

SAFETY EVALUATION BY THE OFFICE OF NEW REACTORS  
RELATED TO EXEMPTION AND AMENDMENT NOS. 88 AND 87  
TO THE COMBINED LICENSE NO. 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 letter dated March 8, 2017, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17067A517), Southern Nuclear Operating Company, Inc., (SNC/licensee) requested that the U.S. Nuclear Regulatory Commission (NRC) amend the combined licenses (COL) for Vogtle Electric Generating Plant (VEGP) Units 3 and 4, COL Numbers NPF-91 and NPF-92, respectively. The letter requested changes to the VEGP COL Appendix C, Table 3.3-6 (and associated plant-specific Tier 1 table) to capture additional raceway separation configurations for the Main Control Room (MCR) and Remote Shutdown Room (RSR) as discussed in the VEGP Updated Final Safety Analysis Report (UFSAR). In addition to those changes, the licensee proposed editorial changes to improve the readability of the text by deleting one particular extraneous period that appears only in the plant-specific Tier 1 Table 3.3-6 and the word “except” in certain parts of the COL Appendix C Table 3.3-6 (and associated plant-specific Tier 1 table).

The license amendment request (LAR) 17-007 would revise the COL in the form of departures from the incorporated plant-specific Design Control Document (DCD) Tier 1 information. More specifically, the proposed amendment involves changes to the VEGP COL Appendix C and associated plant-specific DCD Tier 1 information to capture raceway separation requirements in the MCR and RSR for consistency with the VEGP UFSAR.

The licensee has also requested an exemption from the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 52, Appendix D, “Design Certification Rule for the AP1000

Design,” Section III.B, “Scope and Contents.” This exemption request will 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 Tier 1 information, the NRC must find the licensee’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 BASIS

The onsite power system is comprised of the main ac power system and the dc power system, as described in UFSAR Subsection 8.1.2. The main ac power system is a non-Class 1E system and the onsite standby power system, powered by the two onsite standby diesel generators, supplies power to selected loads in the event of loss of other ac power sources. The dc power system consists of two independent systems: Class 1E dc system and non-Class 1E dc system. Four independent divisions of Class 1E 250 Vdc battery systems are provided for the Class 1E dc and UPS system. Divisions B and C have two battery banks; one battery bank is sized to supply power to safety-related loads for at least 24 hours and the other battery bank is sized to supply power to a second set of safety-related loads for at least 72 hours following a design basis event (including the loss of all ac power). Divisions A and D have one 24-hour battery bank. Uninterruptible power supplies (UPS) to the four independent divisions of the Class 1E 120 Vac instrument buses are included in the Class 1E dc system. The UPS to the four independent divisions of the Class 1E 120 Vac instrument buses are included in the Class 1E dc system.

With regard to the raceway and cable routing, as discussed in UFSAR Section 8.3.2.4.2, there are five separation groups for the cable and raceway system: Groups A, B, C, D, and N. Separation group A contains safety-related circuits from Division A. Similarly, separation group B contains safety-related circuits from Division B; Group C from Division C; Group D from Division D; and Group N from nonsafety-related circuits. Cables of one separation group are run in separate raceway and physically separated from cables of other separation groups. Group N raceways are separated from safety-related Groups A, B, C and D. Non-Class 1E circuits are electrically isolated from Class 1E circuits, and Class 1E circuits from different separation groups are electrically isolated by isolation devices, shielding and wiring techniques, physical separation (in accordance with Regulatory Guide (RG) 1.75 “Criteria for Independence of Electrical Safety Systems,” for circuits in raceways), or an appropriate combination thereof.

10 CFR Part 50, Appendix A, General Design Criterion (GDC) 17, “Electric power systems,” requires, in part, that an onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

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<sup>1</sup> While the licensee 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 generic 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.

10 CFR Part 50, Appendix A, GDC 18, "Inspection and testing of electric power systems," requires that electric power systems important to safety shall be designed to permit appropriate periodic inspection and testing of important areas and features, such as wiring, insulation, connections, and switchboards, to assess the continuity of the systems and the condition of their components. The systems shall be designed with a capability to test periodically (1) the operability and functional performance of the components of the systems, such as onsite power sources, relays, switches, and buses, and (2) the operability of the systems as a whole and, under conditions as close to design as practical, the full operation sequence that brings the systems into operation, including operation of applicable portions of the protection system, and the transfer of power among the nuclear power unit, the offsite power system, and the onsite power system.

