

October 2, 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. 278 RELATED TO
SRP SECTION 09.05.01 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. 2482

Enclosure:
Request for Additional Information

cc: William Mookhoek
James Agles

S. Head

-2-

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OFFICE	SFPB/TR	SFPB/BC	NGE2/PM	NGE2/L-PM
NAME	DAndrukat	RRadlinksi	TTai	GWunder
DATE	8/3/09	8/3/09	10/2/09	9/12/09

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

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Request for Additional Information No. 2482 Revision 2

**South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 09.05.01 - Fire Protection Program
Application Section: 09.05.01**

QUESTIONS for Fire Protection Team (SFPT)

09.05.01-8

Final Safe-Shutdown Analysis:

The final Safe Shutdown Analysis is to include a detailed post-fire safe-shutdown circuit analysis performed and documented using a methodology similar to that described in NEI guidance document, NEI 00-01, "Guidance for Post-Fire Safe-Shutdown Circuit Analysis". The applicant should describe how this as-built analysis will be performed and documented. In addition, the applicant is to commit to having a milestone to have this safe shutdown analysis completed prior to fuel load.

09.05.01-9

Change Process License Condition:

STP FSAR Appendix 9E.1.8 states that STP will provide a "License Condition" to address "Fire Protection Program Changes/Code Deviations." However, the staff was not able to find any such license condition. The applicant should describe the approach to self-approving plant changes that impact the fire protection program, if not in accordance with 10 CFR 52.98.

09.05.01-10

HVAC and Smoke Removal:

STP FSAR Subsection 9.5.13.10 (COL License Information Item 9.27) and ABWR DCD Subsections 9.5.1.1.5 and 9.5.1.1.6 discuss the HVAC system including the Smoke Removal mode.

ABWR DCD Subsection 9.5.1.1.6 states under COL License Information Item 9.27 that the COL applicant shall provide "pressure calculations" for each smoke control HVAC system and that preoperational testing of the smoke removal mode be performed to confirm capability. However, STP FSAR Subsection 9.5.13.10 only commits to developing a procedure for the pre-operational test prior to fuel load. The applicant should update the FSAR to include a description on how these pressure values will be calculated and a description of the initial tests to be conducted to confirm capability. The methodology for establishing design pressure levels should provide reasonable assurance that operators and fire brigade members can still open doors along egress and access routes when the system is operating.

SECY-93-087 and SECY-90-016 include criteria that the design should ensure that smoke, hot gases, or fire suppressant will not migrate into other fire areas to the extent that safe shutdown could be adversely affected. The FSAR should describe what initial testing will be provided, if any, to demonstrate compliance to meet the smoke/hot gases/fire suppression migration SECY criteria.

Enclosure

In addition, the applicant should provide a description on how the applicant will evaluate the potential effects of smoke and hot gases on safe-shutdown equipment.

ABWR DCD Subsection 9.5.1.1.6 references the use of ASHRAE's "Design of Smoke Control Systems for Buildings" which includes references to, but does not require the use of, UL 555 and UL 555S for fire and smoke dampers. Please advise if STP plans to utilize UL-listed fire-dampers and smoke-dampers listed under UL 555 and UL 555S, respectively.

The following RG 1.189 positions were not discussed in the DCD nor in the applicant's FSAR. Please advise if STP is complying with the following positions in Regulatory Guide 1.189:

- RG 1.189 Position 4.1.4 (BTP CMEB C.5.f): "... special protection for ventilation power and control cables may be necessary." (especially for dual purpose HVAC system on the protection of the smoke control/removal system power cables and control cables.)

- RG 1.189 Position 4.1.4: "... HVAC and smoke removal systems are to include provisions to contain and/or monitor these releases for radiological materials for those vents/outlets from all potential radiological areas as described in RG 1.101."

- RG 1.189 Position 4.1.4: "... HVAC and smoke removal systems be designed such that air-intakes to important areas are located away from exhaust and smoke outlets."