

## Vogle PEmails

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**From:** Habib, Donald  
**Sent:** Tuesday, May 8, 2018 4:28 PM  
**To:** Chamberlain, Amy Christine; WASPARKM@southernco.com; Amundson, Theodore Edwin; Hicks, Thomas E.  
**Cc:** neil.haggerty@excelservices.com; Patel, Chandu; Vogtle PEmails; Dixon-Herrity, Jennifer; Haggerty, Neil  
**Subject:** RAI Transmittal for Vogtle 3 and 4 LAR 17-037 (RAI LAR 17-037-9)  
**Attachments:** SRSB RAI LAR 17-037-09 RAI\_9524 As Issued 05-08-2018.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

**Hearing Identifier:** Vogtle\_COL\_Docs\_Public  
**Email Number:** 273

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**Subject:** RAI Transmittal for Vogtle 3 and 4 LAR 17-037 (RAI LAR 17-037-9)  
**Sent Date:** 5/8/2018 4:28:29 PM  
**Received Date:** 5/8/2018 4:28:33 PM  
**From:** Habib, Donald

**Created By:** Donald.Habib@nrc.gov

**Recipients:**

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Tracking Status: None

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Tracking Status: None

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Tracking Status: None

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"Chamberlain, Amy Christine" <ACCHAMBE@southernco.com>

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Tracking Status: None

**Post Office:** SN4PR0901MB2173.namprd09.prod.outlook.com

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MESSAGE	1227	5/8/2018 4:28:33 PM	
SRSB RAI LAR 17-037-09 RAI_9524 As Issued 05-08-2018.docx			34659

**Options**

**Priority:** Standard

**Return Notification:** No

**Reply Requested:** No

**Sensitivity:** Normal

**Expiration Date:**

**Recipients Received:**

## **Request for Additional Information – LAR 17-037-9**

Issue Date: 05/08/2018

Application Title: VEGP Units 3 and 4 - LARs

Operating Company: Southern Nuclear Operating Co.

Docket No. 52-025 and 52-026

The scope of Tier 2\* information of the AP1000 certified design is defined in 10 CFR Part 52 Appendix D Sections VIII.B.6.b and VIII.B.6.c, which state that changes to Tier 2\* will be treated as a request for a license amendment and require staff review and approval prior to implementation. SECY-17-0075, "Planned Improvements in Design Certification Tiered Information Designations," (ADAMS Accession No. ML16196A321) states that Tier 2\* information has safety significance commensurate with that of Tier 1 information and would have received the Tier 1 designation, except that NRC decided to provide more flexibility for this type of information. Per the SECY and the statements of consideration associated with the final rule for Part 52 (72 FR 49352, Licenses, Certifications and Approvals for Nuclear Power Plants, p.49365, August 28, 2007), the purpose of the Tier 2\* designation is to control certain information which the staff has determined to have safety significance commensurate with that of Tier 1 information. Consistent with this significance, the Tier 2\* change process ensures that the information is controlled in a similar manner (e.g. changes to such information require prior staff review and approval).

### Question 1

Enclosure 3 of LAR-17-037 contains the proposed revision to COL license condition 2.D which includes a new condition. This new condition governs the desired departures from plant-specific DCD Tier 2\* information and states that SNC would be 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. Among the provisions of the new condition is that the exemption from the current Tier 2\* change process would apply except for departures from Tier 2\* information that would ". . . Result in a material change to the fuel criteria evaluation process . . ."

Section 5.6.3 of Vogtle Electric Generating Plant (VEGP) Units 3 and 4 Technical Specifications provides the reporting requirement for the Core Operating Limits Report (COLR). Section 5.6.3(b) provides the analytical methods used to determine the core operating limits and states that these methods shall be those previously reviewed and approved by the NRC.

WCAP-12488-P-A, "Fuel Criteria Evaluation Process," is not included in the methods listed in Section 5.6.3(b) of technical specifications; however, it is not clear to the staff whether WCAP-12488-P-A is integral to any of the listed methodologies.

Please confirm that WCAP-12488-P-A is not referenced within any of the approved methodologies listed in Technical Specification Section 5.6.3(b) or provide justification that would demonstrate that the proposed departure process as presented in LAR-17-037 couldn't lead to a change in a methodology as listed in the COLR without requiring NRC approval.

