

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 175 AND 174

TO THE COMBINED LICENSE NOS. NPF-91 AND NPF-92, RESPECTIVELY

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 letter dated October 31, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19304C381), Southern Nuclear Operating Company (SNC) requested that the U.S. 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) 19-018 requested changes to the Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) in COL Appendix C, with corresponding changes to plant specific Tier 1 information, and Updated Final Safety Analysis Report (UFSAR) Tier 2 information (which includes the plant specific DCD (PS-DCD) Tier 2 information). The LAR proposed to modify ITAAC No. 2.2.02.07b.i (Index Number 138) to allow the containment vessel (CV) wetted perimeter measurement to be taken at any elevation between 266 ft. and the spring line, instead of the current requirement of taking the measurement directly at the spring line. The spring line is at an elevation of approximately 244 ft. and is located where the dome transitions to the cylindrical portion of the containment structure.

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.¹ 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

LAR 19-018 proposes to modify the passive containment cooling system (PCS) wetted perimeter test designed to demonstrate that the PCS is able to sufficiently provide water film coverage on the containment surface that meets or exceeds that coverage credited in the approved plant design.

UFSAR, Section 6.2.2, “Passive Containment Cooling System,” states the following regarding the PCS:

The [PCS] is an engineered safety features system. Its functional objective is to reduce the containment temperature and pressure following a loss of coolant accident (LOCA) or main steam line break (MSLB) accident inside the containment by removing thermal energy from the containment atmosphere. The [PCS] also serves as the means of transferring heat to the safety-related ultimate heat sink for other events resulting in a significant increase in containment pressure and temperature.

The [PCS] limits releases of radioactivity (post-accident) by reducing the pressure differential between the containment atmosphere and the external environment, thereby diminishing the driving force for leakage of fission products from the containment to the atmosphere. The [PCS] also serves as the means of transferring heat to the safety-related ultimate heat sink for other events resulting in a significant increase in containment pressure and temperature.

The [PCS] is capable of removing sufficient thermal energy including subsequent decay heat, from the containment atmosphere following a design basis event resulting in containment pressurization such that the containment pressure remains below the design value with no operator action required for 72 hours.

As noted in UFSAR Section 6.2.2.4, “[s]ystem actuation consists of opening the passive containment cooling water storage tank isolation valves. This allows the passive containment cooling water storage tank water to be delivered to the top, external surface of the steel containment shell. The flow of water, provided entirely by the force of gravity, forms a water film over the dome and side walls of the containment structure.”

The staff considered the following regulatory requirements in reviewing the LAR.

¹ 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.

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, 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 a change to COL Appendix C ITAAC information, with corresponding changes to the associated PS-DCD Tier 1 information. Therefore, NRC approval is required prior to making the plant specific proposed changes in this license amendment request.

10 CFR 52.97(b) requires that the COL identify the ITAAC, including those applicable to emergency planning, that the licensee shall perform, and the acceptance criteria that, if met, are necessary and sufficient to provide reasonable assurance that the facility has been constructed and will be operated in conformity with the license, the Atomic Energy Act of 1954, as amended (AEA), and the Commission's rules and regulations.

The specific NRC technical requirements applicable to LAR 19-018 are the general design criteria (GDC) in Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities." In particular, these technical requirements include the following GDC:

10 CFR 50, Appendix A, GDC 40, "Testing of containment heat removal system," states that "[t]he containment heat removal system shall be designed to permit appropriate periodic pressure and functional testing to assure (1) the structural and leaktight integrity of its components, (2) the operability and performance of the active components of the system, and (3) the operability of the system as a whole, and under conditions as close to the design as practical the performance of the full operational sequence that brings the system into operation, including operation of applicable portions of the protection system, the transfer between normal and emergency power sources, and the operation of the associated cooling water system."

10 CFR 50, Appendix A, GDC 44, "Cooling water," states that "[a] system to transfer heat from structures, systems, and components important to safety, to an ultimate heat sink shall be provided. The system safety function shall be to transfer the combined heat load of these structures, systems, and components under normal operating and accident conditions."

