

September 13, 2018

Docket Nos.: 52-025
52-026

ND-18-1180
10 CFR 50.90
10 CFR 52.7

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:
Changes to Tier 2* Departure Evaluation Process (LAR-17-037S6)

Ladies and Gentlemen:

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) by SNC letter ND-17-1726, dated December 21, 2017 [ADAMS Accession Number ML17355A416], to apply the existing departure evaluation process for Tier 2 departures to the evaluation of certain Tier 2* departures. This license amendment request (LAR) 17-037 was supplemented by SNC letters ND-18-0417 (LAR-17-037S1), dated April 6, 2018 [ML18096B328], ND-18-0608 (LAR-17-037S2), dated May 11, 2018 [ML18131A263], ND-18-0646 (LAR-17-037S3), dated June 18, 2018 [ML18169A431], ND-18-1006 (LAR-17-037S4), dated August 3, 2018 [ML18215A461], and ND-18-1067 (LAR-17-037S5), dated August 10, 2018 [ML18222A553]. By letter ND-17-1726, SNC also requested an exemption from certain change requirements in 10 CFR Part 52, Appendix D, consistent with the requested license amendment.

SNC letter ND-17-1726 (LAR-17-037) included eight enclosures, identified as Enclosures 1 through 8, which were updated and re-issued as Enclosures 1U through 8U to SNC letter ND-18-1006 to incorporate changes that were required by the supplemental information provided in LAR-17-037, Supplements 2 through 4, including Enclosures 9 through 19. The supplemental information provided in Enclosure 20 of this letter addresses minor issues that were identified with regard to the proposed license condition provided in Enclosure 3U of letter ND-18-1006 (LAR-17-037S4). Enclosure 20 also provides conforming changes to the text in Enclosures 1U, 3U, 4U, and 5U, in support of the updates to the proposed license condition.

The information provided in this LAR supplement does not impact the scope, technical content, or conclusions of the Significant Hazards Consideration Determination or the Environmental Considerations of the original LAR-17-037 provided in Enclosure 1 of SNC letter ND-17-1726.

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

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

Should you have any questions, please contact Wesley Sparkman at (205) 992-5061.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 13th of September 2018.

Respectfully submitted,



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

- Enclosures
- 1 - 8) (Previously submitted with the original LAR, LAR-17-037, in letter ND-17-1726)
 - 1U – 8U) (Previously submitted with LAR-17-037S4, in letter ND-18-1006)
 - 9) (Previously submitted with LAR-17-037S1, in letter ND-18-0417)
 - 10 - 12) (Previously submitted with LAR-17-037S2, in letter ND-18-0608)
 - 13 - 17) (Previously submitted with LAR-17-037S3, in letter ND-18-0646)
 - 18 - 19) (Previously submitted with LAR-17-037S4, in letter ND-18-1006)
 - 20) Vogtle Electric Generating Plant (VEGP) Units 3 and 4 – Changes to Proposed License Condition 2.D.(13) to Address Identified Issues (LAR-17-037S6)

cc:

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Southern Nuclear Operating Company

ND-18-1180

Enclosure 20

Vogtle Electric Generating Plant (VEGP) Units 3 and 4

Changes to Proposed License Condition 2.D.(13) to Address Identified Issues

(LAR-17-037S6)

Supplement 6 additions to the text provided in LAR-17-037S4 are shown as blue-underlined text; deletions to the LAR-17-037S4 text are shown as ~~red-strikethrough~~ text.

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

Summary Description of Changes

By Southern Nuclear Operating Company (SNC) letter ND-17-1726, dated December 21, 2017 [ADAMS Accession Number ML17355A416], SNC requested an amendment to the combined licenses (COLs) for Vogtle Electric Generating Plant (VEGP) Units 3 and 4 to apply the existing departure evaluation process for Tier 2 departures to the evaluation of certain Tier 2* departures. This enclosure addresses minor issues that were identified in the proposed license condition provided in Enclosure 3U of letter ND-18-1006, dated August 3, 2018 [ADAMS Accession Number ML18215A461].

