

VogtlecolRAIsPEm Resource

From: Joshi, Ravindra
Sent: Wednesday, June 20, 2012 6:43 AM
To: VogtlecolRAIsPEm Resource
Subject: RE: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 02 RELATED TO LICENSE AMENDMENT REQUEST (LAR) 12-003 FOR THE VOGTLE ELECTRIC GENERATING PLANT UNITS 3 AND 4 COMBINED LICENSES
Attachments: VOG-LAR-12-003-RAI-LTR-002.doc

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Subject: RE: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 02 RELATED TO LICENSE AMENDMENT REQUEST (LAR) 12-003 FOR THE VOGTLE ELECTRIC GENERATING PLANT UNITS 3 AND 4 COMBINED LICENSES

Sent Date: 6/20/2012 6:43:00 AM

Received Date: 6/20/2012 6:43:01 AM

From: Joshi, Ravindra

Created By: Ravindra.Joshi@nrc.gov

Recipients:

"VogtlecolRAIsPEm Resource" <VogtlecolRAIsPEm.Resource@nrc.gov>

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June 20, 2012

Mr. B. L. Ivey
Vice President, Regulatory Affairs
Southern Nuclear Operating Company
P.O. Box 1295
Bin B022
Birmingham, AL 35201

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 02 RELATED TO
LICENSE AMENDMENT REQUEST (LAR) 12-003 FOR THE VOGTLE
ELECTRIC GENERATING PLANT UNITS 3 AND 4 COMBINED LICENSES

Dear Mr. Ivey:

In accordance with the provisions of 10 CFR 50.90, by letter dated April 6, 2012 and revised by letters dated April 12, 2012 and May 7, 2012, Southern Nuclear Operating Company (SNC), submitted a license amendment request (LAR) 12-003 to the U. S. Nuclear Regulatory Commission (NRC) for its Vogtle Electric Generating Plant (VEGP) Units 3 and 4 Combine licenses (Licenses Nos.NPF-91 and NPF-92, respectively). The NRC staff is performing a detailed review of this LAR to enable the staff to reach a conclusion on the safety of the proposed LAR.

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

To support the review schedule, you are requested to respond within 30 days of the date of this letter. 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 301-415-6191 or ravindra.joshi@nrc.gov.

Sincerely,

/RA/

Ravindra G. Joshi, Senior Project Manager
Licensing Branch 4
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-025
52-026
eRAI Tracking No. 6550 and 6561

Enclosure:
Request for Additional Information

CC: see next page

If you have any questions or comments concerning this matter, you may contact me at 301-415-6191 or ravindra.joshi@nrc.gov.

Sincerely,

/RA/

Ravindra G. Joshi, Senior Project Manager
Licensing Branch 4
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-025
52-026
eRAI Tracking No. 6550 and 6561

Enclosure:
Request for Additional Information

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DATE	6/7/12	6/11/12	6/7/12	6/7/12	6/7/12

*Approval captured electronically in the electronic RAI system.

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VEGP 3 and 4 LAR 12-003 Basemat Thickness
Southern Nuclear Operating Co.
Docket No. 52-025 and 52-026
SRP Section: 03.08.05 - Foundations
Application Section: Technical Evaluation

QUESTIONS for Structural Engineering Branch 1 (AP1000/EPR Projects) (SEB1)

03.08.05-1

The May 7, 2012, LAR (revised from April 12, 2012 submittal) states a proposed change to the upper tolerance on the Nuclear Island (NI) critical sections basemat thickness as identified in the VEGP Unit 3 and 4 Final Safety Analysis (FSAR). The thickness tolerance value is listed in the plant specific Design Control Document (DCD) and associated Table 3.8.5-3, Note 2 (Tier 2*) and the critical section where the tolerance identifies as +1inch. The proposed change is to increase this upper tolerance to +4 inches.

The staff performed a review of the LAR, Section 3 (Technical Evaluation) and finds that the justification for the basemat thickness change lacks substantive quantification and requires additional information. For example, Page 5 of the LAR states that a small change in mass (~0.6%) of the NI would have negligible impact on the dynamic analysis, but does not differentiate the effects of the mass/stiffness change on global response (i.e., sliding and overturning) and local response as defined by in-structure response spectra (ISRS).

Staff notes that FSAR Appendix 3GG summarizes ISRS demands (upper bound, best-estimate, and lower bound) for key nuclear island locations (Figures 12 through 29). While these comparisons indicate margin to the CSDRS broadened envelope for frequencies greater than 1 Hz, it is not clear to the extent this margin is affected by the increase in thickness of the basemat. To address this concern, staff requests the applicant to assess and quantify the impact of the basemat thickness change on FSAR Figures 12 through 29.

VEGP 3 and 4 LAR 12-003 Basemat Thickness
Southern Nuclear Operating Co.
Docket No. 52-025 and 52-026
SRP Section: 02.05.04 - Stability of Subsurface Materials and Foundations
Application Section: Technical Evaluation

QUESTIONS for Geosciences and Geotechnical Engineering Branch 2 (RGS2)

02.05.04-1

In your License Amendment Request (LAR-12-003R, ML12130A468) you state (Page 4 of 9) that during recent surveying of the mudmat, it was determined that the upper surface of the mudmat is not as level as would be desired for placing a near-constant thickness basemat. You also state that "It is expected that the upper tolerance will need to exceed the current allowable upper tolerance in order to provide a level top surface of the Unit 3 basemat upon which the remaining nuclear structures would then be built." Since there is a specific settlement requirement in the AP1000 DCD, and a mudmat thickness specification in the Vogtle COL FSAR 2.5.4.1.3, in order for the staff to conduct a safety evaluation of this license amendment request, and in accordance with 10 CFR 100.23, please:

1. Clarify whether the uneven level of the upper surface of the mudmat was caused by uneven placement of the mudmat, or by additional backfill settlement. Please provide detailed data (e.g. settlement monitoring data, actual mudmat thickness data) with this clarification.
2. Explain in detail whether additional settlement, both total and differential settlement, will occur upon placement of the basemat. Provide a detailed projection of the expected settlement to justify the need for a 4 inch upper tolerance.