the standard Tier 1 design description in DCD Section 3.4. Specifically, SNC proposed to redefine the ITP scope to consist of preoperational and startup testing consistent with RG 1.68. This change removes component testing from the ITP.

The proposed change to redefine the ITP scope to consist of preoperational and startup testing is consistent with RG 1.68 and 10 CFR 52.79(a)(28). SNC stated that the change does not affect the health and safety of the public because construction and related component testing, although they will not be controlled by the ITP, will be conducted under Appendix B to 10 CFR Part 50 and NQA-1-1994, Quality Assurance Program.

The proposed changes and clarifications to the ITP description maintain the objective of the program to demonstrate that the plant has been constructed as designed, that the systems perform consistent with the plant design, and that activities culminating in operation at full licensed power are performed in a controlled and safe manner. There are no proposed changes to the technical content of any preoperational or startup test procedures. These changes do not impact the ability of any structures, system, or components to perform their functions or negatively impact safety.

As required by RG 1.68, SNC's proposed change to UFSAR Section 14.2.3 would require the ITP Administrative Manual to include "Controls to provide turnover of plant systems and components from construction to the preoperational testing group. These administrative controls also ensure that general prerequisites are satisfied prior to preoperational and/or startup tests of individual systems or components."

##### 3.1.3 Removal of Test Specifications from ITP

SNC proposes to remove references to test specifications. This change will allow for test procedures to be developed directly from source documents. The information currently required to be in test specifications is also required to be in the test procedures. The information that

would be contained in the test specifications will still be contained in the test procedures, making the test specifications redundant.

RG 1.68 does not require development of test specifications. Therefore, the SNC is still meeting its commitment to RG 1.68. The scope of testing remains unchanged, the proposed changes do not reduce the effectiveness of preoperational and startup test procedures and do not affect the health and safety of the public.

### 3.1.4 Summary of the Technical Evaluation

The staff reviewed the SNC's proposed changes in the LAR and exemption request, concerning the ITP phases and test specifications described in UFSAR Table 13.4-201 and Section 14.2, and plant specific Tier 1 Section 3.4. These changes involve material which require revision to COL Conditions 2.D(10) and 2.D(12).

Based on the technical evaluations above, the staff finds that the proposed changes to revise the ITP to remove component test program and test specifications in licensing basis documents continue to meet the regulations in 10 CFR 52.79(a)(28) and is consistent with SNC's commitment to RG 1.68. Therefore, the staff finds the proposed changes to be acceptable.

## 3.2 EVALUATION OF EXEMPTION

The regulations in Section III.B of Appendix D to 10 CFR Part 52 require a holder of a COL referencing Appendix D to 10 CFR Part 52 to incorporate by reference and comply with the requirements of Appendix D, including certified information in Tier 1 of the generic AP1000 DCD. Exemptions from Tier 1 information are governed by the change process in Section VIII.A.4 of Appendix D of 10 CFR Part 52. Because SNC has identified changes to plant-specific Tier 1 information resulting in the need for a departure, an exemption from the certified design information within plant-specific Tier 1 material is required to implement the LAR.

The Tier 1 information for which a plant-specific departure and exemption was requested is described above. The result of this exemption would be that SNC could implement modifications to Tier 1 information to the UFSAR as well as associated PS-DCD Tier 2 information. Pursuant to the provisions of 10 CFR 52.63(b)(1), an exemption from elements of the design as certified in the 10 CFR Part 52, Appendix D, design certification rule is requested for the involved Tier 1 information described and justified in LAR 18-024. This exemption is a permanent exemption limited in scope to the particular Tier 1 information specified.

As stated in Section VIII.A.4 of Appendix D to 10 CFR Part 52, an exemption from Tier 1 information is governed by the requirements of 10 CFR 52.63(b)(1) and 52.98(f). Additionally, Section VIII.A.4 of Appendix D to 10 CFR Part 52 provides that the Commission will deny a request for an exemption from Tier 1 if it finds that the requested change will result in a significant decrease in the level of safety otherwise provided by the design. Pursuant to 10 CFR 52.63(b)(1), the Commission may grant exemptions from one or more elements of the certification information, so long as the criteria given in 10 CFR 52.7, which, in turn, references 10 CFR 50.12, are met and that the special circumstances, which are defined by 10 CFR 50.12(a)(2), outweigh any potential decrease in safety due to reduced standardization.