Paragraph B.5.a Text Omission from Proposed License Condition 2.D.(13)(a)

Proposed License Condition 2.D.(13)(a) introduces the nine qualifying criteria to be considered for departures from Tier 2* information subject to the exemption from the requirements of 10 CFR Part 52, Appendix D, Paragraphs VIII.B.6 and VIII.B.5.a for prior NRC approval. However, as identified in an email from SNC to the NRC staff dated August 29, 2018 [ML18241A247], text applicable to paragraph B.5.a was inadvertently omitted from the proposed license condition. Specifically, the words “and departures from Tier 2 information” were omitted prior to “involving a change to or departure from Tier 2* information.” The full paragraph should read:

“SNC is exempt from the requirements of 10 CFR Part 52, Appendix D, Paragraphs VIII.B.6 and VIII.B.5.a for prior NRC approval of departures from Tier 2* information and departures from Tier 2 information involving a change to or departure from Tier 2* information; except for departures that:”

Because this license condition is accurately reflected throughout the remainder of the license amendment request, the correction of this omission will only necessitate a change to the proposed COL change in letter ND-18-1006, Enclosure 3U.

Revised Text for Qualifying Criterion 1 [Proposed License Condition 2.D.(13)(a)1]

In an August 31, 2018 email to SNC [ML18243A032], the NRC staff proposed an edit to the text of Qualifying Criterion 1 (proposed License Condition 2.D.(13)(a)1, by replacing the phrase “design methodology or construction materials that deviate” with a simpler reference to “a deviation.” SNC concurs with this proposed edit, which will not adversely impact the technical or regulatory evaluations provided in the license amendment or exemption requests in SNC letter ND-18-1006 (LAR-17-037S4). With this change, proposed License Condition 2.D.(13)(a)1 will read:

“Involve a deviation from a code or standard credited in the plant-specific DCD for establishing the criteria for the design or construction of a structure, system, or component (SSC) important to safety,”

The resolution of this comment involves changes to text in letter ND-18-1006, Enclosures 1U, 3U, 4U, and 5U.

ND-18-1180

Enclosure 20

Changes to Proposed License Condition 2.D.(13) to Address Identified Issues (LAR-17-037S6)

Clarification of the Requirement to Comply with Paragraph VIII.B.5 for Departures that do not Require Prior NRC Approval in Proposed License Condition 2.D.(13)(b)

In an email dated September 5, 2018 [ML18248A162], the NRC staff proposed an edit to clarify text of proposed License Condition 2.D.(13)(b), by stating that a departure from Tier 2* that does not require prior NRC approval may be taken provided the Licensee complies with the Tier 2 departure evaluation requirements of 10 CFR Part 52, Appendix D, Paragraph VIII.B.5. SNC concurs with the change proposed by the staff, as the mandatory use of the VIII.B.5 Tier 2 change evaluation process is consistent with the process described and evaluated in Enclosure 1U and depicted in the process flowchart in Enclosure 4U of SNC letter ND-18-1006 (LAR-17-037S4). With this change, proposed License Condition 2.D.(13)(b) will read:

“For a departure from Tier 2* information that does not require prior NRC approval under the exemption in License Condition 2.D.(13)(a), SNC may take the departure provided that SNC complies with the requirements for Tier 2 departures in 10 CFR Part 52, Appendix D, Paragraph VIII.B.5, as modified by the exemption in License Condition 2.D.(13)(a). For each departure authorized by this License Condition:”

The resolution of this comment involves changes to text in Enclosure 1U and to the proposed License Condition in Enclosure 3U of letter ND-18-1006.

Remove Methodology Limitations from Qualifying Criterion 3 [Proposed License Condition 2.D.(13)(a)3]

In an email dated September 11, 2018 [ML18254A412], the NRC staff proposed edits to Qualifying Criterion 3 [proposed License Condition 2.D.(13)(a)3] that would extend the scope of this criterion from consideration of only methodology changes to include changes to other aspects of the process and analysis that would not be considered “methods.” For subparagraph (i) of this criterion, this would include aspects such as acceptance limits, design criteria, and design parameters, which are encompassed by the word “process.” SNC concurs with the changes proposed by the staff, because it is consistent with the wording provided in the associated regulation, 10 CFR Part 52, Appendix D, paragraph VIII.B.6.b(3), *Fuel criteria evaluation process*. For subparagraph (ii), the proposed change would replace small break LOCA “analysis methodology” with “analysis information,” thereby including input parameters to the qualifying criterion. Also, a semi-colon is added to separate “maximum fuel rod average burn-up limits” from “small break LOCA analysis,” to clarify that the small break LOCA analysis, and not the burn-up limits, are provided in the listed UFSAR subsections. SNC concurs with the changes proposed by the staff, as the Tier 2* text applicable to this criterion that is currently incorporated into UFSAR subsections 15.6.5.4B.2.2 or 15.6.5.4B.2.3 already extends beyond the “methodology” specified by regulation, 10 CFR Part 52, Appendix D, paragraph VIII.B.6.b(6), *Small-break loss-of-coolant accident (LOCA) analysis methodology*, by specifying specific input parameters to be used in this analysis. With this change, proposed License Condition 2.D.(13)(a)3 will read:

