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10 CFR 50.90
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U.S. Nuclear Regulatory Commission
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Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 and 4
Request for License Amendment and Exemption:
Clarification of Raceway and Raceway System Designations (LAR-17-008)

Ladies and Gentlemen:

Pursuant to 10 CFR 52.98(c) and in accordance with 10 CFR 50.90, Southern Nuclear Operating Company (SNC), the licensee for Vogtle Electric Generating Plant (VEGP) Units 3 and 4, requests an amendment to Combined License Numbers NPF-91 and NPF-92, for VEGP Units 3 and 4, respectively. The requested amendment proposes to depart from approved AP1000 Design Control Document (DCD) Tier 2 information (text and tables) as incorporated into the Updated Final Safety Analysis Report (UFSAR) as plant-specific DCD information, and also proposes to depart from involved plant-specific Tier 1 information (and associated COL Appendix C 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 also requested for the plant-specific Tier 1 material departures.

The proposed departures consist of changes to COL Appendix C (and plant-specific Tier 1) in regards to raceways that are designated with an electrical classification. This includes proposed changes to ITAAC and UFSAR information in various locations. The proposed changes consist of the following:

1) Revising licensing basis text in COL Appendix C (and plant-specific Tier 1) and UFSAR Tier 2 that refers to raceways with an electrical classification,

2) Revising licensing basis text in COL Appendix C (and plant-specific Tier 1) to change the reference from fiber optic cables to communication cables, and

3) Revising COL Appendix C (and plant-specific Tier 1) ITAAC acceptance criteria to remove ambiguity as to the location of inspected electrical cables.

Enclosure 1 provides the description, technical evaluation, regulatory evaluation (including the Significant Hazards Consideration Determination), and environmental considerations for the proposed changes in the License Amendment Request (LAR).

Enclosure 2 provides the background and supporting basis for the requested exemption.

Enclosure 3 provides the proposed changes to the VEGP 3&4 licensing basis documents.

The changes proposed in this LAR are consistent in technical content with LAR 17-02, submitted by South Carolina Electric & Gas Company (SCE&G) on February 16, 2017 [ADAMS Accession No. ML17047A192], and accepted for technical review on March 10, 2017 [ML17069A085].

SNC confirms that the changes requested in this LAR are not technically linked to any licensing basis document changes requested in LAR-17-006, Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Consolidation, which was submitted by SNC letter ND-17-0213 on March 2, 2017 [ML17061A747] or LAR-17-007, Consistency Update to the Raceway Separation Requirements in the Main Control Room (MCR) and Remote Shutdown Room (RSR), which was submitted by SNC letter ND-17-0239 on March 8, 2017 [ML17067A517].

This letter contains no regulatory commitments. This letter has been reviewed and confirmed to not contain security-related information.

SNC requests staff approval of this license amendment by November 16, 2017, to support the closure of Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) regarding inspections to confirm the color codes used to identify Class 1E cable divisions in the auxiliary building radiologically controlled area. Approval by this date will allow sufficient time to implement the licensing basis changes to support ITAAC closure. SNC expects to implement this proposed amendment (through incorporation into the licensing basis documents; e.g., the UFSAR) within 30 days of approval of the requested changes. SCE&G has indicated that the requested approval date for the Virgil C. Summer Nuclear Station (VCSNS) Units 2 and 3 license amendment request for this topic is January 3, 2018.

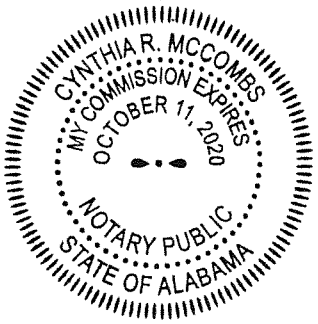
In accordance with 10 CFR 50.91, SNC is notifying the State of Georgia of this LAR by transmitting a copy of this letter and enclosures to the designated State Official.

Should you have any questions, please contact Mr. Adam G. Quarles at (205) 992-7031.

Mr. Brian H. Whitley states that: he is the Regulatory Affairs Director of Southern Nuclear Operating Company; he is authorized to execute this oath on behalf of Southern Nuclear Operating Company; and to the best of his knowledge and belief, the facts set forth in this letter are true.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY



Brian H. Whitley

BHW/NH/ljs

Sworn to and subscribed before me this 15th *day of* March, *2017*

Notary Public: Cynthia R. McCombs

My commission expires: October 11, 2020

Enclosures: 1) Vogtle Electric Generating Plant (VEGP) Units 3 and 4 – Request for License Amendment: Clarification of Raceway and Raceway System Designations (LAR-17-008)

2) Vogtle Electric Generating Plant (VEGP) Units 3 and 4 – Exemption Request: Clarification of Raceway and Raceway System Designations (LAR-17-008)

3) Vogtle Electric Generating Plant (VEGP) Units 3 and 4 – Proposed Changes to the Licensing Basis Documents (LAR-17-008)

cc:

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Southern Nuclear Operating Company

ND-17-0400

Enclosure 1

Vogtle Electric Generating Plant (VEGP) Units 3 and 4

Request for License Amendment:

Clarification of Raceway and Raceway System Designations

(LAR-17-008)

(Enclosure 1 consists of 12 pages, including this cover page.)

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Pursuant to 10 CFR 52.98(c) and in accordance with 10 CFR 50.90, Southern Nuclear Operating Company (SNC, or the "Licensee") hereby requests an amendment to Combined License (COL) Nos. NPF-91 and NPF-92 for Vogtle Electric Generating Plant (VEGP) Units 3 and 4, respectively.

1. SUMMARY DESCRIPTION

The proposed changes would revise the Licensing Basis Documents to clarify text that currently refers to raceways with an electrical classification (i.e., Class 1E / non-Class 1E). This includes rewording ITAAC and UFSAR information in various locations to clarify that any text referring to Class 1E or non-Class 1E raceways or raceway systems is instead referring to raceways or raceway systems that route Class 1E or non-Class 1E circuits.

The proposed changes would also revise COL Appendix C and corresponding plant-specific Tier 1 Section 3.3, item 7.a information. This text refers to "fiber optic cables associated with only one division." However, the corresponding ITAAC (i.e., Table 3.3-6 ITAAC Nos. 3.3.00.07aa, 3.3.00.07ab, and 3.3.00.07ac) refer to "communication cables associated with only one division." For consistency, COL Appendix C (and plant-specific Tier 1) Section 3.3 item 7.a is revised to match the associated ITAAC in the same section.

The proposed changes would also clarify COL Appendix C (and plant-specific Tier 1) ITAAC Nos. 3.3.00.07aa, 3.3.00.07ab, and 3.3.00.07ac acceptance criteria, which are ambiguously worded. The current text is not clear as to which Class 1E electrical cables are inspected as part of each ITAAC.

The requested amendment requires changes to the UFSAR in the form of departures from the plant-specific Design Control Document (DCD) Tier 2 information (as detailed in Section 2), and involves changes to related plant-specific Tier 1 (and COL Appendix C). This enclosure requests approval of the license amendment necessary to implement the Tier 2 and COL Appendix C changes. Enclosure 2 requests the exemption necessary to implement the involved changes to the plant-specific DCD Tier 1 information.