10 CFR Part 50, Appendix A, GDC 19, "Control room," requires, in part, that a control room shall be provided from which actions can be taken to operate the nuclear power unit safely under normal conditions and to maintain it in a safe condition under accident conditions, including loss-of-coolant accidents. Adequate radiation protection shall be provided to permit access and occupancy of the control room under accident conditions without personnel receiving radiation exposures in excess of 5 rem whole body, or its equivalent to any part of the body, for the duration of the accident. Equipment at appropriate locations outside the control room shall be provided (1) with a design capability for prompt hot shutdown of the reactor, including necessary instrumentation and controls to maintain the unit in a safe condition during hot shutdown, and (2) with a potential capability for subsequent cold shutdown of the reactor through the use of suitable procedures.

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

According to 10 CFR 52.63(b)(1), a licensee who references a design certification rule may request NRC approval for an exemption from one or more elements of the certification information. The Commission may grant such a request only 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, and if the special circumstances present 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).

According to 10 CFR 52.98(f), any modification to, addition to, or deletion from the terms and conditions of a COL, including any modification to, addition to, or deletion from the inspections, tests, analyses and acceptance criteria (ITAAC) contained in the license is a proposed amendment to the license. Appendix C of COLs NPF-91 and NPF-92 contain information that the licensee is proposing to modify. Therefore, the proposed changes require a license amendment.

RG 1.75 endorses, with exceptions, Institute of Electrical and Electronics Engineers Standard (IEEE Std.) 384-1992, "IEEE Standard. Criteria for Independence of Class 1E Equipment and Circuits." RG 1.75 provides criteria for establishing and maintaining the independence of safety-related equipment and circuits, and auxiliary supporting features by physical separation and electrical isolation.

### 3.0 TECHNICAL EVALUATION

#### 3.1 EVALUATION OF EXEMPTION

Section VIII.A.4 of Appendix D to 10 CFR Part 52 requires a licensee to obtain an exemption to depart from the Tier 1 information of the generic AP1000 DCD. Because the licensee has identified changes to plant-specific Tier 1 information, with corresponding changes to the associated COL Appendix C information during design finalization of raceways in the MCR and RSR, resulting in the need for a departure, an exemption from the certified design information within plant-specific Tier 1 material is required under 10 CFR 52.63(b)(1) to implement the LAR.

The Tier 1 information for which a plant-specific departure and exemption was requested includes corresponding changes to COL Appendix C information for reconfiguration of the raceways in the MCR and RSR. The result of this exemption would be that the licensee could implement modifications to Tier 1 information described and justified in LAR-17-007 if, and only if, the NRC approves LAR-17-007. This 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, is 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 states, the Commission's consideration will be governed by 10 CFR 50.12, "Specific exemptions." 10 CFR 50.12 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 special circumstances for which an exemption may be considered. It is necessary for one of these special circumstances to be present in order 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 the exemption request is presented below.

##### 3.1.1 AUTHORIZED BY LAW

This exemption would allow the licensee to implement a revision to Tier 1, Table 3.3-6, "Inspections, Tests, Analyses, and Acceptance Criteria," in the plant-specific DCD. This exemption is a permanent exemption limited in scope to particular Tier 1 information. Subsequent changes to Tier 1, Table 3.3-6 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. Based on 10 CFR Part 52, Appendix D, Section VIII.A.4, the staff has determined that granting of the licensee'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.

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

The underlying purpose of Appendix D to 10 CFR 52 is to ensure that a licensee will construct and operate the plant based on the approved information found in the DCD incorporated by reference into a licensee's licensing basis. The changes proposed by the licensee do not add or delete systems or equipment as described in Tier 1 of the AP1000 DCD. These changes will not impact the ability of the systems or equipment to perform their design function. Because they will not alter the operation of any plant equipment or systems, these changes do not present an undue risk from existing equipment or systems. These changes do not add any new equipment or system interfaces to the current plant design. The changes described do not introduce any new industrial, chemical, or radiological hazards that would represent a public health or safety risk, nor do they modify or remove any design or operational controls or safeguards intended to mitigate any existing on-site hazards. Furthermore, the proposed changes would not allow for a new fission product release path, result in a new fission product barrier failure mode, or create a new sequence of events that would result in significant fuel cladding failures. Therefore, as required by 10 CFR 50.12(a)(1), the granting of the exemptions will not present undue risk to the public health and safety.

