PMSTPCOL PEmails

From: Tai, Tom
Sent: Thursday, July 14, 2011 11:42 AM
To: Price, John E
Cc: STPCOL; Chakrabarti, Samir; Spencer, Michael
Subject: STP - Darft Seismic II/I RAI
Attachments: RAI for II_I Interaction.docx

John,

Attached for your information only is a draft copy of the II/I RAI that I am adding to the system.

Please let me know if you need any clarification before I issue.

Regards

Tom Tai
DNRL/NRO
(301) 415-8484
Tom.Tai@NRC.GOV

Hearing Identifier: SouthTexas34Public_EX
Email Number: 2973

Mail Envelope Properties (0A64B42AAA8FD4418CE1EB5240A6FED132ABF9C802)

Subject: STP - Darft Seismic II/I RAI
Sent Date: 7/14/2011 11:42:01 AM
Received Date: 7/14/2011 11:42:02 AM
From: Tai, Tom

Created By: Tom.Tai@nrc.gov

Recipients:
"STPCOL" <STP.COL@nrc.gov>
Tracking Status: None
"Chakrabarti, Samir" <Samir.Chakrabarti@nrc.gov>
Tracking Status: None
"Spencer, Michael" <Michael.Spencer@nrc.gov>
Tracking Status: None
"Price, John E" <jeprice@STPEGS.COM>
Tracking Status: None

Post Office: HQCLSTR02.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	273	7/14/2011 11:42:02 AM
RAI for II_I Interaction.docx	23821	

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

RAI for Interaction of Non-Seismic Category I Structures, Systems and Components with Seismic Category I Structures, Systems and Components

In FSAR Section 3.7.2.8, the applicant stated that the non-category I structures that can interact with seismic category I structures include the turbine building (TB), radwaste building (RWB), service building (SB), control building annex (CBA), and the stack on reactor building roof. The applicant also provided the seismic input motions for design of the above five non-category I structures and included the sliding and overturning factors of safety under site-specific SSE for TB, RWB, SB, and CBA. The applicant further stated that for each non-category I structure, either: (1) it is determined that the collapse of the non-category I structure will not cause the non-category I structure to strike a category I structure; or (2) the non-category I structure will be analyzed and designed to prevent its failure under SSE conditions in a manner such that the margin of safety of the structure is equivalent to that of seismic category I structures. The above description for analysis and design of non-category I structures included in the FSAR only states the guidance provided in SRP 3.7.2 for analysis and design of these structures, and does not provide any information for review by the staff if analysis and design of these structures meet the guidance provided in SRP 3.7.2. Further, the FSAR does not clearly describe how seismic demand and restoring forces were determined for calculation of sliding and overturning factors of safety. Therefore, in order for the staff to conclude that there is no potential for any unacceptable interaction between non-category I structures and seismic category I structures during an SSE, and to address the COL action stated in Section 3.7.5.4 of ABWR DCD, the applicant is requested to provide the following information, and update the FSAR, as necessary:

1. Clearly describe in the FSAR the criterion used to determine that collapse of a non-category I structure will not cause the non-category I structure to strike a category I structure. Also, clarify in the FSAR that non-category I structures that are not identified in the FSAR as structures that can interact with category I structures, meet this criterion.

2. Describe in the FSAR the analysis and design of each non-category I structure that can interact with category I structures, to demonstrate that it is analyzed and designed to prevent its failure under SSE conditions in a manner such that the margin of safety of the structure is equivalent to that of seismic category I structures. Also, include site-specific ITAAC for each structure to confirm that the as-built structure is analyzed and designed as described in the FSAR.

3. For each non-category I structure, describe in the FSAR the stability evaluation procedure including how seismic demand and restoring forces for stability evaluation are determined.