2. DETAILED DESCRIPTION

General System Description

Raceway Systems

Raceway systems are designed and used in the AP1000 plant for supporting, protecting, and routing electrical and instrumentation circuits. As stated in UFSAR Subsections 8.3.1.3.1 and 8.3.2.4.2, a raceway system is the complete assembly of the raceway (e.g., conduit, cable tray, or wireway) and the raceway supports. They are used within the AP1000 main ac and dc power systems and the various instrumentation and control (I&C) systems. This includes safety-related and nonsafety-related systems, such as the Class 1E dc and uninterruptible power supply system (IDS), the protection and safety monitoring system (PMS), and the plant control system (PLS). The raceway systems are designed to protect

circuits from seismic events and fire propagation, and play a role in the physical separation between circuits. Raceway systems that route Class 1E circuits are designed to equipment Class C and seismic Category I requirements to prevent failure during a seismic event.

AP1000 Classification System

AP1000 structures, systems, and components (SSCs) are classified as equipment Class A, B, C, D, E, F, G, L, P, R, or W per the AP1000 classification system discussed in UFSAR Subsection 3.2.2. In addition, electrical equipment receives an electrical designation of Class 1E or non-Class 1E.

- Mechanical Classification: Mechanical equipment, such as a raceway, receives an equipment classification. For mechanical equipment, Classes A, B, and C are safety-related classifications and equivalent to American Nuclear Society (ANS) Safety Class 1, 2, and 3. Equipment Class D is a nonsafety classification with special requirements for procurement, inspection, or monitoring. Equipment Classes E, F, G, L, P, R, and W are nonsafety-related classifications.

- Electrical Classification: Safety-related electrical equipment, such as electrical circuits, is designed to Institute of Electrical and Electronic Engineers (IEEE) standards for Class 1E. The nonsafety-related electrical equipment and instrumentation is constructed to non-Class 1E IEEE standards and National Electrical Manufacturers Association (NEMA) standards.

Change 1: The licensing basis uses imprecise terms when referring to the classification of raceway systems. In multiple instances it refers to raceways and raceway systems as “Class 1E” or “non-Class 1E.” In these instances, the text is actually referring to raceways or raceway systems that route Class 1E or non-Class 1E circuits. The raceway systems themselves are not Class 1E or non-Class 1E. Raceways and raceway systems are not assigned an electrical classification because they do not serve as an electrical device. Raceway systems are given an equipment classification, not an electrical classification, which depends on their role of providing physical protection and support to the circuits they route. Misinterpretation of this wording could challenge the closure of several electrical Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) due to the fact that raceway systems are not designed to Class 1E or non-Class 1E electrical standards.

This activity changes text that designates raceways or raceway systems with an electrical classification. This includes rewording ITAAC and UFSAR information in various locations. The proposed revised text refers to these as raceways that route Class 1E or non-Class 1E circuits.

Change 2: COL Appendix C (and plant-specific Tier 1) Section 3.3, item 7.a refers to “fiber optic cables associated with only one division.” However, the corresponding ITAAC (i.e., Table 3.3-6 ITAAC Nos. 3.3.00.07aa, 3.3.00.07ab, and 3.3.00.07ac) refer to “communication cables associated with only one division.” For consistency, COL Appendix C (and plant-specific Tier 1) Section 3.3 item 7.a is revised to match the associated ITAAC and the other ITAAC in the same section. Specifically, the reference to fiber optic cables is changed to communication cables. The fiber optic cables referred to in COL Appendix C (and plant-

specific Tier 1) Section 3.3, item 7.a are communication cables, so the wording and intent of the corresponding ITAAC is unchanged.

Change 3: COL Appendix C (and plant-specific Tier 1) ITAAC Nos. 3.3.00.07aa, 3.3.00.07ab, and 3.3.00.07ac acceptance criteria are ambiguously worded. The purpose of these ITAAC is to verify that the electrical cables, the communication cables associated with only one division, and the raceways that route them in various plant locations are identified by the appropriate color code. A different plant area is inspected within each of these three ITAAC. The electrical cables, communication cables, and their raceways inside containment are inspected per ITAAC No. 3.3.00.07aa. The cables and their raceways in the non-radiologically controlled area of the auxiliary building are inspected per ITAAC No. 3.3.00.07ab. The cables and their raceways in the radiologically controlled area of the auxiliary building are inspected per ITAAC No. 3.3.00.07ac. However, the acceptance criteria in each of these ITAAC can be interpreted to require all Class 1E electrical cables, regardless of location, to be verified while only the communication cables inside the respective area are to be verified. If left unchanged, each ITAAC would redundantly require an inspection of all Class 1E electrical cables regardless of location. This is not the intent of each ITAAC. The new sentences clarify that the electrical cables to be inspected in these ITAAC are located in the referenced plant area (i.e., inside containment, in the non-radiologically controlled area of the auxiliary building, or in the radiologically controlled area of the auxiliary building). The intent and scope of the ITAAC is maintained.

Proposed Licensing Basis Changes

Change 1: The following licensing basis changes are made to revise licensing basis text that refers to raceways with an electrical classification. Any reference to a Class 1E or non-Class 1E raceway is reworded so that the text no longer refers to the raceway itself with these electrical classifications. The revisions clarify that only the circuits routed in the raceways are Class 1E or non-Class 1E:

- COL Appendix C (and plant-specific Tier 1) Section 3.3, Item 7.a) is reworded to clarify that the raceways referred to are not Class 1E, but route Class 1E cables.
- COL Appendix C (and plant-specific Tier 1) Table 3.3-6, ITAAC 3.3.00.07:
    - 3.3.00.07aa, 3.3.00.07ab, 3.3.00.07ac Design Commitment (DC) and Inspections, Tests, Analyses (ITA) are reworded to clarify that the raceways referred to in the ITAAC are not Class 1E, but route Class 1E cables.
    - 3.3.00.07ba, 3.3.00.07bb, 3.3.00.07bc ITA are reworded to clarify that the raceways referred to in the ITAAC are not Class 1E, but route Class 1E cables.
    - 3.3.00.07c.i.a, 3.3.00.07c.i.b ITA are reworded to clarify that the raceways referred to in the ITAAC are not Class 1E, but route Class 1E cables.
    - 3.3.00.07d.i, 3.3.00.07d.ii.a, 3.3.00.07d.ii.b, 3.3.00.07d.ii.c, 3.3.00.07d.iii.a, 3.3.00.07d.iii.b, 3.3.00.07d.iii.c, 3.3.00.07d.iv.a, 3.3.00.07d.iv.b, 3.3.00.07d.iv.c, 3.3.00.07d.v.a, 3.3.00.07d.v.b, 3.3.00.07d.v.c ITA and Acceptance Criteria (AC) are reworded to clarify that the raceways referred to in the ITAAC are not Class 1E, but route Class 1E cables.

- UFSAR Subsection 8.1.4.2.1 is reworded to clarify that the raceways referred to are not Class 1E, but route Class 1E cables.

- UFSAR Subsection 8.3.1.3.4 is reworded to clarify that the raceways referred to are not Class 1E, but route Class 1E cables.

- UFSAR Table 9A-2 is reworded to clarify that the cable trays referred to are not Class 1E, but route Class 1E cables.

Change 2: COL Appendix C (and plant-specific Tier 1) Section 3.3, Design Description Item 7.a) is revised to refer to communication cables instead of fiber-optic cables.