### 3.1.3 CONSISTENT WITH COMMON DEFENSE AND SECURITY

The proposed exemption would allow editorial and consistency changes to elements of the plant-specific Tier 1 DCD. This proposed exemption would be a permanent exemption limited in scope to particular Tier 1, Table 3.3-6 information. Any changes to Tier 1, Table 3.3-6 or any other Tier 1 information would be subject to the exemption process in Section VIII.A.4 of Appendix D to 10 CFR Part 52. 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 exemption is consistent with the common defense and security.

### 3.1.4 SPECIAL CIRCUMSTANCES

Special circumstances, in accordance with 10 CFR 50.12(a)(2)(ii), 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 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 Vogtle Unit 3 and Unit 4's licensing bases. The proposed changes would reconfigure the raceway separation requirements in the MCR and RSR, as presented in Tier 1. These changes would enable the licensee to safely construct and operate the AP1000 facility by clarifying the information mentioned above found in Tier 1, Table 3.3-6 of the DCD.

Special circumstances are present in the particular circumstances discussed in LAR-17-007 because the application of the specified Tier 1 information does not serve the underlying purpose of the rule. The proposed change implements changes to reconfigure the raceway separation requirements in the MCR and RSR, as presented in the Tier 1 ITAAC table. The Tier 1 information in Table 3.3-6 does not include all configurations for raceway separation identified in the current licensing basis. The underlying purpose of the rule is to provide system configurations that are acceptable to safely construct and operate the plant. The changes in the LAR amend Tier 1 information to include additional configurations for raceway separation that serve the underlying purpose of the rule. This exemption request and associated revisions to Tier 1, Table 3.3-6 demonstrate that the applicable regulatory requirements will continue to be met. 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. Therefore, 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.

### 3.1.5 SPECIAL CIRCUMSTANCES OUTWEIGH REDUCED STANDARDIZATION

Under 52.63(b)(1) “[i]n addition to the factors listed in § 52.7, the Commission shall consider whether the special circumstances that § 52.7 requires to be present outweigh any decrease in safety that may result from the reduction in standardization caused by the exemption.” This exemption would allow the implementation of changes to Tier 1, Table 3.3-6 in the DCD as proposed in the LAR so that the design functions of the system associated with this request are consistent with the current design of the plant in supporting the actual system functions. In addition, the exemption would allow implementation of editorial changes that would improve the understandability of the Tier 1 table. This exemption from the certification information will enable the licensee to safely construct and operate the AP1000 facility consistent with the design certified by the NRC in 10 CFR Part 52, Appendix D. Consequently, any decrease in safety impact that may result from any reduction in standardization caused by the exemption is minimized, because the proposed changes involve editorial improvements and corrections to align the plant-specific Tier 1 with the current licensing basis. Based on the foregoing reasons, as required by 10 CFR Part 52.63(b)(1), the staff finds that the special circumstances outweigh the effects the departure has on the standardization of the AP1000 design.

### 3.1.6 NO SIGNIFICANT REDUCTION IN SAFETY

This exemption would allow the implementation of changes to Tier 1, Table 3.3-6 in the DCD as proposed in the LAR. The exemption request proposes to depart from the certified design by reconfiguring the raceway separation requirements in the MCR and RSR, remove the word “except” from the first identified configuration for each acceptance criteria and remove an inadvertently added period. The proposed changes in this LAR do not affect any function or feature used for the prevention and mitigation of accidents or their safety analyses. The proposed changes do not involve nor interface with any SSC accident initiator or initiating sequence of events related to the accidents evaluated, and therefore do not have an adverse effect on any SSC’s design function. The proposed changes would not adversely affect the ability of the raceway to perform its design functions, and the level of safety provided by the current systems and equipment would be unchanged. Therefore, based on the foregoing reasons and as required by 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.

## 3.2 EVALUATION OF PROPOSED CHANGES

As stated in LAR-17-007, COL Appendix C (and plant-specific Tier 1) ITAAC No. 3.3.00.07d.i, in Table 3.3-6, identifies acceptance criteria regarding inspections of raceways in the MCR and RSR. However, the licensee states that ITAAC No. 3.3.00.07d.i does not currently recognize all of the configurations for raceway separation identified in the licensing basis for the MCR and RSR, as documented in UFSAR Subsection 8.3.2.4.2, "Raceway and Cable Routing."

