August 4, 2009

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

SUBJECT: REVISED - REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 189 RELATED TO SRP SECTION 7.1 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 45 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.

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 by e-mail at George.Wunder@nrc.gov.

Sincerely,

/RA/
Adrian Muniz, Project Manager
ABWR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-012
52-013

eRAI Tracking Nos. 3137

Enclosure:
Request for Additional Information

cc: William Mookhoek
James Cook

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

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Request for Additional Information No. 3137 Revision 02

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 07.01 - Instrumentation and Controls - Introduction
Application Section: 7.1

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

07.01-5

Changes to the FSAR Section 7.1.1.1 are based on departure STD DEP T1 3.4-1, which includes elimination of obsolete data communication technology. As described in the Departure Report for STD DEP T1 3.4-1, proposed data communication functions are inherent to the proposed digital platforms (ELCS, NMS, RTIS, PICS, etc.) and therefore separate and independent from each digital I&C system and divisions within the systems. Also as depicted in Figure 7C-1 (SSLC Data Communications Paths for ESF), communication between the various SSLC units follows point-to-point configuration. Whereas, the certified ABWR design was based on a common data communication (multiplexer) system that was to be used by multiple digital I&C systems. Minimal changes made to the text (i.e., changed EMS to ECF) in this section fail to clearly communicate the description of significantly different data communication features and technology. For instance, the stated description still refers to data highways for sensor input to the logic units, etc., which is in contradiction with the point-to- point configuration setup of the proposed SSLC communication function/features. Provide relevant and applicable description that is consistent with the proposed digital I&C platforms.

07.01-6

The applicant has significantly modified the FSAR Figure 7.1-2 “Assignment of interfacing Safety System Logic to SSLC Controllers,” from the ABWR DCD Tier 2 Figure 7.1-2 based on Tier 1 departure STD DEP T1 3.4-1. However, the applicant has not provided any explanation of the changes made to this figure in the FSAR or the Departure Report. Provide an explanation of the changes made to the FSAR Figure 7.1-2.

07.01-7

In the FSAR sub-section 7.1.1.3.9, the applicant has changed the supply of HVAC emergency cooling water from “diesel generator cooling coils” to “reactor building essential electrical equipment rooms” based on an administrative departure STD DEP Admin. In COLA Departure Report (Part 7), administrative departures are defined as minor corrections such as editorial or administrative errors in the reference ABWR DCD, i.e. misspelling, incorrect references, table headings, etc. Changes made to sub-section 7.1.1.3.9 seem to be beyond administrative in nature. Provide the basis for the changes made to this sub-section.

07.01-8

Based on Tier 2 departure STD DEP 7.1-1, the applicant revised FSAR subsections 7.1.2.1.4, 7.1.2.1.4.1 and 7.1.2.10.9 that now reference Chapter 16 and Bases for Chapter 16 for the instrument setpoint related parameters. Subsequently, in response to RAI Question 16-1, the applicant proposed to use the Setpoint Control Program (SCP) for documenting the setpoint related parameters. Evaluate the impact on revisions made to these FSAR subsection based on their response to RAI Question 16-1.

07.01-9

In the first paragraph of the FSAR subsection 7.1.2.1.6, the applicant changed "ESF" to "ELCS" based on Tier 1 departure STD DEP T1 3.4-1. This minor change raises questions, such as, What is ELCS? Is it ESF Logic and Control System? This term has not been defined in prior subsections of the FSAR Section 7.1. What about NMS (also a part of the SSLC)? Describe the various digital I&C platforms (ELCS, NMS, RTIS, etc.) that makeup the SSLC in the FSAR subsection 7.1.1.1, which would allow use of these digital I&C platforms in subsequent FSAR sections.

07.01-10

From the fourth test described in the FSAR subsection 7.1.2.1.6, the applicant has deleted a sentence that states "The test signals are adjustable manually from the control room and also are capable of performing an automatic sequence of events." This change is based on Tier 1 departure STD DEP T1 3.4-1. However, the Departure Report (COLA Part 7) fails to provide any justification for removing this testing capability. Provide adequate justification for removing this SSLC testing requirement.

07.01-11

In subsection 7.1.2.1.6 (a), "Online Continuous Testing," the applicant has deleted the automatic system self testing features that complies with the criteria for periodic surveillance testing in accordance with IEEE Std 338. This change is based on Tier 1 departure STD DEP T1 3.4-1. However, the Departure Report (COLA Part 7) fails to provide any justification for removing this self testing feature. Provide adequate justification for removing this self testing feature.

07.01-12

In subsection 7.1.2.1.6 (b), a new term, "maintenance and test processor (MTP)" has been introduced, which is intended for testing of ELCS functional logic. Proposed MTP replaces the surveillance test controller (STC) that is a part of the certified ABWR design. The STC was intended for testing the SSLC functional logic that includes the NMS and RTIS platforms. This proposed change under Tier 1 departure STD DEP T1 3.4-1 raises questions, such as, Is MTP integral to the ELCS platform? If not, is it permanently connected to the ELCS platform? Since MTP is only intended for testing ELCS functional logic, how are the NMS and RTIS functional logic tested? The COLA departure report fails to address these proposed changes. Provide adequate justification for the proposed changes.

07.01-13

Per Tier 1 departure T1 2.14-1, the applicant has revised the applicable areas of FSAR subsection 7.1.2.6.6, “Containment Atmospheric Monitoring (CAM) Systems.” The first deleted paragraph under Safety Design Bases applies to the containment radiation monitoring systems. Justify the deletion of the safety design bases applicable to the containment radiation monitoring systems, such as, “Monitoring shall be provided by two independent safety related divisional subsystems.”