Change 3: The Acceptance Criteria for COL Appendix C (and plant-specific Tier 1) ITAAC Nos. 3.3.00.07aa, 3.3.00.07ab, and 3.3.00.07ac are reworded to minimize ambiguity as to the location of the electrical cables to be inspected in each ITAAC.

- COL Appendix C (and plant-specific Tier 1) ITAAC No. 3.3.00.07aa is reworded to clarify that the electrical cables to be inspected are located inside containment.

- COL Appendix C (and plant-specific Tier 1) ITAAC No. 3.3.00.07ab is reworded to clarify that the electrical cables to be inspected are located inside the non-radiologically controlled area of the auxiliary building.

- COL Appendix C (and plant-specific Tier 1) ITAAC No. 3.3.00.07ac is reworded to clarify that the electrical cables to be inspected are located inside the radiologically controlled area of the auxiliary building.

3. TECHNICAL EVALUATION

The changes requested by this LAR are clarification or consistency changes only. No structure, system, or component (SSC) or function is changed by this activity.

Change 1: There is no change to the application of regulatory guides or industry standards to raceways or raceway systems, nor is there a change to how they are designed, fabricated, procured or installed. Raceway systems that route Class 1E circuits will continue to be designated and designed as equipment Class C, safety-related, and seismic Category I.

Change 2: The fiber optic cables referred to in COL Appendix C (and plant-specific Tier 1) Section 3.3, Item 7.a) are communication cables, so the wording and intent of the corresponding ITAAC is unchanged. This change provides consistency between the COL Appendix C (plant-specific Tier 1) Section 3.3, Item 7.a) text and the corresponding ITAAC it describes. The change also makes the terminology in COL Appendix C (and plant-specific Tier 1) Section 3.3, Item 7.a) consistent with the other ITAAC in this section.

Change 3: The intent of the ITAAC is not impacted, nor is the ITAAC scope or closure method. Rewording the ITAAC acceptance criteria provides clarity to the scope of each ITAAC and reduces any potential misinterpretation.

The proposed changes do not affect any function or feature used for the prevention and mitigation of accidents or their safety analyses. No safety-related structure, system, component (SSC) or function is involved. The proposed changes neither involve nor interface with any SSC accident initiator or initiating sequence of events related to the accidents evaluated in the plant-specific DCD or UFSAR. The proposed changes do not affect the radiological source terms (i.e., amounts and types of radioactive materials released, their release rates and release durations) used in the accident analyses. No system or design function or equipment qualification is adversely affected by the proposed changes. The changes do not result in a new failure mode, malfunction or sequence of events that could adversely affect a radioactive material barrier or safety-related equipment. The proposed changes do 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. The proposed changes do not adversely affect any design code limit allowable value or design analysis, nor do they adversely affect any safety analysis input or result or design/safety margin. The proposed changes do not affect plant radiation zones addressed in UFSAR Section 12.3.

4. REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

10 CFR 52.98(f) requires NRC approval for any modification to, addition to, or deletion from the terms and conditions of a Combined License (COL). This activity involves a change to plant-specific Tier 1 (and COL Appendix C) Inspections, Tests, Analyses and Acceptance Criteria information. Therefore, this activity requires a proposed amendment to the COL. Accordingly, NRC approval is required prior to making the plant-specific changes in this license amendment request.

10 CFR 52, 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. This activity involves a change to plant-specific Tier 1 (and COL Appendix C) information and thus requires prior NRC approval.

General Design Criterion (GDC) 2, “Design bases for protection against natural phenomena” states that structures, systems, and components important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches without loss of capability to perform their safety functions. The design bases for these structures, systems, and components shall reflect: (1) Appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding

area, with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated, (2) appropriate combinations of the effects of normal and accident conditions with the effects of the natural phenomena and (3) the importance of the safety functions to be performed. No raceway system function is changed. Raceway systems that carry Class 1E circuits are still classified as equipment Class C and seismic Category I. The scope, intent, and closure method of the associated ITAAC are unchanged. Therefore, GDC 2 is still met.

GDC 22, "Protection system independence" states that the protection system shall be designed to assure that the effects of natural phenomena, and of normal operating, maintenance, testing, and postulated accident conditions on redundant channels do not result in loss of the protection function, or shall be demonstrated to be acceptable on some other defined basis. Design techniques, such as functional diversity or diversity in component design and principles of operation, shall be used to the extent practical to prevent loss of the protection function. No raceway system function is changed. Raceway systems that carry Class 1E circuits are still classified as equipment Class C and seismic Category I. The scope, intent, and closure method of the associated ITAAC are unchanged. Therefore, GDC 22 is still met.

GDC 24, "Separation of protection and control systems" states that the protection system shall be separated from control systems to the extent that failure of any single control system component or channel, or failure or removal from service of any single protection system component or channel which is common to the control and protection systems leaves intact a system satisfying all reliability, redundancy, and independence requirements of the protection system. Interconnection of the protection and control systems shall be limited so as to assure that safety is not significantly impaired. No separation distance between circuits is changed, nor is any change made that impacts the independence of the protection and safety monitoring system. The scope, intent, and closure method of the associated ITAAC are unchanged. Therefore, GDC 24 is still met.

4.2 Precedent

No precedent is identified.

4.3 Significant Hazards Consideration Determination

The proposed changes would revise the Licensing Basis Documents to clarify text that currently refers to raceways with an electrical classification (i.e., Class 1E / non-Class 1E). This includes rewording Tier 2 UFSAR material in various locations and associated text in COL Appendix C (and plant-specific Tier 1) Section 3.3 and multiple (3.3.00.07 series) ITAAC in Table 3.3-6, to clarify that this text is referring to raceways or raceway systems that route Class 1E or non-Class 1E circuits, thus reducing the potential for misinterpretation.

The proposed changes would also revise COL Appendix C (and plant-specific Tier 1) Section 3.3, Item 7.a) information. This text refers to "fiber optic cables associated with only one division." However, the corresponding ITAAC (i.e., Table 3.3-6 ITAAC Nos. 3.3.00.07aa, 3.3.00.07ab, and 3.3.00.07ac) refer to "communication cables associated

with only one division." For consistency, COL Appendix C (and plant-specific Tier 1) Section 3.3 is revised to be consistent with the associated ITAAC and the other ITAAC in the same section. Specifically, the reference to fiber optic cables is changed to communication cables.

The proposed changes would clarify COL Appendix C (and plant-specific Tier 1) ITAAC Nos. 3.3.00.07aa, 3.3.00.07ab, and 3.3.00.07ac acceptance criteria, which are ambiguously worded. The current text is not clear as to which Class 1E electrical cables are inspected as part of the given ITAAC. The new sentence clarifies that the electrical cables to be inspected in the ITAAC are located in the given plant area (i.e., inside containment, in the non-radiologically controlled area of the auxiliary building, or in the radiologically controlled area of the auxiliary building).

The requested amendment proposes changes to Updated Final Safety Analysis Report (UFSAR) Tier 2 information. The changes involve changes to plant-specific Tier 1, along with the corresponding changes to COL Appendix C information.