The licensee proposes to revise COL Appendix C (and plant-specific Tier 1) Table 3.3-6, ITAAC No. 3.3.00.07d.i to define the minimum MCR and RSR raceway separation requirements consistent with IEEE Std. 384-1992, and consistent with the exception identified in UFSAR Subsection 8.3.2.4.2. This proposed change includes adding to ITAAC No. 3.3.00.07d.i the following separation requirements for the MCR and RSR, as identified in UFSAR Subsection 8.3.2.4.2:

- For configurations involving open top raceways, the minimum vertical separation is 3 inches and the minimum horizontal separation is 1 inch.

Note - This is the existing configuration and is only changed by adding text to the configuration requirement clarifying it is applicable to open top raceways. (ITAAC No. 3.3.00.07d.i.1)

- For configurations involving an enclosed raceway and an open raceway, the minimum horizontal and vertical separation is 1 inch if the enclosed raceway is below the open raceway. (ITAAC No. 3.3.00.07d.i.2)
- For configurations involving enclosed raceways, the minimum separation is 1 inch in both horizontal and vertical directions. (ITAAC No. 3.3.00.07d.i.3)

Furthermore, LAR 17-007 proposes the following editorial corrections in ITAAC No. 3.3.00.07d.ii.a, b, and c (and corresponding ITAAC in plant-specific Tier 1 Table 3.3-6): revise the text to remove the word "except" from the end of the first identified configuration for each acceptance criteria, and in plant-specific Tier 1 Table 3.3-6, remove a period from ITAAC No. 3.3.00.07d.ii.c, configuration #2, which was inadvertently added.

The staff evaluated the information provided in the LAR, and determined that the proposed changes do not adversely affect the design of the plant electrical systems. This change does not add or remove any equipment from the onsite or offsite power electrical systems. Therefore, the functions of the cabling in the MCR and RSR are not changed and the safety equipment continues to perform its intended safety function, thus meeting the requirements of GDC 17. Additionally, the staff evaluated the inspections of raceway configurations, and determined that the proposed changes do not adversely affect inspections of cabling in raceways for Class 1E and non-Class 1E divisions in the MCR and RSR. These changes provide for acceptable raceway configurations, thus meeting the requirements of GDC 18. This change does not impact the ability of operators to maintain the plant safely under normal or accident conditions. In addition, the radiological consequences for the MCR and RSR are not impacted and personnel dose levels are not changed. Therefore, the staff finds that the control room radiological habitability dose from GDC 19 is still met. In summary, based upon the review, the staff concludes that there is reasonable assurance that the requirements of GDC 17, GDC 18, and GDC 19 will continue to be met, and that the design is consistent with the existing

licensing basis, including RG 1.75 and IEEE Std. 384-1992 criteria for raceway separation. Therefore, the staff finds the proposed changes to be acceptable.

The staff reviewed the proposed changes using guidelines from IEEE Std. 384-1992, which is endorsed by RG 1.75, Rev. 3 for this safety evaluation. As stated in LAR-17-007, the licensee uses IEEE Std. 384-1981 to justify why the proposed changes to the raceway separation criteria for the MCR and RSR and the affected sections in COL Appendix C are acceptable.

In Table 3.3-6, ITAAC No. 3.3.00.07d.i.1 of Appendix C of the COL, the licensee seeks to revise the design requirements by adding additional text to the beginning of the existing configuration. The staff verified that the proposed changes, to have a minimum vertical separation of 3 inches and the minimum horizontal separation of 1 inch for configurations involving open top raceways, are consistent with UFSAR Subsection 8.3.2.4.2, RG 1.75 and IEEE Std. 384-1992, Section 6.1.3.3, "Table 1-Minimum Separation Distances for Nonhazard Areas." These changes do not involve a physical change to the plant or changes to the original design function of the plant. The staff finds these changes acceptable, since the licensee conforms to the guidance endorsed in RG 1.75.

In Table 3.3-6, ITAAC No. 3.3.00.07d.i.2 of Appendix C of the COL, the licensee seeks to add additional acceptable configurations for raceway separation requirements in the MCR and RSR to the table. The staff verified that the proposed changes, to have a minimum horizontal and vertical separation of 1 inch for configurations involving enclosed raceway and an open raceway, if the enclosed raceway is below the open raceway, are consistent with UFSAR Subsection 8.3.2.4.2, RG 1.75, and IEEE Std. 384-1992, Section 6.1.3.3, "Table 1-Minimum Separation Distances for Nonhazard Areas." These changes do not involve a physical change to the plant or changes to the original design function of the plant. The staff finds these changes acceptable, since the licensee conforms to the guidance endorsed in RG 1.75.

