

April 7, 2010

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 397 RELATED TO
SRP SECTION 19 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 301-415-5787 or by e-mail at Rocky.Foster@nrc.gov or you may contact George Wunder at 301-415-1494 or George.Wunder@nrc.gov.

Sincerely,

/RA/

Rocky D. Foster, Project Manager
ABWR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-012, 52-013

eRAI Tracking No. 4521 and 4563

Enclosure:
Request for Additional Information

cc: William Mookhoek
Richard Bense

S. Head

-2-

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NAME	DJeng	TScarborough	KHawkins	MNorato	RFoster	GWunder
DATE	3/18/2010	3/25/2010	3/18/2010	3/29/2010	3/29/2010	4/7/2010

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

OFFICIAL RECORD COPY

Request for Additional Information No. 4521 Revision 0

**South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013**

**SRP Section: 19 - Probabilistic Risk Assessment and Severe Accident Evaluation
Application Section: Section 19**

QUESTIONS for Structural Engineering Branch 2 (ESBWR/ABWR Projects) (SEB2)

19-31

In accordance with the ABWR DCD COL License Information Item 19.9.4, the applicant is required to evaluate the HCLPF capacities of standard plant and site-specific SSCs for updating the PRA. The staff requests that the applicant confirm that this COL License Information Item includes an update of the system model (seismic accident sequences) developed in DCD to incorporate capacity reductions due to site-specific effects (soil liquefaction, slope failure, etc.) and site-specific SSC (Ultimate Heat Sink (UHS), Service Water System (RSW) including Pumphouse, Cooling Tower and Water Reservoir), and determines whether site-specific soil failures control the seismic HCLPF capacities of SSCs associated with the seismic accident sequences. Based on the result of the update, the applicant is requested to demonstrate the sequence- and plant-level seismic HCLPF capacity. The staff needs this information to ensure that the STP's PRA-Based Seismic Margin Analysis complies with pertinent requirements of 10 CFR 52.79(a)(46) and 10 CFR 52.79(d)(1).

Request for Additional Information No. 4563 Revision 2

**South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 19 - Probabilistic Risk Assessment and Severe Accident Evaluation
Application Section: 19.9.17**

**QUESTIONS for Component Integrity, Performance, and Testing Branch 2
(ESBWR/ABWR Projects) (CIB2)**

19-32

ABWR DCD Tier 2 Section 19.9.17, "Capability of Containment Isolation Valves," specifies that the COL applicant will demonstrate that the stresses of the containment isolation valves, when subjected to severe accident loadings of 0.77 MPa internal pressure and 260 C temperature in combination with dead loads, do not exceed ASME Section III service level C limits. The DCD also specifies that the ultimate pressure capability at 260 C will be shown to be at least 1.03 MPa. In STP FSAR Section 19.9.17 of the same title, STP states in response to COL License Information Item 19.17 that the stresses of the containment isolation valves will be demonstrated not to exceed ASME Section III service level C limits, and the ultimate pressure capability of the containment isolation valves will be demonstrated to be greater than 1.03 MPa prior to fuel loading. STP also references Commitment COM 19.9-16 and indicates that the FSAR will be updated in accordance with 10 CFR 50.71(e) based upon the results of this analysis. The NRC staff requests that STP modify its response to COL License Information Item 19.17 to address the provision in the ABWR DCD that the "COL applicant" demonstrate the capability of the containment isolation valves. RG 1.206 Section C.III.4.3 suggests that the applicant justify why the item has not been resolved. For example, STP should discuss the implementation of the design process for the containment isolation valves following licensing in accordance with the methodology described in ABWR DCD Tier 2 Section 3.9, as incorporated by reference in the STP FSAR with departures and supplemental information, to ensure that applicable stress limits and pressure capabilities for the containment isolation valves are satisfied. In addition to calling out the commitment, STP should also discuss the applicable ITAAC that will confirm the completion of the design process for the demonstration of the capability of the containment isolation valves.