10 CFR 50, Appendix A, GDC 46, "Testing of cooling water system," states that "[t]he cooling water system shall be designed to permit appropriate periodic pressure and functional testing to assure (1) the structural and leaktight integrity of its components, (2) the operability and the performance of the active components of the system, and (3) the operability of the system as a whole and, under conditions as close to design as practical, the performance of the full operational sequence that brings the system into operation for reactor shutdown and for loss-of-coolant accidents, including operation of applicable portions of the protection system and the transfer between normal and emergency power sources."

3.0 TECHNICAL EVALUATION

3.1 TECHNICAL EVALUATION OF THE REQUESTED CHANGES

As described in LAR 19-018, SNC proposes to modify the ITAAC for the PCS wetted perimeter test. Specifically, SNC has determined that testing at the current spring line causes difficulties with the installation of the PCS air baffles. To correct this, SNC proposes to revise COL Appendix C and the corresponding PS-DCD Tier 1 information. The proposed change revises the CV wetted perimeter measurement to be taken at any elevation between the 266 ft. elevation and the spring line instead of the current requirement of taking the measurement directly at the spring line. The LAR does not propose to change or modify any safety-related equipment, design code limit, safety-related function, safety-related analysis input or result. No safety analysis or design basis acceptance limit or criterion would be challenged or exceeded.

In addition to the Tier 1 changes to ITAAC Table 2.2.2-3, the LAR also includes corresponding Tier 2 changes including: (1) Note 1 in UFSAR Table 3.9-17, "System Level Operability Test Requirements;" (2) UFSAR Subsections 6.2.2.4.2, "Preoperational Testing," and 14.2.9.1.4, "Passive Containment Cooling System Testing;" and (3) Note 3 in UFSAR Table 6.2.2-1, "Passive Containment Cooling System Performance Parameters."

As noted in the LAR and UFSAR Subsection 6.2.1.1.3, "Design Evaluation," the design basis accident containment analyses have been performed using the WGOTHIC computer code in accordance with the WGOTHIC methodology described in WCAP-15846P, "WGOTHIC Application to AP600 and AP1000," Revision 5.² As noted in the LAR, the analysis assumes at least 90 percent water film coverage starting from elevation 266 ft. down to the annulus drains at the bottom of the upper annulus.

NRC Staff Evaluation

VEGP Units 3 and 4 COL Appendix C ITAAC 2.2.02.07b.i (Index Number 138) requires the PCS flow test be performed and requires the containment shell water film coverage to be measured at the spring line.

SNC determined the air baffle panels (also PCS components) are located at an elevation above the spring line, which causes construction and testing difficulties. To mitigate this difficulty, SNC proposed to modify COL Appendix C ITAAC 2.2.02.07b.i (Index Number 138) to allow the CV wetted perimeter measurement to be taken at any elevation between the 266 ft. elevation and the spring line. In addition, SNC proposes to modify other involved UFSAR sections that

² WCAP-15846P was submitted for NRC review on December 21, 2017, as part of LAR 17-043 (ADAMS Accession No. ML18029A247) regarding containment pressure analysis. The NRC staff approved the LAR on November 7, 2018 (ADAMS Accession No. ML18289A742).

reference the measurement location as being taken at the spring line to instead reference the measurement being performed in this range.

The NRC staff reviewed WCAP-15846P, Revision 5, which details the evaluation of the large-scale test (LST) data and states the following:

An evaluation of the [LST data] yielded some additional conclusions with respect to film coverage and heat removal:

- Evaporation is the primary mode of heat removal from the outside of the vessel. Sensible heating of the subcooled liquid film, convection, and radiation are second order.
- Striped film coverage provided better heat removal than forced quadrant coverage for the same wetted coverage.
- The highest heat flux occurred near the top of the dome at the elevation where the external water film was applied for all of the wetted LSTs (except the horizontal, high-velocity, steam jet injection case). Although the dome represents about 30 percent of the heat transfer surface area, approximately 40 percent of the total heat removal occurred on the dome and 60 percent on the cylindrical sidewalls.

