July 30, 2009

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 178 RELATED TO SRP SECTION 09.02.02 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. 3184 and 3217

Enclosure:
Request for Additional Information

cc: William Mookhoek
James Agles

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NAME	AStubbs/GCurran	JSegala	TTai	SKirkwood	GWunder
DATE	6/19/09	6/26/09	6/26/09	7/22/09	7/22/09

*Approval captured electronically in the electronic RAI system.

OFFICIAL RECORD COPY

Request for Additional Information No. 3184 Revision 2

7/29/2009

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 09.02.02 - Reactor Auxiliary Cooling Water Systems
Application Section: 9.2.13

QUESTIONS for Balance of Plant Branch 2 (ESBWR/ABWR) (SBPB)

09.02.02-1
Question 12734:

The staff reviewed the response of the applicant in Section 9.2.17.1 of the applicant's FSAR to COL License Information Item 9.11 (COM 9.2.2) item (1), that "Means shall be provided for adjusting refrigerator capacity to chilled water outlet temperature." The applicant intends to meet the item (1) design goal through technical requirements on the purchased components. As the design goal is not listed as an Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) design feature, there is no mechanism to assure that the requirement has been met prior to fuel load.

The relevant section of the Standard Review Plan, Section 9.2.2, 1.16 directs the applicant to address the requirements and restrictions included as license information items in the original Design Certification Document, DCD.

Therefore, justify why there is not an ITAAC to assure that information item (1) is satisfied prior to fuel loading.

09.02.02-2
Question 12735

The staff reviewed the response of the applicant to COL License Information Item 9.11 (COM 9.2.2) item (3), in Section 9.2.17.1 of the FSAR that "Means shall be provided for reacting to a loss of electrical power for periods up to two (2) hours and for automatic restarting of pumps and refrigerators, under the expected environmental conditions during station blackout when electrical power is restored." The applicant intends to meet the item (3) design goal citing the alternate AC power source. As the design goal is not listed as an Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) design feature, there is no mechanism to assure that the requirement has been met prior to fuel load.

The relevant section of the Standard Review Plan, section 9.2.2, I.16 directs the applicant to address the requirements and restrictions included as license information items in the original Design Certification Document, DCD.

In addition, item (3) has taken exception to the DCD COL information Item requirements to provide a AAC design capable of reacting to loss of electrical power for "periods up to two hours for automatic restarting of pumps and refrigerators, under the expected environmental conditions during station blackout when electrical power is restored.

1. Provide justification for the proposed exception in information item (3).

2. Justify why there is not an ITAAC to assure that information item (3) is satisfied prior to fuel loading.

09.02.02-3
Question 12736

The staff reviewed the response of the applicant to COL License Information Item 9.11 (COM 9.2.2) item (4), in Section 9.2.17.1 of the FSAR that "Means shall be provided to minimize the potential for coolant leakage or release into system or surrounding equipment environs." The applicant intends to meet the item (4) design goal through technical requirements on the purchased components. As the design goal is not listed as an Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) design feature, there is no mechanism to assure that the requirement has been met prior to fuel load.

The relevant section of the Standard Review Plan, section 9.2.2, I.16 directs the applicant to address the requirements and restrictions included as license information items in the original Design Certification Document, DCD.

Therefore, justify why there is not an ITAAC to assure that information item (4) is satisfied prior to fuel loading.

09.02.02-4
Question 12738

The staff reviewed the response of the applicant to COL License Information Item 9.11 (COM 9.2.2) item (5), in Section 9.2.17.1 of the FSAR that "An evaluation of transient effects on starting and stopping or prolonged stoppage of the refrigeration/chiller units. Effects like high restart circuit draw downs on safety buses, coolant-oil interactions, degassing needs, coolant gas leakage or release in equipment areas along with flammability threats, synchronized refrigeration swapping." The applicant intends to meet the item (5) design goal through an evaluation of the purchased components. As the design goal is not listed as an Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) design feature, there is no mechanism to assure that the requirement has been met prior to fuel load.

The relevant section of the Standard Review Plan, section 9.2.2, 1.16 directs the applicant to address the requirements and restrictions included as license information items in the original Design Certification Document, DCD.

Therefore, justify why there is not an ITAAC to assure that information item (5) is satisfied prior to fuel loading.

Request for Additional Information No. 3217 Revision 2

7/29/2009

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 09.02.02 - Reactor Auxiliary Cooling Water Systems
Application Section: 9.2.11 Reactor Building Cooling water System

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

09.02.02-5
Question 12846

The staff reviewed STP DEP 16.3-16, LCO 3.7.1, "Reactor Building Cooling Water (RCW) System, Reactor Service Water (RSW) System, and Ultimate Heat Sink (UHS) - Operating and LCO 3.7.2, Reactor Building Cooling Water (RCW) System, Reactor Service Water (RSW) System and Ultimate Heat Sink (UHS) – Shutdown." This departure eliminates the requirement for Condition C2 requiring restoration of two inoperable RCW, RSW or UHS divisions to the operable conditions within 14 days, claiming that it is redundant with Condition A that requires restoration of a single system within 14 days.

Standard Review Plan Section 16.0, Subsection II references 10 CFR 50.34 that requires applicants to justify the selection of technical specification conditions.

The staff finds that STD DEP 16.3-16 may result in misinterpretation of the Technical Specification (TS), which may result in the TS be interpreted to allow longer down times than are specified originally specified in the approved ABWR Technical Specification. The staff finds that elimination of the requirements for condition C2 may result in the LCO being interpreted as allowing a division to be out of service for 21 days (the 7 day period to fix the first disabled unit followed by a new 14 day period to fix the second disabled unit) instead of the 14 days that is specified by condition C2 in LCO 3.7.1 of the ABWR DCD Technical Specifications. Therefore, the staff request that the applicant provide additional information or analysis to confirm the validity of this departure or remove it from the application.