

April 16, 2008

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 13 RELATED TO
THE SRP SECTION 10.04.03 FOR THE SOUTH TEXAS COMBINED LICENSE
APPLICATION

Dear Mr. Gibson:

By letter dated September 20, 2007, STP 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 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.

Mr. Gregory Gibson

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If you have any questions or comments concerning this matter, I can be reached at 301-415-1494 or by e-mail at george.wunder@nrc.gov.

Sincerely,

/RA/

George F. Wunder, Senior 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. 116

Enclosure:
Request for Additional Information

cc: William Mookhoek

Mr. Gregory Gibson

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Enclosure:
Request for Additional Information

cc: William Mookhoek

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

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Request for Additional Information
South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co.
Docket No. 52-012 and 52-013
SRP Section: 10.04.03 - Turbine Gland Sealing System
Application Section: Section 10.4.3 Gland Seal Steam System

QUESTION

10.04.03-2

FSAR Section 10.4.3.3, "Evaluation," describes that the turbine gland sealing system (TGSS) is designed to prevent leakage of radioactive steam from the main turbine shaft glands and valve stems. Also, FSAR Section 10.4.3.3 states, "The high-pressure turbine shaft seals must accommodate a range of turbine shell pressure from full vacuum to approximately 17.3 MPaA. The low-pressure turbine shaft seals operate against a vacuum at all times." Referring to the ABWR DCD, in the COL application the maximum operating pressure limit for the high-pressure turbine shaft seals is increased from 1.52 MPaA to 17.3 MPaA. Since GDC 60 requires controlling radioactive release to the environment, it is not clear to the NRC staff how the TGSS will be able to accommodate this increased pressure demand for the sealing steam. Therefore, the NRC staff requests the applicant to explain how the system will adequately supply the sealing steam at the 17.3 MPaA limit, and its ability to prevent radioactive releases to the environment.