

September 10, 2009

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 267 RELATED TO
THE SRP SECTION 11.2 FOR THE SOUTH TEXAS COMBINED LICENSE
APPLICATION

Dear Mr. Head:

By letter dated September 20, 2007, South Texas Project Nuclear Operating Company (STPNOC) 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.

Mr. Scott Head

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If you have any questions or comments concerning this matter, you may contact me at 301-415-1146 or Raj.Anand@nrc.gov, or you may contact George Wunder at 301-415-1494 or George.wunder@nrc.gov.

Sincerely,

/RA/

Raj Anand, Project Manager
ESBWR/ABWR Projects Branch 2
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-012
52-013
eRAI Tracking No: 3676

Enclosure:
Request for Additional Information

cc: William Mookhoek

Mr. Scott Head

-2-

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Raj Anand, Project Manager
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Enclosure:
Request for Additional Information

cc: William Mookhoek

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NAME	SWilliams*	TFrye*	RAnand*	GWunder*
DATE	8/20/09	8/20/09	8/20/09	9/10/09

***Approval captured electronically in the electronic RAI system.
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Request for Additional Information No. 3676

**South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 11.02 - Liquid Waste Management System
Application Section: FSAR 11.2/11.5/9.2**

QUESTIONS for Health Physics Branch (CHPB)

11.02-7

The Condensate Storage Tank (CST) is listed in FSAR Liquid Waste Management System (LWMS) Sections 11.2.1.2.4.2, 11.2.2, 11.2.2.1, 11.2.3, LWMS Table 11.5-4, shown in Figure 9.2-4, and denoted (to and from CST) on LWMS Figure 11.2-1. Staff could not evaluate the functions of the Condensate Storage Tank from the information provided throughout the FSAR. Please provide information concerning the Condensate Storage Tank radioactive source term, overall function and volume similar to all other associated LWMS tanks, and the method of containing the release of all the liquid radwastes to prevent the release of this radwaste to the environment. (Reference FSAR Section 15.7 and 2.4.13).

11.02-8

Section 11.2.1.2.4 of the FSAR identifies several radwaste system design features that address 10 CFR 20.1406 requirements. However, design features identified in Section 11.2 of the ABWR DCD that address 10 CFR 20.1406 requirements applicable to the Condensate Storage Tank (CST) are not included in Section 11.2 of the FSAR. Specifically, the ABWR DCD states "The Condensate storage tank, which is located outdoors, has liquid level monitoring with alarms in the control room. The tank overflows, drains and sample lines are routed to the radwaste system. A dike is provided around the tank to prevent runoff in the event of a tank overflow. A drain within the dike is routed to the radwaste system." Additionally, Section 11.2.1.2 of the ABWR DCD appears to be the only documentation that states that the CST will be located outdoors.

Based on past and current industry experience with Boiling Water Reactor (BWR) condensate storage tanks, please provide the following additional information, and FSAR discussion, concerning the Condensate Storage Tank:

- Clarify if the CST's for STP 3 and 4 will be located outdoors.
- Clarify if any, or all, of the design features from the ABWR DCD (identified above) for the CST will be included in STP 3 and 4.
- Clarify if piping runs to and from the CST will be placed directly underground or located in trenches or tunnels, and include any design or programmatic considerations that will address 10 CFR 20.1406 requirements for the Makeup Water Condensate (MUWC) system.

Enclosure

11.02-9

Section 9.2.9.1 and Table 11.5-4 of the ABWR DCD are incorporated by reference in the STP 3 and 4 FSAR. Section 9.2.9.1 of the ABWR DCD states "The condensate storage tank shall have a capacity of 2110 m³." and Table 11.5.4 of the ABWR DCD contains a requirement for a weekly sample of the CST for gross beta-gamma activity with minimum sensitivity of 3.7×10^{-5} MBq/L. Based on this information, the CST will contain a very large volume of low level radioactive water. However, the staff was unable to locate any discussion in the FSAR identifying the CST as a radiation source, maximum allowable activity concentration specification for the CST, or calculation of dose rates in the area surrounding the CST.

Please provide additional information concerning the radioactive source term, maximum expected radioactivity concentration in the CST, and dose rate calculations for the CST similar to other LWMS tanks and components.