- “3. (i) Result in a change to the fuel criteria evaluation process, the fuel principal design requirements, or the nuclear design of the fuel or the reactivity control system that is material to a fuel or reactivity control system design function, or the evaluation process in WCAP-12488, “Westinghouse Fuel Criteria Evaluation Process,” or
- (ii) Result in any change to the maximum fuel rod average burn-up limits; or the small break LOCA analysis information in UFSAR Subsections 15.6.5.4B.2.2 or 15.6.5.4B.2.3,

The resolution of this comment involves changes to text in letter ND-18-1006, Enclosures 1U, 3U, 4U, and 5U.

Changes to Updated Enclosures provided in ND-18-1006 (LAR-17-037S4)

The resolution of the issues discussed above involve changes to text in letter ND-18-1006, Enclosures 1U, 3U, 4U, and 5U, as provided below.

Changes to Enclosure 1U:

Revise the text referring to Qualifying Criterion 1 as follows:

Page 5 of 28:

* * *

A Tier 2* departure would qualify to be evaluated under the Tier 2 departure evaluation process unless the proposed departure would:

1. Involve ~~design methodology or construction materials that deviate~~ a deviation from a code or standard credited in the plant-specific DCD for establishing the criteria for the design or construction of a structure, system, or component (SSC) important to safety,

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3. (i) Result in a change to the fuel criteria evaluation process, the fuel principal design requirements, or the nuclear design of the fuel and the reactivity control system that is material to a fuel or reactivity control system design function, or the evaluation ~~methods—process~~ process in WCAP-12488, “Westinghouse Fuel Criteria Evaluation Process,” or
- (ii) Result in any change to the maximum fuel rod average burn-up limits; or the small break LOCA analysis information methodology described in UFSAR Subsections 15.6.5.4B.2.2 or 15.6.5.4B.2.3;

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COL License Condition

* * *

2.D.(13)(b)

Description of the Proposed Change

* * *

Adds a new license condition sub-paragraph that ~~allows~~ requires Tier 2* departures to be evaluated under the provisions of 10 CFR Part 52, Appendix D, Section VIII.B.5 provided the conditions of the license condition are met, ...

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* * *

A set of criteria was then developed that would be used to determine the critical safety aspects of the above matters to determine whether a proposed departure from Tier 2* could qualify to be evaluated under the departure evaluation process for Tier 2 departures outlined in Section VIII.B.5. A proposed Tier 2* departure would not qualify to be evaluated under Section VIII.B.5, if it:

1. Involves ~~design methodology or construction materials that deviate~~ a deviation from a code or standard credited in the plant-specific DCD for establishing the criteria for the design or construction of a structure, system, or component (SSC) important to safety,

* * *

3. (i) Results in a change to the fuel criteria evaluation process, the fuel principal design requirements, or the nuclear design of the fuel and the reactivity control system that is material to a fuel or reactivity control system design function, or the evaluation ~~methods~~ process in WCAP-12488, "Westinghouse Fuel Criteria Evaluation Process, or
- (ii) Results in any change to the maximum fuel rod average burn-up limits; or the small break LOCA analysis information ~~methodology described~~ in UFSAR Subsections 15.6.5.4B.2.2 or 15.6.5.4B.2.3,

Pages 16 - 17 of 18:

Criterion 3 (Nuclear Fuel) detailed guidance:

- A material change is any change in ~~a method of an~~ evaluation or calculation process, including aspects of the process such as acceptance limits, design criteria, and design parameters. Note that WCAP-12488, "Westinghouse Fuel Criteria Evaluation Process" provides the fuel criteria evaluation process. This WCAP topical report describes the process and criteria that applies to changes in existing fuel designs that will not require NRC review and approval as long as ~~these~~ this process and criteria are satisfied ...

* * *

Criterion 3 (Nuclear Fuel) Bases:

* * *

... Therefore, any changes to that information would involve a departure from ~~a method of~~ evaluation information ~~described~~ in the UF SAR and require prior NRC review and approval.

