PMSTPCOL PEmails

From: Tai, Tom
Sent: Thursday, June 11, 2009 10:35 AM
To: John Price (jeprice@stpegs.com)
Cc: STPCOL
Subject: Draft RAI 2916 for Chapter 3.2.1
Attachments: RAI 2916 03.02.01-xx.doc

John,

Please review the attached RAI (03.02.01-xx) for Chapter 3.2.1. If you need a conference call to clarify the requested information, please contact me. If a conference call is not needed, please send me an email and I will continue the formal process of issuing the RAI to STPNOC.

Regards

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Hearing Identifier: SouthTexas34Public_EX
Email Number: 1298

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From: Tai, Tom

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Recipients:
"STPCOL" <STP.COL@nrc.gov>
Tracking Status: None
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Request for Additional Information No. 2916 Revision 2

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 03.02.01 - Seismic Classification
Application Section: 3.2.1

QUESTIONS for Engineering Mechanics Branch 2 (ESBWR/ABWR Projects) (EMB2)

03.02.01-***

STD DEP T1 2.15-1 changes the seismic classification of the Radwaste Building substructure from Seismic Category I to be consistent with the entire Radwaste Building and references RG 1.143. COLA Table 1.9S-1 identifies conformance with RG 1.143 Rev. 2. Although RG 1.143 is the standard regulatory position for the classification and design of structures that house radioactive waste management systems, the applicant has not included the technical justification for the departure from the design certification. Clarify why the seismic classification of the radwaste building substructure was revised from Seismic Category I and why the classification according to RG 1.143 is appropriate and justified.

03.02.01-***

The applicant is expected to identify site-specific SSCs that are not included in the DCD. The reactor service water system (RWS) outside the control building and the firewater pump house are outside the scope of the ABWR DCD. SSCs such as the RWS pumps, RWS pump house and firewater pump house are not included in Table 3.2-1 of the COL FSAR. Staff request that the applicant review the COLA for completeness to identify any site-specific SSCs that have not been seismically classified and update the FSAR.

03.02.01-***

10 CFR 52.80(a) requires that a COL application contain the proposed inspections, tests, and analyses that the licensee should perform, and the acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, the facility has been constructed and will operate in conformity with the combined license, the provisions of the Atomic Energy Act, and the NRC's regulations. STD DEP T1 2.4-3 modified the reactor core isolation cooling design. The applicant is requested to add ITAAC in Part 9 of COLA to ensure that the as-built Seismic Category I RCIC SSCs will withstand SSE loads without loss of their function.

03.02.01-***

10 CFR 52.80(a) requires that a COL application contain the proposed inspections, tests, and analyses that the licensee should perform, and the acceptance criteria that

are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, the facility has been constructed and will operate in conformity with the combined license, the provisions of the Atomic Energy Act, and the NRC's regulations. STD DEP 9.3-2 classifies the breathing air system containment isolation including supports, valves and piping as Seismic Category I and safety-related; however, there is no ITAAC in the DCD or Part 9 of the COLA for the as-built breathing air containment isolation SSCs to ensure their meeting the seismic requirements. Add ITAAC in Table 3.0-11 of Part 9 of the FSAR to ensure that the Seismic Category I as-built SSCs will operate in conformity with the combined license and the NRC's regulations.

03.02.01-***

COL Item 3.22 states that the COL applicant will describe the process for completion of the design of balance-of-plant and non-safety-related systems to minimize II/I interactions and propose procedures for an inspection of the as-built plant for II/I interactions. However, there is no ITAAC in Part 9 of the FSAR to ensure that this COL item will be performed. Add ITAAC to ensure that the as-built nonsafety-related SSCs meet Regulatory Position C.4 of RG 1.29 which requires that the failure of nonsafety-related SSCs will not reduce the function of safety-related SSCs.

03.02.01-***

10 CFR 52.80(a) requires that a COL application contain the proposed inspections, tests, and analyses that the licensee should perform, and the acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, the facility has been constructed and will operate in conformity with the combined license, the provisions of the Atomic Energy Act, and the NRC's regulations. The design of the RWS pumps is outside the scope of the DCD. There is no ITAAC listed in the DCD or Part 9 of the COLA to ensure that the safety-related as-built RWS pumps will remain functional during and after an SSE. Review the completeness of ITACC to include all Seismic Category I SSCs outside the scope of the DCD.

03.02.01-***

10 CFR Part 50, Appendix S, IV(a)(2)(I) states that SSCs necessary for continued operation without undue risk to the health and safety of the public must remain functional and within applicable stress, strain, and deformation limits when subject to the effects of the operating basis earthquake ground motion. NUREG-0800, SRP 3.2.1 states that, if the applicant has set the OBE ground motion to the value one-third of the SSE ground motion, then the applicant should also provide a list of SSCs necessary for continued operation that must remain functional without undue risk of the health and safety of the public and within applicable stress, strain and deformation, during and following the OBE. The ABWR design has elected to eliminate the OBE design requirement and set OBE ground motion to 1/3 of SSE ground motion.

10 CFR Part 50, Appendix S, IV(a)(3) states that if vibratory ground motion exceeding that of the operating basis earthquake ground motion or if significant plant damage occurs, the licensee must shut down the nuclear power plant, and that prior to resuming operations, the licensee must demonstrate to the Commission that no functional damage has occurred to those features necessary for continued operation without undue risk to the health and safety of the public and the licensing basis is maintained. Additionally, RG 1.166 provides guidance for evaluation of results obtained from a plant walkdown inspection after an earthquake. Listing the SSCs will allow the plant to address the requirements when the need exists. Provide this list of SSCs necessary for continued operation or an alternative to address the requirements.