The NRC staff noted that the LST test data indicated that evaporation is the primary method of heat removal. Therefore, the water distribution tests are important to confirm that measurement of the wetted coverage at the location range requested in LAR 19-018 is appropriate.

The NRC staff noted that Westinghouse Electric Company performed water distribution tests as part of the design certification. Section 7 of WCAP-15846P, Revision 5 notes that the tests demonstrated the wetted perimeter does not change much over the steeply sloped region between the second weir and the top of the vertical sidewall. The wetted perimeter input values are the same for each modeled segment representing the vertical sidewall. The NRC staff found that the water distribution test results demonstrate that 90 percent coverage above the spring line to the 266 ft. elevation was maintained.

During a public meeting on January 9, 2020 (ADAMS Accession No. ML20014D479), the NRC staff expressed a concern that air baffle mounting brackets, lifting lugs, and weldments for temporary equipment like scaffolding would deflect the water film such that the wetted perimeter measured at the spring line would be less than that measured above the welded components. The licensee stated that the water distribution tests included the baffle mounting brackets, both meridional and circumferential welded joints, and the maximum allowable plate misalignment. The test demonstrated adequate water film coverage. Subsequent to the meeting, the staff confirmed in WCAP-15846P, Revision 5 that the water distributions tests accounted for these items. In addition, the licensee stated that the lifting lugs and components to support the temporary scaffolding on the dome have been removed and the dome ground smooth. To confirm that the lifting lugs and components to support the temporary scaffolding on the dome are not part of the approved design, the NRC staff reviewed the following documents:

- AP1000 containment vessel top and bottom head attachment plates list (drawings APP-MV50-V1-009, and APP-MV50-V1-0091)
- AP1000 Containment Vessel Cylinder Attachment Plate Details (drawing APP-MV50-V1-011)
- AP1000 containment vessel top head attachment plates location drawing
- AP1000 Containment vessel air baffle U-support location drawing (drawings APP-MV50-V1-092, APP-MV50-V1-096, and APP-MV50-V1-097).

The staff confirmed that the lifting lugs and attachment plates for temporary scaffold components are not part of the approved design for the AP1000 and thus VEGP. Therefore, the staff concluded that the WCAP-15846P, Revision 5, analysis adequately justify the change to the ITAAC measurement location from the spring line to any elevation between the 266 ft. elevation and the spring line.

UFSAR Subsection 6.2.2.4.2 describes preoperational testing of the PCS performed to verify adequate cooling of the containment. The containment coverage will be measured at the base of the upper annulus in addition to the coverage at the location requested by LAR 19-018 for the full flow case, using the PCS water storage tank delivering to the containment shell, and a lower flow case with both PCS recirculation pumps delivering to the containment shell. The NRC staff considered that the measurement at the base of the upper annulus provides additional assurance that the PCS is verified to provide adequate cooling of the containment.

Based on the LST results and the water distribution testing, confirmation that the WCAP-15846P, Revision 5 analysis aligns with the approved design of AP1000 and VEGP, and verification that 90 percent wetted perimeter coverage at the base of the upper annulus is in accordance with the preoperational testing described in Section 6.2.2.4 of the UFSAR, the staff found the modification of the PCS wetted perimeter test modification measurement location acceptable. As such, the staff found the requirements of Appendix A to 10 CFR Part 50, Criterion 40 for testing of containment heat removal system, Criterion 46 for testing applicable portions of the cooling water system, and Criterion 44 for heat transfer from the containment atmosphere to the ultimate heat sink, will continue to be met. The NRC staff also found the corresponding changes in UFSAR Table 3.9-17, Note 1; UFSAR Subsection 6.2.2.4.2; UFSAR, Table 6.2.2-1, Note 3; and UFSAR Subsection 14.2.9.1.4 to be acceptable.

