January 5, 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. 008 RELATED TO SRP SECTION 03.08.04 FOR THE ABWR DESIGN CERTIFICATION RULE AMENDMENT APPLICATION

Dear Mr. Head:

By letter dated June 20, 2009, STP Nuclear Operating Company (STPNOC) submitted for approval an application to amend the ABWR design certification rule (DCR) 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.

Sincerely,

/RA/

Tom M. Tai, Senior Project Manager
ABWR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-001

eRAI Tracking No. 4055

Enclosures:
Request for Additional Information

cc: William Mookhoek
Coley Chappell
Fred Puleo

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.

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DATE	11/14/09	11/20/09	1/5/10

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

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Request for Additional Information No. 4055 Revision 5

ABWR Design Certification Amendment Project
South Texas Project Nuclear Operating Co
Docket No. 52-001
SRP Section: 03.08.04 - Other Seismic Category I Structures
Application Section: FSAR Chapter 9.5.14

QUESTIONS for Structural Engineering Branch 2 (ESBWR/ABWR Projects) (SEB2)

03.08.04-1

Question 15718

Section 1.2.2.16.15, "Alternate Feedwater Injection (AFI) Pump House," of the ABWR DCR amendment application states that, "*The Alternate Feedwater Injection Pump House, which is located remotely from the Reactor Building,…*" Since the application does not include any additional information in Chapters 3.7 and 3.8, no information is available to ensure that the design and location of this non-Category I structure will not adversely affect any Category I SSC to satisfy the acceptance criteria described in NUREG-0800, Subsection 3.7.2.II.8. Please provide a description and a revised site plan drawing that shows the location of the AFI pump house and its location and orientation to the other buildings and safety-related systems, structures and components, or propose an ITAAC to ensure the seismic interaction criteria are met when the new structure is erected.

03.08.04-2

Question 15720

Section 9.5.14.1, "System Description," of the ABWR DCR amendment application states that, "*The injection is provided through the non-safety-related portion of the CUW tie-in lines to the feedwater system. The tie-in is in the R/B portion of the Steam Tunnel. A single AFI system may be used with the injection configured to support more than one unit of a multiple unit site*." Please confirm if any piping seismic response analysis of the modified CUW tie-in lines to the feedwater system, modeled in conjunction with the AFI line, was performed to ensure that the effects of the AFI line addition are accounted for within the seismic design basis of the original feedwater piping and supports. Clarify if the design basis of the feedwater system will be adversely affected by the addition of the AFI line. Also, summarize the results of these analyses, if any.

03.08.04-3

Question 15724

Referring to Figure 9.5-6, "Alternate Feedwater Injection System Schematic," discuss and confirm that the effects of a postulated piping failure of the non-safety related AFI line entering and supported by the steam tunnel wall are adequately accounted for in the structural design basis of the reactor building steam tunnel structures.

03.08.04-4

Question 15726

Several sections of Attachment 1 to the STPNOC's letter dated June 30, 2009 list replacements of non-rated, 3-h fire resistant or a non-fire rated doors with 5-psid door or two 3-hour rated fire doors (refer to Sections 9A.4.1.3.7, 9A.4.1.4.3, 9A.4.1.4.8, 9A.4.1.5.1, 9A.4.1.5.5, 9A.4.1.6.1, 9A.4.1.6.43 and 9A4.1.7.2). Please discuss and confirm that the above noted changes and additions of doors as well as their resulting structural configuration changes were evaluated (including wall structural integrity analyses, as needed) to ensure that the changes are bounded within their original structural design basis, and the affected walls will continue to maintain their structural integrity and perform their intended safety functions.

03.08.04-5

Question 15727

Section 6.7.2, "System Description," of the ABWR DCR amendment application states, in part, that, "*…An additional non-safety related nitrogen gas storage bottle capable of supplying nitrogen to one of the non-ADS safety/relief valves from the AFI Pump House is added to allow system depressurization in the event of loss of nitrogen supply in the Reactor Building.*" Discuss and confirm that the effects of adding this High Pressure Nitrogen Gas Supply System including piping and supports will not adversely impact the structural design basis, integrity and safety functions of the affected structures supporting the system.