Pursuant to 10 CFR 52.7, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR Part 52. As 10 CFR 52.7 further states, the Commission's consideration will be governed by 10 CFR 50.12,

“Specific exemptions,” which states that an exemption may be granted when: (1) the exemptions are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security; and (2) special circumstances are present. Specifically, 10 CFR 50.12(a)(2) lists six circumstances for which an exemption may be granted. It is necessary for one of these bases to be present in order for the NRC to consider granting an exemption request. SNC stated that the requested exemption meets the special circumstances of 10 CFR 50.12(a)(2)(ii). That subparagraph defines special circumstances as when “[a]pplication of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule.” The staff’s analysis of these findings is presented below:

### 3.2.1 AUTHORIZED BY LAW

The requested exemption would allow SNC to implement the amendment described above. This exemption is a permanent exemption limited in scope to particular Tier 1 information. Subsequent changes to this plant-specific Tier 1 information, and corresponding changes to Appendix C, or any other Tier 1 information would be subject to the exemption process specified in Section VIII.A.4 of Appendix D to 10 CFR Part 52 and the requirements of 10 CFR 52.63(b)(1). As stated above, 10 CFR Part 52, Appendix D, Section VIII.A.4 allows the NRC to grant exemptions from one or more elements of the Tier 1 information. The NRC staff has determined that granting of SNC’s proposed exemption will not result in a violation of the Atomic Energy Act of 1954, as amended, or the Commission’s regulations. Therefore, as required by 10 CFR 50.12(a)(1), the exemption is authorized by law.

### 3.2.2 NO UNDUE RISK TO PUBLIC HEALTH AND SAFETY

As discussed above in the technical evaluation, the proposed changes comply with the NRC’s substantive safety regulations. Therefore there is no undue risk to the public health and safety.

### 3.2.3 CONSISTENT WITH COMMON DEFENSE AND SECURITY

The proposed exemption would allow changes as described above in the technical evaluation, thereby departing from the AP1000 certified (Tier 1) design information. The change does not alter or impede the design, function, or operation of any plant structures, systems, or components associated with the facility’s physical or cyber security and, therefore, does not affect any plant equipment that is necessary to maintain a safe and secure plant status. In addition, the changes have no impact on plant security or safeguards. Therefore, as required by 10 CFR 50.12(a)(1), the staff finds that the common defense and security is not impacted by this exemption.

### 3.2.4 SPECIAL CIRCUMSTANCES

Special circumstances, in accordance with 10 CFR 50.12(a)(2), are present, in part, whenever application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule. The underlying purpose of the Tier 1 information is to ensure that a licensee will safely construct and operate a plant based on the certified information found in the AP1000 DCD, which was incorporated by reference into the VEGP Units 3 and 4 licensing basis. The proposed changes described in the above technical evaluation do not impact the ability of any structures, systems, and components (SSCs) to perform their functions or negatively impact safety.

Special circumstances are present in the particular circumstances discussed in LAR 18-024 because the application of the specified Tier 1 information is not necessary to achieve the underlying purpose of the rule. The proposed changes provide additional clarity to the existing requirement. The proposed changes do not affect any function or feature used for the prevention and mitigation of accidents or their safety analyses, and no safety-related SSC or function is involved. The proposed changes neither adversely impact the ability to meet the design functions of the (SSCs) nor involve a significant decrease in the level of safety provided by the structures, systems, or components. Because the proposed changes are consistent with plant-specific DCD Tier 2 information and the underlying plant design, the changes do not physically affect an SSC. The proposed changes to information in plant-specific DCD Tier 1 continue to provide the detail necessary to implement the corresponding Inspections, Tests, Analyses, and Acceptance Criteria. This exemption request and associated revisions to the Tier 1 information demonstrate that the applicable regulatory requirements will continue to be met. Therefore, for the above reasons, the staff finds that the special circumstances required by 10 CFR 50.12(a)(2)(ii) for the granting of an exemption from the Tier 1 information exist.

