May 4, 2010

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 342 RELATED TO SRP SECTION 2.5 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.

If you have any questions or comments concerning this matter, I can be reached at 301-415-6197 or by e-mail at Tekia.Govan@nrc.gov or you may contact George Wunder at 301-415-1494 or George.Wunder@nrc.gov.

Sincerely,

/RA/

Tekia V. Govan, Project Manager
ABWR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

Docket Nos.: 52-012, 52-013
eRAI Tracking No. 4670

Enclosure: Request for Additional Information

cc: William Mookhoek
Richard Bense

May 4, 2010

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STP Nuclear Operating Company
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DATE	4/27/2010	4/27/2010	4/27/2010	5/4/2010

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

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Request for Additional Information No. 4670 Revision 3
South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 02.05.04 - Stability of Subsurface Materials and Foundations
Application Section: 2.5.4.5 and 2.5.4.10

QUESTIONS for Geosciences and Geotechnical Engineering Branch 1 (RGS1)

02.05.04-36

Table 3.0-11, Backfill under Category I Structures, provided in Supplement 1 to RAI 2.5.4-33, includes an ITAAC for shear wave velocity and the newly proposed ITAAC for lab testing of backfill from unidentified sources. Table 3.0-13, submitted in the response to RAI 2.5.4-30, contains the settlement ITAAC. All of these ITAAC lack specific acceptance criteria, as well as specificity in the other elements of the ITAAC. Please update these three ITAACs to reflect a clear demonstration that the assumptions in the safety analyses are verified consistent with requirement in 10 CFR 100.23. For the shear wave velocity ITAAC, please refer the NRC's August 7, 2009 letter to NEI regarding the NRC staff position and standard wording for backfill ITAAC under Category I structures.

Enclosure