PMSTPCOL PEmails

From: Muniz, Adrian
Sent: Wednesday, August 19, 2009 2:51 PM
To: jwcook@stpegs.com
Cc: STPCOL
Subject: Draft RAI 3159
Attachments: Draft RAI 3377.doc

James:

I have attached to this electronic communication a draft request for additional information (RAI). 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.

Thanks,

Adrian Muñiz, USNRC
Chapter 7 PM

Hearing Identifier: SouthTexas34Public_EX
Email Number: 1624

Mail Envelope Properties (3DF2506A7257014AAC5857E5E852DEAC075AFE12CD)

Subject: Draft RAI 3159
Sent Date: 8/19/2009 2:51:20 PM
Received Date: 8/19/2009 2:51:22 PM
From: Muniz, Adrian

Created By: Adrian.Muniz@nrc.gov

Recipients:
"STPCOL" <STP.COL@nrc.gov>
Tracking Status: None
"jwcook@stpegs.com" <jwcook@stpegs.com>
Tracking Status: None

Post Office: HQCLSTR02.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	398	8/19/2009 2:51:22 PM
Draft RAI 3377.doc	36346	

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

Draft Request for Additional Information No. 3377 Revision 02

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 07 - Instrumentation and Controls - Overview of Review Process
Application Section: Tier 1 Sections 2.2.7, 2.2.11, 2.7.5, and 3.4

QUESTIONS for Instrumentation, Controls and Electrical Engineering 2 (ESBWR/ABWR Projects) (ICE2)

07-***

COLA FSAR Tier 1 Section 2.2.7 has been annotated with departure number STD DEP T1 2.2-1. However, the staff is unable to find any changes in this section that may have resulted from departure STD DEP T1 2.2-1. Verify the applicability of departure STD DEP T1 2.2-1 to COLA FSAR Tier 1 Section 2.2.7.

07-***

Based on COLA FSAR Tier 1 departure STD T1 3.4-1, process computer system (PCS) was replaced with plant computer functions (PCFs). Design Description provided for the PCFs in COLA FSAR Tier 1, Section 2.2.11 is inconsistent with the system description provided in COLA FSAR Tier 2, Section 7.7.1.5. According to 10 CFR Part 52, Appendix A, Tier 1 information, such as, design descriptions, interface requirements, and site parameters are derived from Tier 2. The staff requests STPNOC to resolve these inconsistencies.

07-***

In Design Description for COLA FSAR Tier 1 Section 2.2.7, “Reactor Protection System,” applicant deleted the description of interfaces between 1) the RPS and MSIV closure signals; and 2) RPS and Suppression Pool Temperature trip. These changes are based on departure STD DEP T1 3.4-1. However, the Departure Report does not provide any justification for these changes. Provide justification for these changes.

07-***

In Design Description for COLA FSAR Tier 1 Section 2.2.7, “Reactor Protection System,” applicant added a new paragraph “The OLU and LDs are implemented with non-microprocessor-based equipment. The remaining RPS functions are primarily implemented with microprocessor-based equipment configurable logic devices.” Statements made in the paragraph are inconsistent with the changes described for STD DEP T1 3.4-1 in the Departure Report. The staff requests STPNOC to resolve these inconsistencies.

07-***

COLA FSAR Tier 1 Section 2.7.5 design description has been replaced in its entirety based on STD DEP T1 3.4-1. In the design description for ECF, it is stated, “The ECFs are implemented through the use of divisionally dedicated networks and/or data links provided with the safety related digital system platforms. Some of the platforms use data links only or networks only and some of the platforms use a combination of both data links and networks.” Whereas in the subsequent paragraph, it is stated, “Data communication is provided between redundant safety related divisions to support coincident logic functions. The data communication is implemented through fiber optic based data links to ensure interdivisional isolation.” How does the interdivisional communication take place for the platforms that do not use data links? Also, define the terms “data link” and “network” and explain the differences.

07-***

Based on STD DEP T1 3.4-1, the applicant has revised COLA FSAR Tier 1 subsection A of Section 3.4 that provides design description of the proposed Safety System Logic and Control (SSLC). According to 10 CFR Part 52, Appendix A, Tier 1 information, such as, design descriptions, interface requirements, and site parameters are derived from Tier 2. The NRC staff is unable to locate the SSLC design details in COLA FSAR Tier 2 that would form the basis for the SSLC design description provided in COLA FSAR Tier 1 Section 3.4. The staff requests STPNOC to resolve this inconsistency.

07-***

Based on STD DEP T1 3.4-1, the applicant added a sentence in COLA FSAR Tier 1 subsection A(3) of Section 3.4 stating, “The TLF also receives input directly from the Neutron Monitoring System and manual control switches.” Whereas, according to the COLA FSAR Tier 2, Figure 7.2-2, the Trip Logic Function (TLF) also receives direct input from the sensor channel(s) of corresponding division. Provide the design description of the sensor channel(s) with direct input to the TLF, and evaluate the impact on Figure 3.4b.

07-***

Based on STD DEP T1 3.4-1, the applicant has deleted from COLA FSAR Tier 1 subsection A(5) of Section 3.4 the design concept of each division containing two engineered safety features (ESF) processing channels each containing a pair of SLU. The Departure Report fails to provide any justification for making this change in the design concept. Provide adequate justification for this change in design concept.

07-***

Based on STD DEP T1 3.4-1, the applicant has added design description for ESF Logic & Control System (ELCS) portion of Safety System Logic & Control (SSLC) in COLA FSAR Tier 1 subsection A(3) of Section 3.4. Some of the added statements are vague, e.g., A <u>majority of redundant processors</u> must agree …., … logic for <u>some isolation and</u>

supporting ESF functions …, Other ELCS functions are implemented using redundancy …., etc. With these types of statements, inspection/verification of associate ITAAC would be impossible. Provide specific design details that outline the ESF functions and their need for redundant or non-redundant processing channels. Criteria for selecting the ESF functions that do not require redundant processing channels should also be provided.

07-***

Based on STD DEP T1 3.4-1, the applicant has revised design description for ELCS portion of SSLC in COLA FSAR Tier 1 subsection A(4) of Section 3.4. The first sentence in the subsection appears to be incomplete, which simply states "local inputs." Also the applicant added a statement that states, "ELCS logic and controls are implemented through three divisions corresponding to the three divisions of controlled equipment." This statement is in contradiction with design details provided in various other parts of the COL application, which imply that there are four divisions of ELCS. Complete the missing information, and resolve the stated conflicting information.

07-***

Based on STD DEP T1 3.4-1, the applicant had renumbered the subsections of Tier 1 COLA FSAR Section 3.4, i.e., subsection 'A' to '3.4.1', 'B' to '3.4.2', and 'C' to '3.4.3'. In the STPNOC letter U7-C-STP-NRC-090009, dated February 9, 2009, the applicant reverted back the subsection numbering from '3.4.1' to 'A' and '3.4.3' to 'C'. However, the applicant did not revert back numbering of the subsection '3.4.2' to 'B'. Parts of the COLA FSAR Tier 1 document still make references to subsection 'B'. The NRC staff requests STPNOC to resolve this conflict.