### 3.2.5 SPECIAL CIRCUMSTANCES OUTWEIGH REDUCED STANDARDIZATION

This exemption would allow the implementation of changes to Tier 1 information in the PS-DCD and corresponding changes to information to the UFSAR as well as COL license conditions that are being proposed in the LAR. The justification provided in LAR 18-024, the exemption request, and the associated licensing basis mark-ups demonstrate that there is a limited change from the standard information provided in the generic AP1000 DCD. The design functions of the system associated with this request will continue to be maintained because the associated revisions to the Tier 1 information support the design function of the AP1000 containment building. Consequently, the safety impact that may result from any reduction in standardization is minimized, because the proposed design change does not result in a reduction in the level of safety. In addition, the proposed changes reflect the actual detailed and finalized design of the containment building. Based on the foregoing reasons, as required by 10 CFR Part 52.63(b)(1), the staff finds that the special circumstances outweigh any decrease in safety that may result from the reduction of standardization of the AP1000 design.

### 3.2.6 NO SIGNIFICANT REDUCTION IN SAFETY

This exemption would allow the implementation of changes discussed above. The exemption request proposes to depart from the certified design by allowing changes discussed above in the technical evaluation. The changes for consistency will not impact the functional capabilities of any plant systems. The proposed changes will not adversely affect the ability of the plant from performing its design functions, and the level of safety provided by the current systems and equipment therein is unchanged. Therefore, based on the foregoing reasons and as required by 10 CFR 52.7, 10 CFR 52.98(f), and 10 CFR Part 52, Appendix D, Section VIII.A.4, the staff finds that granting the exemption would not result in a significant decrease in the level of safety otherwise provided by the design.

## 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Georgia State official was notified of the proposed issuance of the amendment on February 1, 2019. 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. 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, and that 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* citation(83 FR 47372 published on September 19, 2018). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

Because the exemption is necessary to allow the changes proposed in the license amendment, and because the exemption does not authorize any activities other than those proposed in the license amendment, the environmental consideration for the exemption is identical to that of the license amendment. Accordingly, the exemption 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 needs to be prepared in connection with the issuance of the exemption.

## 6.0 CONCLUSION

The staff has determined that pursuant to Section VIII.A.4 of Appendix D to 10 CFR Part 52, the exemption (1) is authorized by law, (2) presents no undue risk to the public health and safety, (3) is consistent with the common defense and security, (4) presents special circumstances, and (5) does not reduce the level of safety at SNC's facility. Therefore, the staff grants SNC an exemption from the Tier 1 information specified by SNC.

The staff has concluded, based on the considerations discussed in Section 3.1 of this evaluation 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) there is reasonable assurance that 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 to the health and safety of the public. Therefore, the staff finds the changes proposed in this license amendment acceptable.

## 7.0 REFERENCES

1. Vogtle Electric Generating Plant, Request for License Amendment and Exemption Regarding "Request for License Amendment and Exemption; Administrative Changes to Align Initial Test Program (ITP) with Regulatory Guide 1.68 (LAR 18-024)," letter from SNC, dated August 30, 2018, (ADAMS Accession No. ML18242A039).
2. Amendment No. 34 for Vogtle Electric Generating Plant, Units 3 and 4, Request for License Amendment and Exemption (LAR 14-010), dated June 4, 2015, (ADAMS Accession No. ML15138A052).

3. Vogtle Electric Generating Plant, Units 3 and 4, Updated Final Safety Analysis Report, Revision 7 and Tier 1, Revision 6 dated August 9, 2018, (ADAMS Accession No. ML18179A227).
4. Westinghouse AP1000 Design Control Document, Revision 19, dated June 13, 2011, (ADAMS Accession No. ML11171A500).
5. Regulatory Guide 1.68, Revision 3, "Initial Test Programs for Water-Cooled Nuclear Power Plants," March 2007 (ADAMS Accession No. ML070260039)