Southern Nuclear

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52-026

ND-19-0041
10 CFR 50.90
10 CFR 52.63

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 and 4
Supplement to Request for License Amendment and Exemption:
Routing of Class 1E Divisional Cables Supporting Passive Containment Cooling (LAR-18-028S1)

Ladies and Gentlemen:

On November 16, 2018, pursuant to 10 CFR 52.98(c) and in accordance with 10 CFR 50.90, Southern Nuclear Operating Company (SNC) requested an amendment to the combined licenses (COLs) for Vogtle Electric Generating Plant (VEGP) Units 3 and 4 (License Numbers NPF-91 and NPF-92, respectively). The requested amendment proposed to depart from the Updated Final Safety Analysis Report (UFSAR) Tier 2 information (which includes the plant-specific Design Control Document (DCD) Tier 2 information) and involved related changes to plant-specific Tier 1 information, with corresponding changes to the 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 was also requested for the plant-specific DCD Tier 1 material departures.

The requested amendment proposed changes to reflect revisions in the routing of Class 1E cables associated with the passive containment cooling system (PCS). Additionally, related consistency revisions in the safe shutdown evaluation divisional separation information are proposed.

On January 10, 2019, the Nuclear Regulatory Commission (NRC) Staff requested clarification during a public teleconference. Revisions resulting from the requested clarifications are provided in Enclosure 4. Enclosures 1 through 3 were provided with the original LAR-18-028.

The clarifying revisions and additions to Enclosure 1 are consistent with the significant hazards consideration determination and the environmental considerations provided in Enclosure 1 of the original LAR.

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

SNC continues to request NRC Staff review and approval of this license amendment request (LAR) no later than May 20, 2019. Approval by this date will allow sufficient time to implement

licensing basis changes necessary to support closure of the related Inspections, Tests, Analyses and Acceptance Criteria. SNC expects to implement the proposed amendment within 30 days of approval of the LAR.

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

Should you have any questions, please contact Ms. Amy Chamberlain at (205) 992-6361.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 24th of January 2019.

Respectfully submitted,

Brian H. Whitley
Director, Regulatory Affairs
Southern Nuclear Operating Company

Enclosures 1) to 3) provided with original LAR-18-028

4) Vogtle Electric Generating Plant (VEGP) Units 3 and 4 – Supplement to Request for License Amendment Regarding Routing of Class 1E Divisional Cables Supporting Passive Containment Cooling (LAR-18-028S1)

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Southern Nuclear Operating Company

ND-19-0041

Enclosure 4

Vogtle Electric Generating Plant (VEGP) Units 3 and 4

Supplement to Request for License Amendment Regarding

Routing of Class 1E Divisional Cables Supporting Passive Containment Cooling

(LAR-18-028S1)

Insertions Denoted by Blue Underline and Deletions by ~~Red Strikethrough~~
Relocated or duplicated text is identified in Green
Omitted text is identified by three asterisks (* * *)

(This Enclosure consists of 4 pages, including this cover page)

Enclosure 1, Section 3, Technical Evaluation, is revised as follows:

* * *

- 1242 AF 02 (Room 12412)

  UFSAR Table 9A-2 lists the safe shutdown components located in this fire area and is revised as part of this activity to include IDS existing Division~~s~~ A and added Division C Class 1E cables consistent with the revised routing and the updated Fire Protection Analysis Report.

  The division A penetration room is physically separated from the other safety-related divisions and nonsafety-related equipment by 3-hour fire barriers. In the event of a fire in this room, it is assumed that control of all division A and C active components is lost. Because of the physical separation, the fire does not adversely affect the other safety-related electrical divisions. In the event of a fire in this room, the division B and D components identified in UFSAR Table 9A-2 are sufficient to achieve and maintain safe shutdown.

  In addition, division C electrical cables that serve the redundant PCS valves and instruments located in the PCS valve room are routed through this fire area. In the event of a fire, it is also assumed that this division is disabled. The remaining division B electrical cables and components routed through and located in other fire areas are sufficient to perform the applicable functions to achieve and maintain safe shutdown.

  This change activity involves a proposed revision to COL Appendix C Table 3.3-3 to identify Division C in Fire Area 1242 AF 02 as well as an update to the UFSAR Subsection 9A.3.1.2.1.2 safe shutdown evaluation text to address this divisional Class 1E cabling. An additional editorial change to add a dash in the division D column is also made in COL Appendix C Table 3.3-3 for consistency with the UFSAR Subsection 9A.3.1.2.1.2 safe shutdown evaluation.

  This revised routing is also reflected in proposed revisions to UFSAR Table 9A-4 to include the existing Division A and added Division C cables.

  The revised routing also adds additional cables to Room 12412 and thus, the combustible material information in UFSAR Table 9A-3 is revised for this room. The added material is not significant to the loading and thus, does not affect the overall results of the fire protection evaluation.

* * *

Enclosure 1, Section 3, Technical Evaluation, is also revised as follows:

* * *

Additional Impact Evaluation

* * *

There are no radiation zone changes or radiological access control changes required because of these proposed changes. The physical design and operation of the system, as described in the UFSAR, is not changed, and thus there are no changes required to the radiation protection design features described in UFSAR Section 12.3.

The dose for post-accident vital area missions was also assessed and there are no significant changes to the total doses for post-accident vital area missions. Sensitivity studies indicate that small additional penetrations are not significant contributors to reported post-accident dose rates in Rooms 12501 and 12506 where there are other, more significant sources. The total dose for each post-accident vital mission remains below the 5 rem identified in UFSAR Subsection 12.4.1.8 and Subsection 1.9.3, item (2)(vii).

The proposed changes do not affect the containment, control, channeling, monitoring, processing or releasing of radioactive and non-radioactive materials. The proposed changes do not adversely affect the containment and control of radioactive and non-radioactive materials inside containment, and do not adversely affect the containment boundary.

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Enclosure 1, Section 4.1, Applicable Regulatory Requirements/Criteria, is revised as follows:

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4.1 Applicable Regulatory Requirements/Criteria

* * *

10 CFR Part 50, Appendix A, "General Design Criteria for Nuclear Power Plants," General Design Criterion (GDC) 2, *Design basis for protection against natural phenomena.* Structures, systems, and components (SSCs) important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches without the loss of the capability to perform their safety functions. The design bases for these SSCs 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. The changes to the routing of Class 1E cables provide for protection ~~for protection~~ from natural phenomena by routing the cables within the ~~shield~~ auxiliary building structure, and through fire areas with environments for which the cables are qualified. Therefore, compliance with GDC 2 is maintained.

10 CFR Part 50, Appendix A, GDC 3, *Fire protection.* * * *

* * *

10 CFR Part 50, Appendix A, GDC 4, *Environmental and dynamic effects design bases.* SSCs important to safety shall be designed to accommodate the effects of and to be compatible with the environmental conditions associated with normal operation, maintenance, testing, and postulated accidents, including loss-of-coolant accidents. These SSCs shall be appropriately protected against dynamic effects, including the effects of missiles, pipe whipping, and discharging fluids, that may result from equipment failures and from events and conditions outside the nuclear power unit. However, dynamic effects associated with postulated pipe ruptures in nuclear power units may be excluded from the design basis when analyses reviewed and approved by the Commission demonstrate that the probability of fluid system piping rupture is extremely low under conditions consistent with the design basis for the piping. The Class 1E cables subject to the revised routing are designed to accommodate the environmental conditions and dynamic effects in the areas where they are to be routed. Therefore, compliance with GDC 4 is maintained.

10 CFR Part 50, Appendix A, GDC 17, *Electric power systems.* * * *

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