

January 5, 2011

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 369 RELATED TO
SRP SECTION 3.7.2 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 301-415-8484 or by e-mail at Tom.Tai@nrc.gov or you may contact George Wunder at 301-415-1494 or George.Wunder@nrc.gov.

Sincerely,

/RA/

Tom M. Tai, Senior Project Manager
ABWR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-012
52-013

eRAI Tracking No. 5318

Enclosure:
Request for Additional Information

cc: William Mookhoek
John Price
Loree Elton

S. Head

-2-

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OFFICE	SEB2/TR	SEB2/BC	BWR/PM	BWR/L-PM
NAME	MChakravorty	KHawkins	TTai	GWunder
DATE	12/13/2010	12/13/2010	1/5/2011	12/17/2010

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

OFFICIAL RECORD COPY

Request for Additional Information No. 5318 Revision 4

**South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 03.07.02 - Seismic System Analysis
Application Section: 03.07.02**

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

03.07.02-30

RAI for STP Due to Fluor Part 21 Evaluation:

ABWR DCD, Tier 2, Section 3.2.5.3 states that *"the main steam piping, bypass line, and condenser are used to mitigate the consequences of an accident and are required to remain functional during and after an SSE."* ABWR DCD Section 3.2.5.3 further requires that *"Dynamic input loads for the design of the main steam lines in the turbine building are derived as follows: For locations on the basemat, the ARS shall be based upon the Regulatory Guide 1.60 Response spectra normalized to 0.6g (i.e., 2 times ARS of the site envelope). For locations at the operating deck level (either operating deck or turbine deck), the ARS used shall be the same as used at the reactor building end of the main steam tunnel. Seismic Anchor motions shall be similarly calculated."*

In a letter dated August 30, 2010, Fluor Enterprises, notified the NRC regarding exceedance of the ABWR DCD seismic design input requirements for main steam line (MSL) seismic analysis in the turbine building (TB) for STP 3 and 4 in accordance with 10 CFR Part 21.

As noted in the STP COLA, STP has taken a departure from the TB design as described in the ABWR DCD (STP DEP 1.2-2). In the course of detailed design of the STP 3 and 4 TBs, Fluor performed a dynamic analysis and generated floor response spectra (FRS) for the STP TBs. Fluor compared the STP TB FRS with the FRS specified in the DCD Tier 2, Section 3.2.5.3 for input to the Main Steam Line (MSL) seismic analysis. The comparison revealed that the FRS generated for the STP TB exceeded the FRS required by DCD Section 3.2.5.3 for MSLs. Fluor indicated that this issue is being addressed in the STP 3 and 4 design by use of conservative FRS generated during detailed design.

In view of the above, the applicant is requested to provide the following additional information in the FSAR regarding the seismic input used for the MSL and other important to safety SSCs in the TB:

1. The dynamic input loads (such as floor response spectra, anchor motions, etc) for the design of the MSLs in the TB including a description of the site-specific TB dynamic analysis model, the corresponding SSE input, and the computer programs used in the analysis; and,
2. An update to appropriate sections of the STP COL application including the applicable Departure Report in Part 7, the design descriptions or commitments identified in DCD Tier 1, Section 2.15.11 and the corresponding ITAAC for the TB as a result of STP specific FRS being higher than the FRS specified in DCD Tier 2, Section 3.2.5.3 for input to the MSL seismic analysis.

The staff needs this information to confirm that design of the MSLs and other important to safety SSCs in the TB appropriately consider the SSE design loads in combination with other appropriate loads as required by the ABWR DCD, and to ensure the FSAR reflects the corresponding design basis.

Enclosure