An evaluation to determine whether or not a significant hazards consideration is involved with the proposed amendment was completed by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

4.3.1 Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

These proposed changes are for clarification and consistency. No structure, system, or component (SSC) or function is changed within this activity. There is no change to the application of regulatory guides or industry standards to raceways or raceway systems, nor is there a change to how they are designed, fabricated, procured or installed. Raceway systems that route Class 1E circuits will continue to be designated and designed as equipment Class C, safety-related, and seismic Category I structures. The proposal to align the text in COL Appendix C (and plant-specific Tier 1) Section 3.3 with the associated ITAAC is made for clarification and consistency to reduce misinterpretation. The proposal to reword multiple ITAAC in 3.3.00.07 does not change the intent of the ITAAC, nor is the ITAAC scope or closure method impacted.

The proposed amendment does not affect the prevention and mitigation of abnormal events; e.g., accidents, anticipated operation occurrences, earthquakes, floods, turbine missiles, and fires or their safety or design analyses. This change does not involve containment of radioactive isotopes or any adverse effect on a fission product barrier. There is no impact on previously evaluated accidents.

Therefore, the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

4.3.2 Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed changes do not involve a new failure mechanism or malfunction, which affects an SSC accident initiator, or interface with any SSC accident initiator or initiating sequence of events considered in the design and licensing bases. There is no adverse effect on radioisotope barriers or the release of radioactive materials. The proposed amendment does not adversely affect any accident, including the possibility of creating a new or different kind of accident from any accident previously evaluated.

Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

4.3.3 Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No

These proposed changes are for clarification and consistency to reduce misinterpretation. No SSC or function is changed within this activity. There is no change to the application of regulatory guides or industry standards to raceways or raceway systems, nor is there a change to how they are designed, fabricated, procured or installed. Raceway systems that route Class 1E circuits will continue to be designated and designed as Equipment Class C, safety-related, and seismic Category I.

The proposed changes would not affect any safety-related design code, function, design analysis, safety analysis input or result, or existing design/safety margin. No safety analysis or design basis acceptance limit/criterion is challenged or exceeded by the requested changes.

Therefore, the proposed amendment does not involve a significant reduction in a margin of safety.

Based on the above, it is concluded that the proposed amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of “no significant hazards consideration” is justified.

4.4 Conclusions

Based on the considerations discussed above, (1) there is reasonable assurance that 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 to the health and safety of the public. The above evaluations demonstrate that the requested changes can be accommodated without an increase in the probability or consequences of an accident previously evaluated, without creating

the possibility of a new or different kind of accident from any accident previously evaluated, and without a significant reduction in a margin of safety. Having arrived at negative declarations with regard to the criteria of 10 CFR 50.92, this assessment determined that the requested change does not involve a significant hazards consideration, and, accordingly, a finding of "no significant hazards consideration" is justified.

5. ENVIRONMENTAL CONSIDERATIONS

The proposed amendment would change text that currently designates raceways or raceway systems with an electrical classification. This includes rewording Tier 2 UFSAR material in various locations and associated text in COL Appendix C (and plant-specific Tier 1) Section 3.3 and multiple (3.3.00.07 series) ITAAC in Table 3.3-6, to clarify that this text is referring to raceways or raceway systems that route Class 1E or non-Class 1E circuits, thus reducing misinterpretation that could challenge the closure of multiple ITAAC due to the fact that raceway systems are not designed to Class 1E or non-Class 1E electrical standards.

The proposed changes would also revise COL Appendix C (and plant-specific Tier 1) Section 3.3, Item 7.a) information. This text refers to "fiber optic cables associated with only one division." However, the corresponding ITAAC (i.e., Table 3.3-6 ITAAC Nos. 3.3.00.07aa, 3.3.00.07ab, and 3.3.00.07ac) refer to "communication cables associated with only one division." For consistency, COL Appendix C (and plant-specific Tier 1) Section 3.3 is revised to be consistent with the associated ITAAC and the other ITAACs in the same section. Specifically, the reference to fiber optic cables is changed to communication cables.

In addition, the proposed changes would clarify COL Appendix C (and plant-specific Tier 1) ITAAC Nos. 3.3.00.07aa, 3.3.00.07ab, and 3.3.00.07ac acceptance criteria, which are ambiguously worded. The current text is not clear as to which Class 1E electrical cables are inspected as part of the given ITAAC. The new sentence clarifies that the electrical cables to be inspected in the ITAAC are located in the given plant area (i.e., inside containment, in the non-radiologically controlled area of the auxiliary building, or in the radiologically controlled area of the auxiliary building).

This review has determined the proposed changes require an amendment to the COL. However, a review of the anticipated construction and operational effects of the requested amendment has determined the requested amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9), in that:

(i) There is no significant hazards consideration.

As documented in Section 4.3, Significant Hazards Consideration Determination, of this license amendment request, an evaluation was completed to determine whether or not a significant hazards consideration is involved by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment." The Significant Hazards Consideration determined that (1) the requested amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated; (2) the requested amendment does not create the possibility of a new or

different kind of accident from any accident previously evaluated; and (3) the requested amendment does not involve a significant reduction in a margin of safety. Therefore, it is concluded that the requested amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of "no significant hazards consideration" is justified.

(ii) There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

The proposed changes are unrelated to any aspects of plant construction or operation that would introduce any changes to effluent types (e.g., effluents containing chemicals or biocides, sanitary system effluents, and other effluents) or affect any plant radiological or non-radiological effluent release quantities. Furthermore, the proposed change does not diminish the functionality of any design or operational features that are credited with controlling the release of effluents during plant operation. Therefore, it is concluded that the proposed amendment does not involve a significant change in the types or a significant increase in the amounts of any effluents that may be released offsite.

(iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed changes do not affect plant radiation zones addressed in UFSAR Section 12.3, and controls under 10 CFR 20 preclude a significant increase in occupational radiation exposure. Therefore, the proposed amendment does not involve a significant increase in individual or cumulative occupational radiation exposure.

Based on the above review of the proposed amendment, it has been determined that anticipated construction and operational impacts of the proposed amendment do not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in the individual or cumulative occupational radiation exposure. Accordingly, the proposed 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 be prepared in connection with the proposed amendment.

6. REFERENCES

None.

Southern Nuclear Operating Company

ND-17-0400

Enclosure 2

Vogtle Electric Generating Plant (VEGP) Units 3 and 4

Exemption Request:

Clarification of Raceway and Raceway System Designations

(LAR-17-008)

(Enclosure 2 consists of nine pages, including this cover page.)

1.0 PURPOSE

Southern Nuclear Operating Company (the Licensee) requests a permanent exemption from the provisions of 10 CFR 52, Appendix D, Section III.B, Design Certification Rule for the AP1000 Design, Scope and Contents, to allow a departure from elements of the certification information in Tier 1 of the generic AP1000 Design Control Document (DCD). The regulation, 10 CFR 52, Appendix D, Section III.B, requires an applicant or licensee referencing Appendix D to 10 CFR Part 52 to incorporate by reference and comply with the requirements of Appendix D, including certified information in DCD Tier 1. Tier 1 includes Inspections, Tests, Analyses and Acceptance Criteria (ITAAC) that must be satisfactorily performed prior to fuel load. The design details to be verified by these ITAAC are specified in the tables that are referenced in each individual ITAAC. Enclosure 1, Section 2 of this submittal contains the detailed description of the changes proposed by this exemption request.

