

CCNPP3eRAIPEm Resource

From: Arora, Surinder
Sent: Monday, June 11, 2012 8:42 AM
To: Infanger, Paul; UNECC3Project@unistarnuclear.com
Cc: CCNPP3eRAIPEm Resource; Segala, John; Xu, Jim; Wilson, Anthony; Vrahoretis, Susan; Thomas, Brian; Ford, Tanya; McLellan, Judith
Subject: CCNPP3 - Final RAI 353 SEB2 6477
Attachments: FINAL RAI 353 SEB2 6477.doc

Paul,

Attached please find the subject request for additional information (RAI) pertaining to Section 19.1 of the Calvert Cliffs Unit 3 FSAR. The draft of this RAI was sent to you on May 23, 2012. As stated in the email transmitting the draft RAI, UniStar was to request a clarification call, if required, by June 7, 2012. Since no clarification call has been requested by UniStar, this email forwards the subject RAI as "final" for your response.

The schedule we have established for review of your application assumes technically correct and complete responses within 30 days of receipt of RAIs. For any RAIs that cannot be answered within 30 days, it is expected that a schedule date for submitting your technically correct and complete response will be provided to the staff within the 30 day period so that the staff can assess how this information will impact the review schedule.

Your response letter should also include a statement confirming that the response does or does not contain any sensitive or proprietary information.

Thanks

SURINDER ARORA, PE
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Hearing Identifier: CalvertCliffs_Unit3Col_RAI
Email Number: 219

Mail Envelope Properties (B46615B367D1144982B324704E3BCEEDC2FB9AB392)

Subject: CCNPP3 - Final RAI 353 SEB2 6477
Sent Date: 6/11/2012 8:42:28 AM
Received Date: 6/11/2012 8:42:29 AM
From: Arora, Surinder

Created By: Surinder.Arora@nrc.gov

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Post Office: HQCLSTR01.nrc.gov

Files	Size	Date & Time
MESSAGE	1257	6/11/2012 8:42:29 AM
FINAL RAI 353 SEB2 6477.doc	32250	

Options

Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

Request for Additional Information No. 353 (eRAI 6477)

6/11/2012

Calvert Cliffs Unit 3
UniStar

Docket No. 52-016

SRP Section: 19.01 - Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities
Application Section: SRP 19

QUESTIONS for Structural Engineering Branch 2 (ESBWR/ABWR Projects) (SEB2)

19.01-1

This RAI Question is supplementary to previous RAI 313, Question 19-26.

The staff has reviewed the response to RAI 313, Question 19-26 and finds it inadequate with respect to the following:

1. The response stated that the GMRS is anchored to a PGA of 0.076g which is inconsistent with a previous response to RAI 160, Question 19-19 which stated that the CCNPP Unit 3 ground motion response spectra (GMRS) peak ground acceleration is 0.084 g.
2. The PRA-based SMA performed for the EPR design certification (DC) application includes a seismic model with accident sequences which addressed the DC portion of EPR plant. In accordance with ISG-20 (ML1004912330), the scope of COL application is to update the DC system model to incorporate the COL portion of the EPR plant and to reflect the site-specific and plant specific features. The response only made a statement "Possible effects of site soil failures on the U.S. EPR FSAR accident sequences need not be assessed." But it did not address other aspects of system model update such as plant specific design features within the scope of COL application. In addition, the COL updating cannot be completed until the DC PRA-based analysis is completed.
3. The DC fragility analysis is based on the assumed site parameters and typically does not consider soil related failure modes. Therefore, the HCLPF (high confidence low probability of failure) capacity for the EPR DC portion of Structures, Systems and Components (SSCs) was established at 0.5g PGA (Based on CSDRS shapes). It is not clear in the response whether the applicant is confirming the plant level seismic capacity at 1.67 times CSDRS HCLPF capacity or at the site-specific 1.67 times GMRS HCLPF capacity for the Calvert Cliff site.
4. The DC fragility analysis establishes the HCLPF capacity for the SSCs in system model at 1.67 times CSDRS using a generic site which does not address site-specific soil failures. Therefore, for soil site, the applicant needs to confirm whether the DC HCLPF calculations remain valid for the site or update them using the site-

specific GMRS to confirm the plant level HCLPF at 1.67 times GMRS. It is not clear from the response that the applicant has done it. In addition, AREVA has not yet completed the DC fragility analysis for the SSCs. Therefore, it may not be possible for the applicant to perform the fragility update until the DC's analysis is complete.

The staff requests that the applicant provide additional information to address the issues raised above and provide auditable references to analyses/calculations in support of the updating process. The staff requests that the applicant provide a proposed markup of FSAR changes for the staff review.