May 12, 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. 31 RELATED TO THE SRP SECTION 02.04.02 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.

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: 242

Enclosure:
Request for Additional Information

cc: William Mookhoek

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,

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ESBWR/ABWR Projects Branch 2
Division of New Reactor Licensing
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Enclosure:
Request for Additional Information

cc: William Mookhoek

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NAME	HAhn*	MThaggard*	RAnand*	JBiggins*	GWunder*
DATE	5/06/08	5/08/08	5/08/08	5/09/08	5/12/08

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

OFFICIAL RECORD COPY

Request for Additional Information

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co.
Docket Nos. 52-012 and 52-013
SRP Section: 02.04.02 - Floods
Application Section: 02.04S.2 - Floods

QUESTIONS

02.04.02-1

Final Safety Analysis Report (FSAR) Table 2.0-2 shows that the precipitation site characteristic at the STP site is defined by the local PMP rate of 19.8 in/hr, which exceeds the ABWR DCD envelope value of 19.4 in/hr. Provide a discussion of the additional load on safety-related SSCs as a result of this exceedance to demonstrate that sufficient safety margins exist in the design of these SSCs.

02.04.02-2

(a) Provide input and output files used in the HEC-HMS computations that form the basis of peak discharges from site drainages during the local PMP event. (b) Provide input and output files used in the HEC-RAS simulations used to determine peak flood elevations in the power block area.

02.04.02-3

Provide a discussion of (A) flood magnitude and timing; (B) the effect on water levels in the power block area; and, (C) the effect of the 34 ft MSL constant water level boundary condition in HEC-RAS simulation, if FM 521 were not to act like a barrier and flood runoff from North 1 and 2 subbasins were not lagged significantly. Provide justification for using a 6-hr PMP, rather than using a shorter duration and more intense PMP value, to obtain a peak PMF water level in the power block area. Specify in the FSAR, at which spot within the power block area, the peak flooding level was simulated.

02.04.02-4

Provide elaboration of the following statements in FSAR, Revision 0, Section 2.4S.2.3.4, page 2.4S.2-8: “The peak discharge obtained for a subbasin in HEC-HMS was first distributed to the most upstream cross section of a stream reach in HEC-RAS in proportion to the area contributing to that cross section and the total area of the subbasin. The remaining portion of the peak discharge is then distributed equally among the remaining cross sections within the receiving channel reach.” The staff needs this information to understand the procedure used to evaluate its degree of conservatism.