This request for exemption will apply the requirements of 10 CFR 52, Appendix D, Section VIII.A.4 to allow changes to Tier 1 information due to the following proposed changes:

Change 1: The proposed changes would revise Tier 1 to clarify text referring to raceways with an electrical classification (i.e., Class 1E / non-Class 1E). Specifically, this includes rewording several ITAAC to clarify that Class 1E or non-Class 1E raceways or raceway systems actually refer to raceways or raceway systems that route Class 1E or non-Class 1E circuits, thus reducing misinterpretation that could challenge the closure of several ITAAC due to the fact that Class 1E and non-Class 1E electrical standards are not applicable to raceway systems. The proposed changes affect the following:

- Plant-specific Tier 1 Section 3.3, Item 7.a).
- Plant-specific Tier 1 Table 3.3-6, Item 7

Change 2: The proposed changes would revise text referring to “fiber optic cables” in plant-specific Tier 1 Section 3.3 as “communication cables” in order to maintain consistency with other ITAAC in this section. The proposed changes affect the following:

- Plant-specific Tier 1 Section 3.3, Item 7.a).

Change 3: The proposed changes would clarify the following ITAAC acceptance criteria to remove ambiguity as to the location of the inspected electrical cables:

- Plant-specific Tier 1 Table 3.3-6, Item 7.a)a)
- Plant-specific Tier 1 Table 3.3-6, Item 7.a)b)
- Plant-specific Tier 1 Table 3.3-6, Item 7.a)c)

This request applies the requirements for granting exemptions from design certification information, as specified in 10 CFR Part 52, Appendix D, Section VIII.A.4, 10 CFR 52.63, §52.7, and §50.12.

2.0 BACKGROUND

The Licensee is the holder of Combined License Nos. NPF-91 and NPF-92, which authorize construction and operation of two Westinghouse Electric Company AP1000 nuclear plants, named Vogtle Electric Generating Plant (VEGP) Units 3 and 4, respectively.

Raceway systems are designed and used in the AP1000 plant for supporting, protecting, and routing electrical and instrumentation circuits. As stated in UFSAR subsections 8.3.1.3.1 and 8.3.2.4.2, a raceway system is the complete assembly of the raceway (e.g., conduit, cable tray, or wireway) and the raceway supports. They are used within the AP1000 main ac and dc power systems and the various instrumentation and control (I&C) systems. This includes safety-related and nonsafety-related systems, such as the Class 1E dc and uninterruptible power supply system (IDS), the protection and safety monitoring system (PMS), and the plant control system (PLS). The raceway systems are designed to protect circuits from seismic events, fire propagation, and they play a role in the physical separation between circuits. Raceway systems that route Class 1E circuits are designed to equipment Class C and seismic Category I requirements to prevent failure during a seismic event.

AP1000 structures, systems, and components (SSCs) are classified as equipment Class A, B, C, D, E, F, G, L, P, R, or W per the AP1000 classification system discussed in UFSAR subsection 3.2.2. In addition, electrical equipment receives an electrical designation of Class 1E or non-Class 1E.

- Mechanical Classification: Mechanical equipment, such as a raceway, receives an equipment classification. For mechanical equipment, Classes A, B, and C are safety-related classifications and equivalent to American Nuclear Society (ANS) Safety Class 1, 2, and 3. Equipment Class D is a nonsafety classification with special requirements for procurement, inspection, or monitoring. Equipment Classes E, F, G, L, P, R, and W are nonsafety-related classifications.

- Electrical Classification: Safety-related electrical equipment, such as electrical circuits, is designed to Institute of Electrical and Electronic Engineers (IEEE) standards for Class 1E. The nonsafety-related electrical equipment and instrumentation is constructed to non-Class 1E IEEE standards and National Electrical Manufacturers Association (NEMA) standards.

These activities require an exemption from generic DCD Tier 1 information and changes to the associated COL Appendix C ITAAC. This enclosure requests an exemption from elements of the AP1000 Tier 1 certified design information to allow a departure from the section and tables providing information supporting the associated ITAAC concerning raceway systems. All of the changes are for clarification or consistency only. No SSC or function is changed within this activity.

3.0 TECHNICAL JUSTIFICATION OF ACCEPTABILITY

Change 1: The current Tier 1 text uses confusing terms when referring to the classification of raceway systems. In several cases, the text refers to raceways and raceway systems as “Class 1E” or “non-Class 1E.” In these instances, the text is actually referring to raceways or raceway systems that route Class 1E or non-Class 1E circuits. The raceway systems themselves are not Class 1E or non-Class 1E. Raceways and raceway systems are not assigned an electrical classification because they do not serve as an electrical device. Raceway systems are given an equipment classification, not an electrical classification, which depends on their role of providing physical protection and support to the circuits they route. The Tier 1 text regarding the classification of raceway systems as written could cause misinterpretation during the closure of electrical ITAAC due to the fact that Class 1E and non-Class 1E electrical standards do not apply to the design of raceway systems.

This activity proposes rewording Tier 1 Section 3.3 Design Description Item 7.a) text that refers to raceways or raceway systems with an electrical classification to clarify that these are raceways that route Class 1E or non-Class 1E cables. Associated changes to ITAAC Table 3.3-6 include: 7.a) Design Commitment and Inspections, Tests, Analyses are reworded to clarify that the raceways referred to in the ITAAC are not Class 1E, but instead route Class 1E cables; 7.b) Inspections, Tests, Analyses are reworded to clarify that the raceways referred to in the ITAAC are not Class 1E, but instead route Class 1E cables; 7.c)(i) Inspections, Tests, Analyses are reworded to clarify that the raceways referred to in the ITAAC are not Class 1E, but instead route Class 1E cables; and 7.d) Inspections, Tests, Analyses and Acceptance Criteria are reworded to clarify that the raceways referred to in the ITAAC are not Class 1E, but instead route Class 1E cables.

The changes are for clarification only. No SSC or function is affected by these changes. There is no change to the application of regulatory guides or industry standards to raceways or raceway systems, nor is there a change to how they are designed, fabricated, procured or installed. Raceway systems that route Class 1E circuits will continue to be designated and designed as equipment Class C, safety-related, and seismic Category I.

Change 2: Tier 1 Section 3.3, Item 7.a) information refers to “fiber optic cables associated with only one division.” However, the corresponding ITAAC in Table 3.3-6 refer to “communication cables associated with only one division.” The fiber optic cables referred to in Section 3.3, item 7.a are communication cables. For consistency, Tier 1 Section 3.3 Item 7.a) is revised to match the associated ITAAC in the same section. Specifically, the reference to fiber optic cables is changed to communication cables. This proposed change maintains consistency between the Tier 1 Section and associated ITAAC. No SSC or function is affected by this change. The wording and intent of the corresponding ITAAC is unchanged.

