

Vogle PEmails

From: Habib, Donald
Sent: Thursday, April 12, 2018 5:32 PM
To: ptapscot@southernco.com; Chamberlain, Amy Christine;
WASPARKM@southernco.com
Cc: neil.haggerty@excelservices.com; Patel, Chandu; Vogtle PEmails; Dixon-Herrity, Jennifer
Subject: RAI Transmittal for Vogtle 3 & 4 LAR 17-037 (RAI LAR 17-037-2)
Attachments: SEB RAI LAR 17-037-02 RAI_9530 As Issued 04-12-2018.docx

To All:

By letter dated December 21, 2017, Southern Nuclear Company submitted License Amendment Request No. 17-037 to the U. S. Nuclear Regulatory Commission (NRC) for Vogtle Electric Generating Plant Units 3 and 4, Combined License Nos. NPF-91 and NPF-92 (ADAMS Accession No. ML17355A416). The NRC staff is reviewing the request to enable the staff to reach a conclusion on the safety of the proposed changes.

The NRC staff has identified that additional information is needed to continue the review. The staff's request for additional information (RAI) is contained in the attachment to this email.

To support the review schedule, you are requested to respond within 30 days of the date of this email. If changes are needed to the final safety analysis report, the staff requests that the RAI response include the proposed wording changes.

If you have any questions or comments concerning this matter, you may contact me at 301-415-1035.

Sincerely,

Donald Habib, Project Manager
Licensing Branch 4
Division of New Reactor Licensing
Office of New Reactors
301-415-1035

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Subject: RAI Transmittal for Vogtle 3 & 4 LAR 17-037 (RAI LAR 17-037-2)
Sent Date: 4/12/2018 5:31:49 PM
Received Date: 4/12/2018 5:31:54 PM
From: Habib, Donald

Created By: Donald.Habib@nrc.gov

Recipients:

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Tracking Status: None

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Options

Priority: Standard

Return Notification: No

Reply Requested: No

Sensitivity: Normal

Expiration Date:

Recipients Received:

Request for Additional Information LAR 17-037-2

Issue Date: 04/12/2018

Application Title: Vogtle Nuclear Site, Units 3 and 4, LAR 17-037

Operating Company: Southern Nuclear Operating Co.

Docket No. 52-0025 and 52-0026

Review/Application Section: Not Applicable

The final safety analysis report of the Vogtle Electric Generating Plant (VEGP) Units 3 and 4 references the Westinghouse AP1000 certified design. Appendix D to 10 CFR Part 52, "Design Certification Rule for the AP1000 Design," provides the regulatory requirements for the AP1000 design. 10 CFR Part 52, Appendix D, Section VIII.B.6.c provides a list of Tier 2* matters, including a design summary of critical sections, that a licensee who references this appendix may not depart from without NRC approval. Furthermore, SECY-17-0075, "Planned Improvements in Design Certification Tiered Information Designations," described the staff's approach to using the Tier 2* designation for safety significant information. The SECY noted that if Tier 2* were to be eliminated, certain safety-significant information currently in Tier 2* should be included in Tier 1 rather than in Tier 2. The staff considers that a "critical section" has attributes that make it safety significant in maintaining the integrity of the plant structure. The designed capacity of the "critical sections" support the reasonable assurance of safety determination for the AP1000 DCD, Rev.19 design in the staff safety evaluation.

The staff reviewed the LAR and noted that the criteria for screening Tier 2* information pertaining to "critical sections" is not well defined.

In Enclosure 3, "Proposed Changes to Licensing Basis Documents," of the LAR, the licensee proposed to revise its combined license (COL) to include a new license condition to address the Tier 2* change process. The licensee included a new license condition, proposed License Condition 13, "Departures from Plant-Specific DCD Tier 2* Information." The proposed license condition states that the licensee

. . . is exempt from the requirements of 10 CFR Part 52, Appendix D, Paragraphs II.F and VIII.B.6 that invoke the Tier 2* change process that requires prior NRC approval via a license amendment for departures from Tier 2* information; and Paragraph VIII.B.5.a for Tier 2 information that involves a change to, or departure from, Tier 2* information; except for departures from Tier 2* information that:

1. Involve design methodology or construction materials that deviate 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 proposed license condition is not clear as to how the critical sections associated with the steel-concrete (SC) modular construction would be screened using the above

criteria because information from analysis and tests were used in conjunction with codes and standards for the design of SC modules. As approved in the certified design, linear analysis, nonlinear analysis, and testing of the SC module design were performed and the results were compared to provisions of two different codes in order to validate the use of the codes.

The staff considers that the critical sections have safety significance in assuring the integrity of the building which house safety related systems and components. The proposed Criterion 1 relies on code compliance in the design and detailing of the critical sections to screen out details that are code controlled. The application of this criteria may lead the applicant to conclude that the parameters of the critical sections can be modified in the field using available NRC change processes without resorting to the license amendment process. The staff finds instances where the application of this criterion will not yield the desired results. The staff has identified the following cases as exceptions to the Criterion 1:

- Critical sections using steel concrete sandwich construction, and
- the capacity aspects such as area of steel provided or the demand to capacity ratio of critical sections using reinforced concrete

In both cases, the staff has determined that neither the design nor the cited attributes of the critical sections are code defined, making Criterion 1 in-applicable in these instances. The staff requests the applicant to revise the Criterion 1 such that the conditions identified above are screened in and a license amendment process followed for any changes to these cases, or that the applicant provide additional explanation as to why the proposed criteria would not need to be revised in order to maintain a reasonable assurance of safety.