In addition, the staff noted the above proposed changes do not represent any technical changes to the design, construction, or operation of the plant. No structure, system, and component (SSC), design function, or analysis, as described in the UFSAR, are affected. The staff found that with the proposed change, the ITAAC continues to be sufficient to verify that the facility has been constructed and will be operated in accordance with the license, the AEA, and NRC rules and regulations. Therefore, within the scope of this license amendment, the NRC finds that 10 CFR 52.97(b) is satisfied.

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 the licensee has identified changes to plant-specific Tier 1 information, with corresponding changes to the associated COL Appendix C 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 the licensee could implement modifications to Tier 1 information to the PS-DCD and associated COL Appendix C. 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 19-018. This exemption is a permanent exemption limited in scope to the 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 references 10 CFR 50.12, are met, and that the special circumstances 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 for the NRC to consider granting an exemption request. The licensee 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 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 in the above technical evaluation, the proposed changes comply with the NRC's substantive safety regulations. Therefore, there is no undue risk to 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 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 ITAAC information is to meet 10 CFR 52.97(b) by providing reasonable assurance that the facility has been constructed and will be operated in accordance with the pertinent requirements in the license, AEA, and NRC rules and regulations. The proposed changes described in the above technical evaluation do not impact the ability of any SSCs to perform their functions or negatively impact safety.

Special circumstances are present in the circumstances discussed in LAR 19-018 because the application of the specified Tier 1 ITAAC information is not necessary to achieve the underlying purpose of the rule. As discussed above, the proposed changes revise the CV wetted perimeter measurement location and do not change or modify any safety-related equipment, design code limit, safety-related function, safety-related analysis input or result. This exemption request and associated revisions to the Tier 1 information and corresponding changes to Appendix C 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 Appendix C that are being proposed in the LAR. The justification provided in LAR 19-018, 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 PCS. 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. 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 this system. The proposed changes will not adversely affect the ability of the PCS to perform 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 12, 2020. The State official had no comments.

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 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 December 17, 2019 (84 FR 68953). 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 the licensee's facility. Therefore, the staff grants the licensee an exemption from the Tier 1 information requested by the licensee.

The staff has concluded, based on the considerations discussed in Section 3.1 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. Southern Nuclear Operating Company, Vogtle Electric Generating Plant Units 3 and 4, "Request for License Amendment and Exemption: PCS Wetted Perimeter Test Modification (LAR-19-018)," October 31, 2019 (ADAMS Accession No. ML19304C381).
2. Vogtle Electric Generating Plant Units 3 and 4, Updated Final Safety Analysis Report, Chapter 3, Design of Structures, Components, Equipment and System, Section 3.9, Revision 8, June 28, 2019 (ADAMS Accession No. ML19171A059).
3. Vogtle Electric Generating Plant Units 3 and 4, Updated Final Safety Analysis Report, Chapter 6, Engineered Safety Features, Revision 8, June 28, 2019 (ADAMS Accession No. ML19171A065).
4. Vogtle Electric Generating Plant Units 3 and 4, Updated Final Safety Analysis Report, Chapter 14, Revision 8, June 28, 2019 (ADAMS Accession No. ML19171A073).
5. AP1000 Design Control Document, Revision 19, June 13, 2011 (ADAMS Accession No. ML11171A500).
6. Combined License NPF-91 for Vogtle Electric Generating Plant Unit 3, Southern Nuclear Operating Company (ADAMS Accession No. ML14100A106).
7. Combined License NPF-92 for Vogtle Electric Generating Plant Unit 4, Southern Nuclear Operating Company (ADAMS Accession No. ML14100A135).
8. Southern Nuclear Operating Company, Vogtle Electric Generating Plant Units 3 and 4, "Request for License Amendment and Exemption: Containment Pressure Analysis (LAR-17-043)," December 21, 2017 (ADAMS Accession No. ML18029A247).
9. U.S. Nuclear Regulatory Commission, Vogtle Electric Generating Plant Units 3 and 4, "Issuance of Amendments and Granting of Exemptions RE: Containment Pressure Analysis (LAR 17-043) (EPID L-2018-LLA-0005)," November 7, 2018 (ADAMS Accession No. ML18289A742).