Change 3: Tier 1 Table 3.3-6 Items 7.a)a), 7.a)b), and 7.a)c) acceptance criteria are ambiguously worded. The purpose of these ITAAC is to verify that the electrical cables, the communication cables associated with only one division, and the raceways that route them in various plant locations are identified by the appropriate color code. A different plant area is inspected within each ITAAC. The electrical cables, communication cables,

and their raceways inside containment are inspected per item 7.a)a). The cables and their raceways in the non-radiologically controlled area of the auxiliary building are inspected per item 7.a)b). The cables and their raceways in the radiologically controlled area of the auxiliary building are inspected per item 7.a)c). However, the acceptance criteria in each of these ITAAC seem to require all Class 1E electrical cables, regardless of location, to be verified while only the communication cables inside the respective area are verified. If left unchanged, each ITAAC would redundantly require an inspection of all Class 1E electrical cables regardless of location. This is not the intent of each ITAAC. The new sentences clarify that the electrical cables to be inspected in each ITAAC are located in the referenced plant area (i.e., inside containment, in the non-radiologically controlled area of the auxiliary building, or in the radiologically controlled area of the auxiliary building).

Detailed technical justification supporting this request for exemption is provided in Section 3 of the associated License Amendment Request in Enclosure 1 of this letter.

4.0 JUSTIFICATION OF EXEMPTION

10 CFR Part 52, Appendix D, Section VIII.A.4 and 10 CFR 52.63(b)(1) govern the issuance of exemptions from elements of the certified design information for AP1000 nuclear power plants. Because the Licensee has identified changes to information regarding raceways or raceway systems in Tier 1 Section 3.3 and related ITAAC text in Table 3.3-6, an exemption from the certified design information in Tier 1 is needed.

10 CFR Part 52, Appendix D, and 10 CFR 50.12, §52.7, and §52.63 state that the NRC may grant exemptions from the requirements of the regulations provided six conditions are met: 1) the exemption is authorized by law [§50.12(a)(1)]; 2) the exemption will not present an undue risk to the health and safety of the public [§50.12(a)(1)]; 3) the exemption is consistent with the common defense and security [§50.12(a)(1)]; 4) special circumstances are present [§50.12(a)(2)(ii)]; 5) the special circumstances outweigh any decrease in safety that may result from the reduction in standardization caused by the exemption [§52.63(b)(1)]; and 6) the design change will not result in a significant decrease in the level of safety [Part 52, App. D, VIII.A.1].

The requested exemption to change information regarding raceways or raceway systems in Tier 1 Section 3.3 and related ITAAC text in Table 3.3-6 satisfies the criteria for granting specific exemptions, as described below.

1. This exemption is authorized by law

The NRC has authority under 10 CFR 52.63, §52.7, and §50.12 to grant exemptions from the requirements of NRC regulations. Specifically, 10 CFR 50.12 and §52.7 state that the NRC may grant exemptions from the requirements of 10 CFR Part 52 upon a proper showing. No law exists that would preclude the changes covered by this exemption request. Additionally, granting of the proposed exemption does not result in a violation of the Atomic Energy Act of 1954, as amended, or the Commission's regulations.

Accordingly, this requested exemption is "authorized by law," as required by 10 CFR 50.12(a)(1).

2. This exemption will not present an undue risk to the health and safety of the public

The proposed exemption from the requirements of 10 CFR 52, Appendix D, Section III.B would allow changes to elements of the plant-specific Tier 1 DCD to depart from the AP1000 certified (Tier 1) design information. The plant-specific DCD Tier 1 will continue to reflect the approved licensing basis for VEGP Units 3 and 4, and will maintain a consistent level of detail with that which is currently provided elsewhere in Tier 1 of the DCD. Therefore, the affected plant-specific DCD Tier 1 ITAAC will continue to serve their required purpose.

The proposed changes 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 fuel cladding failures. The proposed changes are for clarification or for consistency only. There are no physical changes made to the plant with this activity, therefore no SSC or function is changed with this activity. There is no change to the application of regulatory guides or industry standards to raceways or raceway systems, nor is there a change to how they are designed, fabricated, procured or installed. Raceway systems that route Class 1E circuits will continue to be designed and designated as equipment Class C, safety-related, and seismic Category I. The intent of the ITAAC is not impacted, nor is the ITAAC scope or closure method. Accordingly, these changes do not present an undue risk from any existing or proposed equipment or systems.

Therefore, the requested exemption from 10 CFR 52, Appendix D, Section III.B would not present an undue risk to the health and safety of the public.

3. The exemption is consistent with the common defense and security

The exemption from the requirements of 10 CFR 52, Appendix D, Section III.B would 1) revise Tier 1 Section 3.3 and ITAAC in Tier 1 Table 3.3-6 to clarify text referring to raceways with an electrical classification (i.e., Class 1E / non-Class 1E), 2) revise text referring to “fiber optic cables” in plant-specific Tier 1 Section 3.3 as “communication cables” in order to maintain consistency with associated ITAAC in this section, and 3) clarify items 7.a)a), 7.a)b), and 7.a)c) acceptance criteria to minimize ambiguity as to the location of the inspected electrical cables in the plant-specific DCD Tier 1, thereby departing from the AP1000 certified (Tier 1) design information. The proposed exemption clarifies wording within Tier 1, and continues to reflect the current design information for the systems, structures, and components (SSCs) that are referenced in the Tier 1 section and ITAAC table. The exemption does not adversely impact the design, function, or operation of any plant SSCs associated with the facility’s physical or cyber security, and therefore does not adversely affect any plant equipment that is necessary to maintain a safe and secure plant status. The proposed exemption has no adverse impact on plant security or safeguards.

Therefore, the requested exemption is consistent with the common defense and security.

4. Special circumstances are present

10 CFR 50.12(a)(2) lists six "special circumstances" for which an exemption may be granted. Pursuant to the regulation, it is necessary for one of these special circumstances to be present in order for the NRC to consider granting an exemption request. The requested exemption meets the special circumstances of 10 CFR 50.12(a)(2)(ii). That subsection defines special circumstances as when "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 rule under consideration in this request for exemption is 10 CFR 52, Appendix D, Section III.B, which requires that a licensee referencing the AP1000 Design Certification Rule (10 CFR Part 52, Appendix D) shall incorporate by reference and comply with the requirements of Appendix D, including Tier 1 information. The VEGP Units 3 and 4 COLs reference the AP1000 Design Certification Rule and incorporate by reference the requirements of 10 CFR Part 52, Appendix D, including Tier 1 information. The underlying purpose of Appendix D, Section III.B is to describe and define the scope and contents of the AP1000 design certification, and to require compliance with the design certification information in Appendix D.

The proposed exemption would allow changes to clarify text in Tier 1 Section 3.3 and associated ITAAC in Table 3.3-6. All of the proposed changes are for clarification and consistency. There are no physical changes proposed to the plant by this activity. The proposed changes maintain the intent of the associated ITAAC. The proposed changes do not impact the ability of any SSC to perform its functions or negatively impact safety. Furthermore, the proposed changes to the information in Tier 1 Section 3.3 and associated ITAAC in Table 3.3-6 are consistent with format and content of other similar information currently provided in these Tier 1 tables. Accordingly, this change to the certified information will enable the licensee to safely verify the construction of the AP1000 facility consistent with the design certified by the NRC in 10 CFR Part 52, Appendix D.

Therefore, special circumstances are present, because application of the current generic certified design information in Tier 1 as required by 10 CFR Part 52, Appendix D, Section III.B, in the particular circumstances discussed in this request is not necessary to achieve the underlying purpose of the rule.