### Question 2

Item (1) of 10 CFR Part 52 Appendix D, Section VIII.B.6.b covers the maximum rod average fuel burnup. Additionally, the validity of the methods contained in referenced topical report

WCAP-12488-P-A and the staff's approval for this topical report are based upon the burnup-dependent empirical fuel performance models.

Enclosure 3 of LAR-17-037 contains the proposed revision to COL license condition 2.D which includes a new condition. This new condition governs the desired departures from plant-specific DCD Tier 2\* information and states that SNC would be 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. The exemption from the current Tier 2\* change process would apply except for departures from Tier 2\* information that, "Result in a material change to the . . . maximum fuel rod average burn-up limits . . ." However, the staff notes that Enclosure 1 of LAR-17-037 provides guidance (Criterion 3) which states that "[a] material change is any change that would have an effect on maximum fuel rod average burn-up limits". The staff is concerned that the wording in Enclosure 3 does not reflect the guidance provided in Enclosure 1 and could lead a screener to interpret that some changes to rod average burn-up limits could be made without requiring prior staff review and approval.

Please revise Enclosure 3 to clarify whether *any* changes to maximum fuel rod average burn-up limits are excluded from this departure.

#### Question 3

Enclosure 1 of LAR-17-037 provides detailed guidance for Criterion 3 and contains examples of what are not considered material changes and would therefore not require prior NRC review and approval. The list includes "minor corrections to drawings and figures (e.g., correcting mislabeled components)." It is unclear to the staff what drawings and figures this refers to since the Tier 2\* information provided in FSAR Sections 4.2, 4.3, and 4.4 does not include any drawings or figures.

The staff requests the licensee to clarify which Tier 2\* drawings and figures the guidance is referring to, or correct the Criterion 3 guidance to only refer to relevant examples specific to the Tier 2\* information governed by Criterion 3.

#### Question 4

In Enclosure 1, the detailed guidance for Criterion 3 contains examples of what are not considered material changes. The list includes "[c]hanges that do not change the meaning or substance of information present (e.g., reformatting or removing detail)." The staff disagrees that removing detail does not necessarily change the meaning or substance of information.

The staff requests the licensee to revise the guidance in Enclosure 1 to clearly indicate when removing detail would not require NRC approval.

#### Question 5

Enclosure 1 of LAR-17-037 provides guidance for Criterion 3 to help distinguish which changes could be made without requiring prior staff review and approval. The guidance includes the statement "[a] material change to a design would be any change that has an adverse effect on a design function." The staff notes that no definition is provided to clarify what types of changes

would be considered "adverse." Additionally, it is unclear if the term "design function" refers to the design criteria presented in WCAP-12488, or if a different definition was intended.

The staff requests the licensee to provide a definition for "adverse" and "design function" to clarify the guidance provided in relation to Criterion 3 in Enclosure 1 and assist the reader in determining if a particular change to a Tier 2\* item would be considered material, thereby requiring prior staff review and approval.

#### Question 6

The staff reviewed the proposed departure evaluation process outlined in LAR-17-037, including the Reviewer's Aids in Enclosure 4 and Enclosure 5. The staff notes that there are no proposed screening criteria for changes to Tier 2\* information associated with small-break loss-of-coolant accident (LOCA) analysis methodology. Due to the uniqueness of the AP1000 design the staff determined the use of the NOTRUMP code to be acceptable, in part, because of the identified Tier 2\* information in Chapter 15 (two paragraphs in Sections 15.6.5.4B.2.2 and 15.6.5.4B.2.3). Under the 50.59 process NEI 96-07 allows changes to methodology input parameters; however, the staff considers Tier 2\* information associated with NOTRUMP homogeneous sensitivity model and critical heat flux assessment during accumulator injection to be safety significant and an integral aspect of the methodology as approved for the AP1000. Therefore, the staff maintains that any changes to that information would involve a departure from a method of evaluation described in the FSAR and require prior NRC review and approval. Had Tier 2\* not existed at the time of approval of the AP1000 design, the information related to the NOTRUMP methodology would have either been designated Tier 1 or a change to the approved topical report would have been necessary.

The staff requests that additional screening criteria be included in the Tier 2\* departure evaluation process that captures the critical safety aspect of the Tier 2\* information for small-break LOCA analysis methodology, and identify that any changes (material or otherwise) to those Tier 2\* items must undergo NRC review and approval as a change to the methodology.