

January 19, 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. 313 RELATED TO
SRP SECTION 3.9.2 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.

S. Head

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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. 4218

Enclosure:
Request for Additional Information

cc: William Mookhoek
John Price

S. Head

-2-

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cc: William Mookhoek
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OFFICE	EMB2/TR	EMB2/BC	NGE2/PM	NGE2/L-PM
NAME	YWong	JDHerrity	TTai	GWunder
DATE	12/28/09	1/7/09	1/19/09	1/14/10

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

OFFICIAL RECORD COPY

Request for Additional Information No. 4218 Revision 3

**South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013**

**SRP Section: 03.09.02 - Dynamic Testing and Analysis of Systems Structures and Components
Application Section: 3.9.2**

QUESTIONS for Engineering Mechanics Branch 2 (ESBWR/ABWR Projects) (EMB2)

03.09.02-9

Supplement to Question 11648 (eRAI 03.09.02-2)

In the response to RAI 03.09.02-2, STP referenced two Toshiba reports:

1. RS-5126954, Revision 1, "Prototype ABWR Reactor Internals Flow Induced Vibration Test Report," that documents the ABWR prototype comprehensive vibration assessment program; and
2. RS-5126579, Revision 1, "STP-3 and 4 Reactor Internals Flow Induced Vibration Assessment Program," that documents STP-3 and 4's additional testing and analyses and their application of the prototype vibration assessment program.

The staff has reviewed these reports for their contents and the level of details described in Regulatory Guide 1.20. Please be advised that the valid prototype referenced in the STP COL FSAR is a foreign plant, as such, these reports do not meet the guidance described in Regulatory Guide 1.20. Please update and re-submit these reports.

03.09.02-10

Supplement to Question 11649 (eRAI 03.09.02-3)

RAI 03.09.02-3 requested STP for the following:

"(1) A tabulation of all reactor internals components and local areas to be inspected. A description of the inspection procedure including the method of examination, method of documentation, provisions for access to the reactor internals, and the criteria which will be applied. The applicant should also discuss what actions will be taken as a result of these inspections.

(2) In addition, the SRP recommends that walkdown inspections of the steam, feedwater, and condensate systems take place during hold points in the testing. The applicant should provide details of the planned walkdowns, what monitoring and testing equipment is required, and what actions will be taken as a result of these inspections."

STP's response referenced the Toshiba report RS-5126579, Revision 1. Our review indicated that this report does not meet regulatory positions C.2.2(2)(a) and C.2.3 in Regulatory Guide 1.20. Please consider these regulatory positions and update the reports.

03.09.02-11

Supplement to Question 11650 (eRAI 03.09.02-4)

In the response to RAI 03.09.02-4, STP advised that the results of the initial acoustic screening analysis and confirmatory scale model testing are scheduled to be completed by December 2010. This schedule is not acceptable since it is beyond the Phase 4 schedule.

Please provide an updated schedule.

03.09.02-12

Supplement to Question 11651 (eRAI 03.09.02-5)

In RAI 03.09.02-5, the staff requested more detailed discussion on the acoustic circuit methodology. STP's response referenced Chapter III of the Toshiba report RS-5126579, Revision 1, and advised that the evaluation methodology is in compliance with EPRI report BWRVIP-194, which is currently under review by the NRC. Our review indicated that the Toshiba report does not have sufficient details. Please resubmit the Toshiba report including the detailed discussion of the acoustic circuit methodology.

03.09.02-13

Supplement to 11652 (eRAI 03.09.02-6)

In RAI 03.09.02-6, the staff requested the applicant to instrument the steam dryer to verify the analytically predicted loads. In the response, STP referenced the Toshiba report RS-5126579, Revision 1, and credited the successful operating experience of K-6, the valid prototype plant. Please note that our review of RS-5126579, revision 1 indicated that it does not have the level of details described in Regulatory Guide 1.20. In addition, STP Units 3 and 4's steam line configuration is not the same as K-6. Please address the differences in configuration and either re-consider providing instrumentation for the steam dryer or provide a better justification.

03.09.02-14

Supplement to Question 11653 (eRAI 03.09.02-7)

In ABWR FSAR, Tier 2, Section 3.9.7.1, Reactor Internals Vibration Analysis, Measurement and Inspection Program, it states that the first COL applicant will provide, at the time of the application, the results of the vibration assessment program for the ABWR prototype internals. NRC review and approval of the results, as specified in Regulatory Guide 1.20, will complete the vibration assessment program provision for prototype reactor internals. In addition to this information, the first COL applicant will provide the information on the schedule in accordance with position C.3 of Regulatory Guide 1.20. The staff's review of the FSAR section 3.9.2.3 and 3.9.2.4 did not include information on the schedule. In accordance with Regulatory Guide 1.20, the staff requests the applicant to provide a comprehensive schedule which includes the prototype test report and testing of the steam dryer.

The staff requested the above in RAI 03.09.02-7. STP's response referenced Toshiba report RS-5126954, Revision 1, and RS-5126579, Revision 1. The staff has reviewed these reports and did not consider these reports meet the guidance in Regulatory Guide 1.20. Please update these reports and provide more details as described in the regulatory guide.

03.09.02-15

Supplement to Question 11654 (eRAI 03.09.02-8)

ITAAC #7 of DCD Tier 1, Table 2.1.1d states that a vibration type test will be conducted on the prototype RPV internals of an ABWR, and that a flow test and post-test inspection will be conducted on the as-built RPV internals. Since the prototype has been identified as the 1350 MWe ABWR, the staff requests that the prototype vibration assessment report be made available to be reviewed by the staff. The staff also requests the applicant to explain how the remaining portion of the ITAAC for the as-built RPV internals will be resolved. It should be noted that a COL applicant should submit the results from the vibration assessment program for the RPV internals in accordance with Regulatory Guide 1.20. STP's response to this RAI referenced the Toshiba report RS-5126954, Revision 1, which we did not consider adequate. Please update this report to meet the guidance in Regulatory Guide 1.20.