5. The special circumstances outweigh any decrease in safety that may result from the reduction in standardization caused by the exemption

The exemption from the requirements of 10 CFR 52, Appendix D, Section III.B would change elements of the plant-specific DCD Tier 1 by departing from standard AP1000 certified (Tier 1) design information. This exemption would allow changes to clarify text in Tier 1 Section 3.3 and associated Table 3.3-6 ITAAC information. Based on the nature of the proposed departures from generic Tier 1 information and

the understanding that these changes were identified during the design finalization process for the AP1000, it is expected that this exemption will be requested by other AP1000 licensees and applicants. However, even if other AP1000 licensees and applicants do not request this same departure, the special circumstances will continue to outweigh any decrease in safety from the reduction in standardization. No SSC design function is affected by the proposed changes and the intent of the ITAAC associated with this request will continue to be maintained. Furthermore, the justification provided in the license amendment request and this exemption request and the associated mark-ups demonstrate that there is a limited change from the standard information provided in the generic AP1000 DCD, which is offset by the special circumstances identified above.

Therefore, the special circumstances associated with the requested exemption outweigh any decrease in safety that may result from the reduction in standardization caused by the exemption.

6. The design change will not result in a significant decrease in the level of safety.

The proposed exemption would allow departure from AP1000 generic Tier 1 DCD information by revising 1) Tier 1 Section 3.3 and associated ITAAC in Table 3.3-6 to clarify text referring to raceways with an electrical classification (i.e., Class 1E / non-Class 1E), 2) revise text referring to “fiber optic cables” in Tier 1 Section 3.3 as “communication cables” in order to maintain consistency with associated ITAAC in this section, and 3) clarify ITAAC in Table 3.3-6 items 7.a)a), 7.a)b), and 7.a)c) acceptance criteria to remove ambiguity as to the location of the inspected electrical cables. The proposed changes do not have an adverse effect on the ability of any safety-related SSCs to perform their design basis functions.

As a result of the limited scope and nature of the proposed changes associated with this exemption request, no systems or equipment will be adversely impacted such that there are new failure modes introduced by these changes.

Since no SSC design function will be affected by the proposed changes and the intent of the ITAAC associated with this request will continue to be maintained, it is concluded that the proposed changes associated with the exemption will not result in a significant decrease in the level of safety.

5.0 RISK ASSESSMENT

A risk assessment was not determined to be applicable to address the acceptability of this proposal.

6.0 PRECEDENT EXEMPTIONS

None identified.

7.0 ENVIRONMENTAL CONSIDERATION

The Licensee requests a departure from elements of the certified information in Tier 1 of the generic AP1000 DCD. The Licensee has determined that the proposed departure would require a permanent exemption from the requirements of 10 CFR 52, Appendix D, Section III.B, *Design Certification Rule for the AP1000 Design, Scope and Contents,* with respect to revising text within Tier 1 regarding raceway or raceway system descriptions; however, the Licensee evaluation of the proposed exemption has determined that the proposed exemption meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9).

Based on the above review of the proposed exemption, the Licensee has determined that the proposed activity does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in the individual or cumulative occupational radiation exposure. Accordingly, the proposed 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), an environmental impact statement or environmental assessment of the proposed exemption is not required.

Specific details of the environmental considerations supporting this request for exemption are discussed in Section 5 of the associated License Amendment Request provided in Enclosure 1 of this letter.

8.0 CONCLUSION

The Licensee requests a permanent exemption from elements of AP1000 design certification information reflected in Tier 1. The proposed exemption would allow departures from AP1000 generic Tier 1 information by revising 1) Tier 1 Section 3.3 and associated ITAAC in Table 3.3-6 to clarify text referring to raceways with an electrical classification (i.e., Class 1E / non-Class 1E), 2) revise text referring to “fiber optic cables” in Tier 1 Section 3.3 as “communication cables” in order to maintain consistency with associated ITAAC in this section, and 3) clarify ITAAC in Table 3.3-6 items 7.a)a), 7.a)b), and 7.a)c) acceptance criteria to minimize ambiguity as to the location of the inspected electrical cables. These changes are necessary to provide clarity and consistency within the text, and to minimize ambiguity in Tier 1 material. The exemption request meets the requirements of 10 CFR 52.63, *Finality of standard design certifications*, 10 CFR 52.7, *Specific exemptions*, 10 CFR 50.12, *Specific exemptions*, and 10 CFR 52 Appendix D, *Design Certification Rule for the AP1000 Design*. Specifically, the exemption request meets the criteria of 10 CFR 50.12(a)(1) in that the request is authorized by law, presents no undue risk to public health and safety, and is consistent with the common defense and security. Furthermore, approval of this request does not result in a significant decrease in the level of safety, presents special circumstances by satisfying the underlying purpose of the AP1000 Design Certification Rule, does not present a significant decrease in safety as a result of a reduction in standardization, and meets the eligibility requirements for categorical exclusion.

9.0 REFERENCES

None.

Southern Nuclear Operating Company

ND-17-0400

Enclosure 3

Vogtle Electric Generating Plant (VEGP) Units 3 and 4

Proposed Changes to the Licensing Basis Documents

(LAR-17-008)

Note:
Added text is shown as bold **Blue Underline**
Deleted text is shown as bold **~~Red Strikethrough~~**

(Enclosure 3 consists of seven pages, including this cover page.)

**COL Appendix C (and plant-specific Tier 1) Section 3.3, Item 7.a)
(Tier 1 Page 3.3-3 and COL Appendix C Page C-410)**

Revise text as shown below:

7. a) Class 1E electrical cables, ~~fiber optic~~ communication cables associated with only one division, and raceways that route the Class 1E electrical cables and the communication cables are identified according to applicable color-coded Class 1E divisions.

**Plant-specific Tier 1 Table 3.3-6, item 7.a) and COL Appendix C ITAAC Nos. 3.3.00.07aa, 3.3.00.07ab, and 3.3.00.07ac
(Tier 1 Pages 3.3-23 and 3.3-24 and COL Appendix C Pages C-429 and C-430)**

Revise as shown below:

Design Commitment	Inspections, Tests, Analyses	Acceptance Critieria
7.a) Class 1E electrical cables, communication cables associated with only one division, and raceways that route the Class 1E electrical cables and the communication cables are identified according to applicable color-coded Class 1E divisions.	Inspections of the as-built Class 1E cables and the as-built raceways that route the Class 1E cables will be conducted.	a) Class 1E electrical cables, and communication cables ~~inside containment~~ associated with only one division, and the raceways that route these cables inside containment are identified by the appropriate color code. b) Class 1E electrical cables, and communication cables ~~in the non-radiologically controlled area of the auxiliary building~~ associated with only one division, and the raceways that route these cables in the non-radiologically controlled area of the auxiliary building are identified by the appropriate color code. c) Class 1E electrical cables, and communication cables ~~in the radiologically controlled area of the auxiliary building~~ associated with only one division, and the raceways that route these cables in the radiologically controlled area of the auxiliary building are identified by the appropriate color code.