Changes to Enclosure 3U:

Revise proposed License Condition 2.D.(13)(a) and 2.D.(13)(b), as follows (with blue-underlined and ~~red-strikethrough~~ font used to show only changes made by this supplement):

Page 2 of 4:

D. The license is subject to, and SNC shall comply with, the conditions specified and incorporated below:

* * *

(13) Departures from Plant-specific DCD Tier 2* Information

(a) SNC is exempt from the requirements of 10 CFR Part 52, Appendix D, Paragraphs VIII.B.6 and VIII.B.5.a for prior NRC approval of departures from Tier 2* information and departures from Tier 2 information involving a change to or departure from Tier 2* information; except for departures that:

1. Involve ~~design methodology or construction materials that deviate~~ a deviation from a code or standard credited in the plant-specific DCD for establishing the criteria for the design or construction of a structure, system, or component (SSC) important to safety,

* * *

3. (i) Result in a change to the fuel criteria evaluation process, the fuel principal design requirements, or the nuclear design of the fuel and the reactivity control system that is material to a fuel or reactivity control system design function, or the evaluation ~~methods~~ process in WCAP-12488, "Westinghouse Fuel Criteria Evaluation Process," or

(ii) Result in any change to the maximum fuel rod average burn-up limits; or the small break LOCA analysis information ~~methodology described~~ in UFSAR Subsections 15.6.5.4B.2.2 or 15.6.5.4B.2.3,

Page 3 of 4:

* * *

(b) For a departure from Tier 2* information that does not require prior NRC approval under the exemption in License Condition 2.D.(13)(a), SNC may take the departure ~~under and in compliance with the Tier 2 change processes provided~~ that SNC complies with the requirements for Tier 2 departures in 10 CFR Part 52, Appendix D, Paragraph VIII.B.5, as modified by the exemption in License Condition 2.D.(13)(a). For each departure authorized by this License Condition:

Changes to Enclosure 4U:

Page 2 of 5:

Revise the text adjacent to the decision box for Qualifying Criterion 1 to read:

Involve ~~design methodology or construction materials that deviate a~~ [deviation](#) from a code or standard credited in the plant-specific DCD for establishing the criteria for the design or construction of a structure, system, or component (SSC) important to safety

Revise the text adjacent to the decision box for Qualifying Criterion 3 to read:

- (i) Result in a change to the fuel criteria evaluation process, the fuel principal design requirements, or [the](#) nuclear design of [the](#) fuel and [the](#) reactivity control system that is material to a fuel or reactivity control system design function, or the evaluation ~~methods~~ [process](#) in WCAP-12488, "Westinghouse Fuel Criteria Evaluation Process," or
- (ii) ~~R~~esult in any change to the maximum fuel rod average burn-up limits; or the small break LOCA analysis [information](#) ~~methodology described~~ in UFSAR Subsections 15.6.5.4B.2.2 or 15.6.5.4B.2.3,

Changes to Enclosure 5U:

Make changes to the "Associated Criteria" for the following B.6.b Tier 2* matters:

Page 2 of 7:

Item 3, *Fuel criteria evaluation process*.

Result in a change to the fuel criteria evaluation process, ... that is material to the fuel or reactivity control system design function or the evaluation ~~methods~~ [process](#) in WCAP-12488, "Westinghouse Fuel Criteria Evaluation Process,"

Item 6, *Small-break loss-of-coolant accident (LOCA) analysis methodology*.

Result in ... any change to small break LOCA analysis [information](#) ~~methodology described~~ in UFSAR Subsections 15.6.5.4B.2.2 or 15.6.5.4B.2.3.

Make changes to the “Associated Criteria” for the following B.6.c Tier 2* matters:

Page 5 of 7:

- Item 4, *American Concrete Institute (ACI) 318, ACI 349, American National Standards Institute/American Institute of Steel Construction (ANSI/AISC)–690, and American Iron and Steel Institute (AISI), “Specification for the Design of Cold Formed Steel Structural Members, Part 1 and 2,” 1996 Edition and 2000 Supplement.*

Involve ~~design methodology or construction materials that deviate~~ a deviation from a code or standard credited in the plant-specific DCD for establishing the criteria for the design or construction of a structure, system, or component (SSC) important to safety.

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- Item 16, *Steel composite structural module details.*

Involve ~~design methodology or construction materials that deviate~~ a deviation from a code or standard credited in the plant-specific DCD for establishing the criteria for the design or construction of a structure, system, or component (SSC) important to safety.