CCNPP3COLA PEmails

From: Rycyna, John
Sent: Thursday, August 13, 2009 9:08 AM
To: 'Poche, Robert'; katie.thurstin@unistarnuclear.com; McQueeney, Jennifer; michael.stevenson@unistarnuclear.com
Cc: CCNPP3COL Resource; Chakrabarti, Samir; Chakravorty, Manas; Arora, Surinder; Miernicki, Michael; Colaccino, Joseph; Biggins, James; Vrahoretis, Susan; Simon, Marcia
Subject: RAI No 139 SEB2 2715.doc
Attachments: RAI No 139 SEB2 2715.doc

Rob,

Attached please find the subject request for additional information (RAI). A draft of the RAI was provided to you on July 30, 2009. No conference call was requested to discuss this RAI. 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 date for receipt of this information will be provided to the staff within the 30 day period so that the staff can assess how this information will impact the published schedule.

John Rycyna, PE
Sr. Project Manager
Division of New Reactor Licensing
Office of New Reactors
U.S. Nuclear Regulatory Commission
301-415-4122

Hearing Identifier: CalvertCliffs_Unit3Cola_Public_EX
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Subject: RAI No 139 SEB2 2715.doc
Sent Date: 8/13/2009 9:07:48 AM
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From: Rycyna, John

Created By: John.Rycyna@nrc.gov

Recipients:
"CCNPP3COL Resource" <CCNPP3COL.Resource@nrc.gov>
Tracking Status: None
"Chakrabarti, Samir" <Samir.Chakrabarti@nrc.gov>
Tracking Status: None
"Chakravorty, Manas" <Manas.Chakravorty@nrc.gov>
Tracking Status: None
"Arora, Surinder" <Surinder.Arora@nrc.gov>
Tracking Status: None
"Miernicki, Michael" <Michael.Miernicki@nrc.gov>
Tracking Status: None
"Colaccino, Joseph" <Joseph.Colaccino@nrc.gov>
Tracking Status: None
"Biggins, James" <James.Biggins@nrc.gov>
Tracking Status: None
"Vrahoretis, Susan" <Susan.Vrahoretis@nrc.gov>
Tracking Status: None
"Simon, Marcia" <Marcia.Simon@nrc.gov>
Tracking Status: None
"'Poche, Robert'" <Robert.Poche@constellation.com>
Tracking Status: None
"katie.thurstin@unistarnuclear.com" <katie.thurstin@unistarnuclear.com>
Tracking Status: None
"McQueeney, Jennifer" <Jennifer.McQueeney@unistarnuclear.com>
Tracking Status: None
"michael.stevenson@unistarnuclear.com" <michael.stevenson@unistarnuclear.com>
Tracking Status: None

Post Office: HQCLSTR02.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	766	8/13/2009 9:07:49 AM
RAI No 139 SEB2 2715.doc	25198	

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

Request for Additional Information No. 139

8/13/09

Calvert Cliffs Unit 3
UniStar
Docket No. 52-016
SRP Section: 03.07.02 - Seismic System Analysis
Application Section: 3.7.2

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

03.07.02-28

Follow-up 1 to Question 03.07.02-16 (RAI No. 65)

The staff reviewed the response to RAI No. 65, Question 03.07.02-16 and the proposed change to the CCNPP Unit 3 FSAR (UniStar letter No. UN#09-126, dated March 19, 2009) for the Ultimate Heat Sink (UHS) Makeup Water Intake Structure, and found them acceptable based on the fact that the time history method used meets the guidance provided in Regulatory Guide (RG) 1.92. However, in the March 19 RAI response, the proposed revision to FSAR Section 3.7.2.7 states that the combination of modal responses does not apply to the UHS Electrical Building (EB). Instead, because of its small cross-section size and significant stiffness, the response of the UHS EB is based on the ground motion Zero Period Acceleration (ZPA). Please include in FSAR Section 3.7.2.7 additional technical justification for the assumed seismic response of the UHS EB, or include references to other FSAR Sections where such technical justification may have been provided.

03.07.02-29

Follow-up 1 to Question 03.07-02-22 (RAI No. 65)

The staff reviewed the response to RAI No. 65, Question 03.07.02-22 (UniStar letter No. UN#09-126, dated March 19, 2009) regarding the distribution of foundation stiffness to the basemat nodes, and concluded that the response included only a concept of how the springs are calculated for the tributary areas, and did not provide enough information as to how this was accomplished for the Ultimate Heat Sink (UHS) Makeup Water Intake Structure (MWIS). Provide a specific example showing how the methodology is applied to the UHS MWIS, including how the nodes are distributed in the foundation, and how the tributary area is determined for each node. Also, the March 19 RAI response stated that the stiffness values are amplified to account for embedment effects using factors given in Table C3.3-1 of American Society of Civil Engineers (ASCE) 4-98, “Seismic Analysis of Safety-Related Nuclear Structures,” which is applicable to circular foundations. In the forthcoming response to RAI No. 65, Question 03.07.02-6, which will address issues regarding the Soil Structure Interaction (SSI) analysis of this structure, provide discussion of how embedment effects are determined, including justification for the use of Table C3.3.1 for the UHS MWIS, which has a rectangular foundation and is not embedded on all sides, and how the stiffness of the soil is calculated.