Plant-specific Tier 1 Table 3.3-6, item 7.b) and COL Appendix C ITAAC Nos. 3.3.00.07ba, 3.3.00.07bb, and 3.3.00.07bc
(Tier 1 Page 3.3-24 and COL Appendix C Page C-430)

Revise as shown below:

Design Commitment	Inspections, Tests, Analyses	Acceptance Critieria
7.b) Class 1E divisional electrical cables and communication cables associated with only one division are routed in their respective divisional raceways.	Inspections of the as-built Class 1E divisional cables and the as-built raceways that route the Class 1E cables will be conducted.	a) Class 1E electrical cables and communication cables inside containment associated with only one division are routed in raceways assigned to the same division. There are no other safety division electrical cables in a raceway assigned to a different division. b) Class 1E electrical cables and communication cables in the non-radiologically controlled area of the auxiliary building associated with only one division are routed in raceways assigned to the same division. There are no other safety division electrical cables in a raceway assigned to a different division. c) Class 1E electrical cables and communication cables in the radiologically controlled area of the auxiliary building associated with only one division are routed in raceways assigned to the same division . There are no other safety division electrical cables in a raceway assigned to a different division.

Plant-specific Tier 1 Table 3.3-6, item 7.c)(i) and COL Appendix C ITAAC Nos. 3.3.00.07c.i.a, and 3.3.00.07c.i.b
(Tier 1 Page 3.3-25 and COL Appendix C Page C-431)

Revise as shown below:

Design Commitment	Inspections, Tests, Analyses	Acceptance Critieria
7.c) Separation is maintained between Class 1E divisions in accordance with the fire areas as identified in Table 3.3-3.	i) Inspections of the as-built Class 1E division electrical cables, as-built communication cables associated with only one division, and the as-built raceways that route the Class 1E divisional electrical cables and communication cables located in the fire areas identified in Table 3.3-3 will be conducted.	i.a) Results of the inspection will confirm that the separation between Class 1E divisions in the nonradiologically controlled area of the auxiliary building is consistent with Table 3.3-3. i.b) Results of the inspection will confirm that the separation between Class 1E divisions in the radiologically controlled area of the auxiliary building is consistent with Table 3.3-3.

Plant-specific Tier 1 Table 3.3-6, item 7.d) and COL Appendix C ITAAC Nos. 3.3.00.07d.i, 3.3.00.07d.ii.a, 3.3.00.07d.ii.b, 3.3.00.07d.ii.c, 3.3.00.07d.iii.a, 3.3.00.07d.iii.b, 3.3.00.07d.iii.c, 3.3.00.07d.iv.a, 3.3.00.07d.iv.b, 3.3.00.07d.iv.c, 3.3.00.07d.v.a, 3.3.00.07d.v.b, and 3.3.00.07d.v.c
(Tier 1 Page 3.3-25 and COL Appendix C Page C-431)

Revise as shown below:

Design Commitment	Inspections, Tests, Analyses	Acceptance Critieria
7.d) Physical separation is maintained between Class 1E divisions and between Class 1E divisions and non-Class 1E cables.	Inspections of the as-built ~~Class 1E~~ raceways that route Class 1E cables will be performed to confirm that the separation between ~~Class 1E~~ raceways that route Class 1E cables of different divisions, and between ~~Class 1E~~ raceways that route Class 1E cables and ~~non Class 1E~~ raceways that route non-Class 1E cables is consistent with the following: i) Within the main control room and remote shutdown room, the minimum vertical separation is 3 inches and the minimum horizontal separation is 1 inch.	Results of the inspection will confirm that the separation between ~~Class 1E~~ raceways that route Class 1E cables of different divisions, and between ~~Class 1E~~ raceways that route Class 1E cables and ~~non Class 1E~~ raceways that route non-Class 1E cables is consistent with the following: i) Within the main control room and remote shutdown room, the vertical separation is 3 inches or more and the horizontal separation is 1 inch or more.

UFSAR Subsection 8.1.4.2.1, Safety Design Basis, revise fifth bullet as shown below:

- Special identification criteria are applied for Class 1E equipment, Class 1E cabling, and raceways that route Class 1E cables as described in Subsection 8.3.2.3.

UFSAR Subsection 8.3.1.3.4, Raceway and Cable Routing, revise the fourth and sixth paragraphs as shown below:

~~Non-Class 1E raceways and supports~~ Raceways that route non-Class 1E cables and their supports installed in seismic Category I structures are designed and/or physically arranged so that the safe shutdown earthquake could not cause unacceptable structural interaction or failure of seismic Category I components.

~~For Class 1E raceway and cable routing see Subsection 8.3.2.~~ See Subsection 8.3.2 for raceway and cable routing for Class 1E cables.

UFSAR Table 9A-2, Safe Shutdown Components, revise as shown below:

Sheet 3 of 14:

Fire Area/ Fire Zone	System	Description	Class 1E Division			
			A	C	B	D
1000 AF 01/ 1100 AF 11300B	IDS	Class 1E Electrical Penetrations	EY-P11Z	EY-P27Z		
		Class 1E Electrical Penetrations	EY-P12Y	EY-P29Y		
		Class 1E Electrical Penetrations	EY-P13Y	EY-P28Y		
		~~Class 1E Cable Trays~~ Cable trays that route Class 1E cables	Note 1	Note 1		

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Fire Area/ Fire Zone	System	Description	Class 1E Division			
			A	C	B	D
1000 AF 01/ 1100 AF 11500	IDS	~~Class 1E Cable Trays~~ Cable trays that route Class 1E cables			Note 1	Note 1
		Class 1E Electrical Penetrations			EY-P30Z	EY-P14Z
		Class 1E Electrical Penetrations			EY-P31Y	EY-P15Y
		Class 1E Electrical Penetrations			EY-P32Y	EY-P16Y

Sheet 7 of 14:

Fire Area/ Fire Zone	System	Description	Class 1E Division			
			A	C	B	D
1200 AF 01	IDS	~~Class 1E Cable Trays~~ Cable trays that route Class 1E cables	Note 1	Note 1		

Sheet 8 of 14:

Fire Area/ Fire Zone	System	Description	Class 1E Division			
			A	C	B	D
1200 AF 03	IDS	~~Class 1E Cable Trays~~ Cable trays that route Class 1E cables			Note 1	Note 1

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Fire Area/ Fire Zone	System	Description	Class 1E Division			
			A	C	B	D
1201 AF 04	IDS	~~Class 1E Cable Trays~~ Cable trays that route Class 1E cables				Note 1

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Fire Area/ Fire Zone	System	Description	Class 1E Division			
			A	C	B	D
1220 AF 01	IDS	~~Class 1E Cable Trays~~ Cable trays that route Class 1E cables			Note 1	Note 1

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Fire Area/ Fire Zone	System	Description	Class 1E Division			
			A	C	B	D
1230 AF 01	IDS	~~Class 1E Cable Trays~~ Cable trays that route Class 1E cables	Note 1	Note 1		
1230 AF 02	IDS	~~Class 1E Cable Trays~~ Cable trays that route Class 1E cables			Note 1	Note 1
		Remote Shutdown Room				
1232 AF 01	IDS	~~Class 1E Cable Trays~~ Cable trays that route Class 1E cables	Note 1	Note 1	Note 1	Note 1
1240 AF 01	IDS	~~Class 1E Cable Trays~~ Cable trays that route Class 1E cables	Note 1	Note 1		
		MCR Workstation				
1242 AF 01	IDS	~~Class 1E Cable Trays~~ Cable trays that route Class 1E cables	Note 1	Note 1	Note 1	Note 1