

PMSTPCOL PEmails

From: Keith, Felicia
Sent: Wednesday, August 26, 2009 10:44 AM
To: Bill Mookhoek; STPCOL; Scott Head; Chappell, Coley
Cc: Muniz, Adrian
Subject: Request For Additional Information Letter No. 252 Related To SRP Section 7 For the South Texas Project Combined License Application
Attachments: RAI 3377 Letter 252.pdf

TO: Scott Head

FROM: Adrian Muniz

DATE: August 25, 2009

ADAMS Accession NO. ML092370650

*Felicia Keith, Secretary
ESBWR/ABWR Projects Branch 2
Division of New Reactor Licensing
Office of New Reactors
301-415-2950
Felicia.Keith@nrc.gov*

Hearing Identifier: SouthTexas34Public_EX
Email Number: 1674

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Subject: Request For Additional Information Letter No. 252 Related To SRP Section 7
For the South Texas Project Combined License Application
Sent Date: 8/26/2009 10:43:47 AM
Received Date: 8/26/2009 10:43:49 AM
From: Keith, Felicia

Created By: Felicia.Keith@nrc.gov

Recipients:

"Muniz, Adrian" <Adrian.Muniz@nrc.gov>
Tracking Status: None
"Bill Mookhoek" <wemookhoek@stpegs.com>
Tracking Status: None
"STPCOL" <STP.COL@nrc.gov>
Tracking Status: None
"Scott Head" <smhead@stpegs.com>
Tracking Status: None
"Chappell, Coley" <ccchappell@STPEGS.COM>
Tracking Status: None

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RAI 3377 Letter 252.pdf		101868

Options

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

August 25, 2009

Mr. Scott Head, Manager
Regulatory Affairs
STP Nuclear Operating Company
P. O. Box 289
Wadsworth, TX 77483

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 252 RELATED TO
SRP SECTION 7 FOR THE SOUTH TEXAS PROJECT COMBINED LICENSE
APPLICATION

Dear Mr. Head

By letter dated September 20, 2007, STP Nuclear Operating Company (STP) submitted for approval a combined license application pursuant to 10 CFR Part 52. The U. S. Nuclear Regulatory Commission (NRC) staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed application.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter.

To support the review schedule, you are requested to respond within 30 days of the date of this letter. If changes are needed to the safety analysis report, the staff requests that the RAI response include the proposed wording changes.

S. Head

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If you have any questions or comments concerning this matter, I can be reached at 301-415-4093 or by e-mail at Adrian.Muniz@nrc.gov or you may contact George Wunder at 301-415-1494 or George.Wunder@nrc.gov.

Sincerely,

/RA/

Adrian Muñoz, Project Manager
ABWR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-012
52-013

eRAI Tracking No. 3377

Enclosure:
Request for Additional Information

cc: William Mookhoek
James Cook

S. Head

-2-

If you have any questions or comments concerning this matter, I can be reached at 301-415-4093 or by e-mail at Adrian.Muniz@nrc.gov or you may contact George Wunder at 301-415-1494 or George.Wunder@nrc.gov.

Sincerely,

/RA/

Adrian Muñiz, Project Manager
ABWR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-012
52-013

eRAI Tracking No. 3377

Enclosure:
Request for Additional Information

cc: William Mookhoek
James Cook

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NRO-002

OFFICE	ICE2/TR	ICE2/BC	NGE2/PM	OGC	NGE2/L-PM
NAME	DTaneja	Hli	AMuñiz	JBielecki	GWunder
DATE	7/23/09	7/24/09	8/25/09	8/19/09	8/19/09

***Approval captured electronically in the electronic RAI system.**

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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)

07-1

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.

07-2

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.

07-3

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.

07-4

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.

07-5

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.

07-6

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.

07-7

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.

07-8

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.

07-9

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 majority of redundant processors must agree, ... logic for some isolation and 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.

07-10

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.

07-11

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.