

ClinchRiverESPHFNPEm Resource

From: Fetter, Allen
Sent: Friday, June 16, 2017 2:06 PM
To: Schiele, Raymond Joseph
Cc: Sutton, Mallecia; pshastings (pshastings@tva.gov); ClinchRiverESPSafRAINPEm Resource; Colaccino, Joseph; Heeszal, David
Subject: Draft RAI pertaining to Section 2.5.2, Vibratory Ground Motion, RAI Number 3, eRAI-8893
Attachments: CRNS ESP Draft RAI VGM03 8893.pdf

Good Afternoon,

Attached is a draft RAI pertaining to Section 2.5.2, Vibratory Ground Motion, for the Clinch River Nuclear Site ESP application review. Question 2 in the document relates to information need VGM-02 from NRC's Seismic and Geotechnical audit that took place from May 8-9, 2017

This is the third draft safety RAI prepared (Number 3) for the Clinch River Nuclear Site ESP application review, and it has a unique e-RAI identifying number of eRAI-8893.

TVA has ten working days to review this draft RAI and to decide whether a conference call is needed to clarify any of portion of the RAI and/or if TVA identifies any proprietary information or security-related information (SRI) located in the question(s). After the call, or after ten days, NRC will finish processing the RAI through the eRAI system and issue it to TVA as a final RAI. Subsequent to receipt of the final RAI, TVA will have 30 calendar days to respond to the RAI unless additional time is specifically requested.

Please let me know if you have any questions.

Thanks,

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Draft Request for Additional Information, Number 3, eRAI-8893

Issue Date: 06/16/2017

Application Title: Clinch River Nuclear Site, ESP

Operating Company: Tennessee Valley Authority

Docket No. 52-047

Review Section: 02.05.02 - Vibratory Ground Motion

Application Section: 2.5.2

QUESTIONS

02.05.02-01

Section 2.5.2.6 of the SSAR provides the results of a sensitivity study evaluating the potential impact of 2-D site effects on site response. This sensitivity study includes a comparison of the 2-D site response and a 1-D site response using a similar approach used for the 2-D results. However, the 1-D site response used in this comparison is not used for establishing the permit basis of the Clinch River site. The comparison presented in the SSAR does not currently show that the 1-D site response used for licensing adequately captures the 2-D site effects explored by the sensitivity study.

In order to satisfy requirements in 10 CFR 100.23(d)(1) as it relates to seismic hazard and for the staff to make a determination about the adequacy of the 2-D sensitivity study, please provide a comparison of the 2-D site response to the 1-D site response results used to establish the Clinch River site GMRS.

02.05.02-02

Updated SSAR Section 2.5.2.5.1.1 discusses the approach used to model epistemic uncertainty at the CRN site. A site profile is developed by grouping all available site data (as well as information from TVA dam sites) and calculating a log-mean and standard deviation. This is then used to calculate upper and lower site profiles. This approach is expected to account for dip across the site through the use of the three profiles. However, there is no justification made for this assertion in the text of the SSAR. Specifically, the SSAR does not explain how this approach accounts for the dipping structure across the site. Because the site is underlain by multiple rock layers with a dip of 33 degrees, it is necessary to explain how the 1-D site response approach is expected to accommodate the 2-D nature of the site.

In order to satisfy requirements in 10 CFR 100.23(d)(1) as it relates to seismic hazard and for the staff to make a determination about the adequacy of the site response inputs, please explain how the use of a log-mean profile, combined with upper and lower profiles based on the statistical analysis, accounts for the dipping stratigraphy of the site.