March 10, 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. 324 RELATED TO SRP SECTION 10.02 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 301-415-8484 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. 4103

Enclosure:
Request for Additional Information

cc: William Mookhoek
James Agles

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.

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Docket Nos. 52-012
52-013

eRAI Tracking No. 4103

Enclosure:
Request for Additional Information

cc: William Mookhoek
James Agles

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DATE	12/02/2009	12/03/2009	3/10/2010	3/8/2010

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

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Request for Additional Information No. 4103 Revision 3

3/9/2010

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 10.02 - Turbine Generator
Application Section: 10.2

QUESTIONS for Balance of Plant Branch 1 (AP1000/EPR Projects) (SBPA)

10.02-3 (Follow-up Question to RAI 10.2-1 (Question 12174))

The guidance in Item 2.B, Section III, "Review Procedure," of Standard Review Plan (SRP) Section 10.2, states that for normal speed control, the electro hydraulic control (EHC) system fully cuts off steam to the turbine at approximately 103 percent of the turbine rated speed by closing the control and intercept valves. In RAI 10.2-1 dated July 29, 2009, the staff requested the applicant to provide clarification how this SRP guidance is complied.

In its response to RAI 10.2-1, the applicant noted that for the normal speed-control mode, the steam supply to HP and LP turbines is completely shut-off at 105 percent and 107 percent of the turbine rated speed, respectively. However, the applicant did not address the reason for elimination of the 103 percent value as recommended in the SRP. Furthermore, for the normal speed control, the system is supposed to re-open and modulate the control and intercept valves to achieve and maintain 100 percent rated speed at certain point of its normal overspeed. Therefore, the staff requests the applicant to provide clarifications and/or additional information explaining why the 103 percent value is eliminated for the normal speed-load control. The staff further requests the applicant to provide details on how the normal overspeed control system is supplemented by the Power-Load Unbalance function (that was described in the RAI 10.2-1 response), since the steam supply is completely shut-off to the HP and LP turbines at 105 and 107 percent.

10.02-4 (Follow-up to RAI 10.2-2 (Question 12294))

In STP response to staff's RAI 10.2-2, the staff noted that the turbine trip set-points for the primary and emergency backup electrical overspeed systems are 110 and 111 percent of its rated speed, respectively. The staff finds these overspeed trip systems conform to the guidance specified in Items 2.C and 2.D of SRP Section 10.2.III, as related to their set-points. However, the applicant did not provide the schematics and logic diagrams for the two electric overspeed systems, as requested in the RAI 10.2-2. The staff is unable to conclude that the applicant has provided sufficient information for the two electrical overspeed control systems without these schematics and an associated ITAAC in this regard. Therefore, the staff requests the applicant to provide the following:

1. the schematics and logic diagrams for the two electric overspeed systems;
2. explain whether each of these two emergency overspeed systems have their own power source and are installed in separate areas.
3. a site specific ITAAC in Part 9 of the COLA (which includes a report to confirm the design and hardware/firmware diversity of these two electric overspeed systems);

Enclosure