PMSTPCOL PEmails

From: Muniz, Adrian
Sent: Monday, July 27, 2009 10:27 AM
To: jwcook@stpegs.com
Subject: Draft RAI 3139
Attachments: Draft RAI 3139.doc

James:

I have attached to this electronic communication a draft request for additional information (RAI) for Section 7.9 of the STP COLA. 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: 1485

Mail Envelope Properties (Adrian.Muniz@nrc.gov20090727102600)

Subject: Draft RAI 3139
Sent Date: 7/27/2009 10:26:36 AM
Received Date: 7/27/2009 10:26:00 AM
From: Muniz, Adrian

Created By: Adrian.Muniz@nrc.gov

Recipients:
"jwcook@stpegs.com" <jwcook@stpegs.com>
Tracking Status: None

Post Office:

Files	**Size**	**Date & Time**
MESSAGE	430	7/27/2009 10:26:00 AM
Draft RAI 3139.doc	32762	

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

Draft Request for Additional Information No. 3139 Revision 02

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 07.09 - Data Communication Systems
Application Section: 07.09

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

07.09-***

COLA FSAR Tier 2 Section 7.9S.2.2 and Figure 7.9S-1 took Departure STD DEP T1 3.4-1 on the data communication systems from the generic ABWR DCD. Departure DEP T1 3.4-1 also took departures from the generic ABWR DCD on the platforms for engineered safety features (ESF) logic & control system (ELCS), neutron monitoring system (NMS), reactor trip & isolation system (RTIS), and plant information & control system (PICS) systems. For the safety related ELCS, NMS, and RTIS systems, provide sufficient information on how the communication interface is addressed between safety related and non-safety systems, and also among different platforms (TOSDIA-FPGA, TOSMAP (C2000 and HCNT), Common-Q, Ovation, multiplexing system for RCIS, and platform for radiation monitoring system).

07.09-***

Departure STD DEP T1 3.4-1 describes the deviation of safety-related instrumentation and controls (I&C) architecture from the certified ABWR DCD. Provide sufficient information in COLA FSAR Tier 2 Section 7.9S on how the isolation is implemented for both the communication interface (CI) modules and gateways. In addition, a safety related CI module is used on Figure 7.9S-1 for NMS and RTIS systems to communicate to the corresponding gateways, but there is no CI for ELCS system. Provide sufficient information on how the communication interface function is addressed for the safety related ELCS system.

07.09-***

STP COLA took Departure STD DEP T1 3.4-1 on the data communication system from the generic ABWR DCD. This proposed data communication system will be fiber optic based. Both the fiber optic cable and its components such as terminations, field splices, and connectors are critical to provide communication, electrical and communication isolation for the safety related systems. Provide sufficient equipment qualification information in the COL application for the fiber optic cable components.

07.09-***

In Departure STD DEP T1 3.4-1, STPNOC took a deviation on data communication systems from the certified ABWR DCD. COLA FSAR Section 7.9S.3.1 states that network gateways are safety related, but Figure 7.9S-1 shows that the gateways are not safety related. Clarify this inconsistency.

07.09-***

STP COLA took Departure STD DEP T1 3.4-1 from the generic ABWR DCD to use new data communication systems. The new data communication system proposed in the COLA is different from the system used in the ABWR DCD. Provide sufficient information to address system design analysis and the criteria in SRP Section 7.9 and BTP 7-21.

07.09-***

Departure T1 3.4-1 in STP COLA made the final selection of platforms to use configurable logic devices for neutron monitoring system (NMS) and reactor trip and isolation system (RTIS). Since the topical report for the new platform will not be included as part of the COL application, provide sufficient information in the COL application on how the following technical items are addressed in the new platform-based NMS and RTIS system design to meet the safety and reliability requirements: timing, delay, race conditions, gate skew, power dissipation, partitioning, maintainability, testability, tool usage and qualification, environmental, and fabrication associated with the underlying technologies to be used.

07.09-***

Departure STD DEP T1 3.4-1, Safety-Related I&C Architecture, proposed a new data communication technology in the COLA. Therefore, include all specific functions related to the new communication technology in the ITAAC, for example, test and inspection for redundancy function at the component level, and communication speed/load.