In Table 3.3-6, ITAAC No. 3.3.00.07d.i.3 of Appendix C of the COL, the licensee seeks to add additional acceptable configurations for raceway separation requirements in the MCR and RSR to the table. The staff verified that the proposed changes, to have a minimum separation of 1 inch in both horizontal and vertical directions for configurations involving enclosed raceways, are consistent with RG 1.75 and IEEE Std. 384-1992, Section 6.1.3.3, "Table 1-Minimum Separation Distances for Nonhazard Areas." These changes do not involve a physical change to the plant or changes to the original design function of the plant. The staff finds these changes acceptable, since the licensee conforms to the guidance endorsed in RG 1.75.

The staff concludes that the changes in ITAAC No. 3.3.00.07d.ii.a, b, and c (and corresponding ITAAC in plant-specific Tier 1 Table 3.3-6) to remove the word "except" from the end of the first identified configuration for each acceptance criteria are editorial changes. "Except" is not necessary as the acceptance criteria already states that the inspection must confirm that separation meets one of the listed requirements. Additionally, in plant-specific Tier 1, Table 3.3-6 only, a misplaced period is removed from ITAAC No. 3.3.00.07d.ii.c, configuration #2. This change does not adversely affect the design commitment or acceptance criteria as this change is editorial in nature. The staff verified that the proposed changes are consistent with the remainder of the information within the table and editorial in nature. These changes do not impact equipment or system functionality or change the original design function of the plant. The staff reviewed the updated information, and confirmed that it provides consistency.

#### 4.0 SUMMARY

In LAR-17-007, the licensee proposed to make changes that would affect the COL Appendix C, and the corresponding plant-specific Tier 1 information. The proposed changes add additional acceptable configurations for raceway separation requirements in the MCR and RSR, remove the word “except” from the end of the first identified configuration for each acceptance criteria and remove an inadvertently added period, as presented in Tier 1 Table 3.3-6. These changes will enable the licensee to safely construct and operate the AP1000 facility consistent with the design certified by the NRC by clarifying the information mentioned above found in Tier 1, Table 3.3-6 of the DCD. The staff reviewed the proposed changes in Section 3.2 of this safety evaluation and finds the additions to the descriptions of the raceway separation criteria for the MCR and RSR and the affected sections in COL Appendix C, and its corresponding plant-specific DCD Tier 1 acceptable in accordance with 10 CFR 50, Appendix A, GDC 17, 18, 19 and the guidance provided in RG 1.75 and IEEE Std. 384-1992.

#### 5.0 STATE CONSULTATION

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

#### 6.0 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.” Based on the staff evaluation and conclusion stated in Section 3.2, the NRC staff 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 previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (82 FR 19105, published on April 25, 2017). 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 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of the exemption.

#### 7.0 CONCLUSION

The NRC 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) is a special circumstance that outweighs the reduction in standardization, and (5) does not significantly

reduce the level of safety at the licensee's facility. Therefore, the staff grants the exemptions from the Tier 1 information specified by the SNC.

The staff has concluded, based on the considerations discussed in Section 3.2 of this safety evaluation and confirming that these changes do not change an analysis methodology, assumptions, or the design itself, that: (1) there is reasonable assurance that 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 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: Consistency Update to the Raceway Separation Requirements in the Main Control Room (MCR) and Remote Shutdown Room (RSR) (LAR-17-007)," dated March 8, 2017 (ADAMS Accession No. ML17067A517).
2. Vogtle Units 3 and 4, Updated Final Safety Analysis Report, Revision 5 and Tier 1 dated April 6, 2016 (ADAMS Accession No. ML16174A168).
3. AP1000 Design Control Document, Revision 19, dated June 13, 2011 (ADAMS Accession No. ML11171A500).
4. Combined License NPF-91 for Vogtle Electric Generating Plant Unit 3, Southern Nuclear Operating Company (ADAMS Accession No. ML14100A106).
5. Combined License NPF-92 for Vogtle Electric Generating Plant Unit 4, Southern Nuclear Operating Company (ADAMS Accession No. ML14100A135).
6. Regulatory Guide 1.75, "Criteria for Independence of Electrical Safety Systems," (ADAMS Accession No. ML043630448).
7. IEEE Std. 384-1992, "IEEE Standard Criteria for Independence of Class 1E Equipment and Circuits."