PMSTPCOL PEmails

From: Thomas Scarbrough
Sent: Friday, March 27, 2009 11:46 AM
To: Stacy Joseph
Cc: Weidong Wang; STPCOL
Subject: RE: RAI 2422 - The RAI Document is Ready for Review
Attachments: RAI 2422 Scarbrough 3-27-09.doc

Stacy,

Per our discussion, attached is my proposed revision to the RCIC RAIs for STP.

Also, I combined the third RAI into the second RAI because the topic is the same.

Thanks.
Tom

-----Original Message-----
From: Stacy Joseph
Sent: Friday, March 27, 2009 10:40 AM
To: Weidong Wang; Thomas Scarbrough
Subject: FW: RAI 2422 - The RAI Document is Ready for Review

Weidong and Tom,

I have reviewed RAI 2422 and have a couple of recommended revisions. Please see attached. Weidong and I already discussed the first one. For the second and third, I took a shot at adding some regulatory basis to the question (as we are really supposed to do). Please review/revise if this is not correct (as obviously you know better than I!). Also, I removed the reference to Ch. 5.4.6 (mainly because this is a Ch. 6 question). Finally, I deleted the 4th question because we already had the telecon with STP and I believe that RAI 2470 supercedes this question.

Please review and let me know if you concur with the changes or give me a call if we need to discuss. I have not made these changes in eRAI. Once we agree on wording, I'll make the changes and send the RAI back to you to concur.

Thank you!
Stacy

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From: Thomas Scarbrough

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Request for Additional Information No. 2422 Revision 02

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 06.03 - Emergency Core Cooling System
Application Section: 6.03

QUESTIONS for Reactor System, Nuclear Performance and Code Review (SRSB)

06.03-***

The applicant is required by Section IV.A.3 of the ABWR Design Certification Rule to provide the referenced proprietary information.

Provide the proprietary information item Figure 6.~~1~~3-10 referenced in the ABWR DCD.

06.03-***

~~Section 5.4.6, "Reactor Core Isolation Cooling System," in Revision 2 to South Texas Project (STP) Units 3 & 4 COL Application Final Safety Analysis Report (FSAR) removes the reference to GE Licensing Topical Report NEDE-33299P, "Advanced Boiling Water Reactor (ABWR) With Alternate RCIC Turbine Pump Design," in several subsections.~~ STP 3 & 4 FSAR (Revision 2) Subsection 6.3.2.2.3, "Reactor Core Isolation Cooling System (RCIC)," references Standard Departure (STD DEP) T1 2.4-3, and states that the STP 3 & 4 RCIC System will consist of a steam-driven turbine integral with a pump assembly and will include piping, valves, and instrumentation necessary to implement its several flow paths. Revised STP DEP T1 2.4-3, "RCIC Turbine/Pump," in STP 3 & 4 COL Application Part 7 ~~(~~ (Revision 2), "Departures Report," removes the reference to ~~NEDE-33299P~~GE Licensing Topical Report NEDE-33299P, "Advanced Boiling Water Reactor (ABWR) With Alternate RCIC Turbine Pump Design,", but does not provide a plant-specific description of the STP 3 & 4 RCIC design in comparison to the accepted ABWR RCIC design. STP 3 & 4 COL Application Part 9 (Revision 2), "Inspections, Tests, Analyses, Acceptance Criteria," removes the reference to NEDE-33299P in discussing the ITAAC for the STP 3 & 4 RCIC System, and states that the ITAAC have been revised to reflect the change to an integrated turbine and pump design.

The NRC regulations specify General Design Criteria (GDC) in 10 CFR Part 50, Appendix A, for the emergency core cooling system (ECCS) and other structures, systems, and components important to safety to provide reasonable assurance that a nuclear power plant can operated without undue risk to the health and safety of the public. Applicable design criteria for the ECCS include, for example, GDC 1 through 5 and 35 through 37. Section 6.3, "Emergency Core Cooling Systems," in STP 3 & 4 COL FSAR includes the RCIC System as part of the ECCS for this plant. In that the STP 3 & 4 applicant is not using the RCIC turbine-pump design reviewed and accepted by the NRC staff for the certified ABWR design in NUREG-1503, the NRC staff needs information regarding the RCIC System to evaluate compliance with 10 CFR Part 50, Appendix A, for this system at STP 3 & 4. Therefore,

~~RG. 1.206 C.I.6.3.2 states that the applicant should provide piping and instrumentation drawings, should describe each component of the system and identify significant design parameters, etc. In accordance with the guidance provided in RG 1.206 C.I.6.3.2, please D~~describe the plant-specific RCIC System and its components to be installed at STP 3 & 4, including the pump and turbine assembly, piping, valves, and instrumentation. For example, describe the design, qualification, manufacture, quality assurance, preservice and inservice testing, flow-induced vibration analysis and monitoring, and maintenance of the STP 3 & 4 RCIC System and its components. Provide the RCIC pump performance or operating characteristics for the new monoblock design of the RCIC turbine/pump. Also, discuss the ITAAC to be applied to the STP 3 & 4 RCIC System and its components to confirm the acceptability of their design, qualification, manufacture, and installation. Identify instances where the STP 3 & 4 RCIC System will differ from the system and its components accepted in the NRC Final Safety Evaluation Report on the ABWR Design Certification (NUREG-1503).

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~~06.03-***~~

~~In STP 3 & 4 FSAR (Revision 2), T~~the applicant has changed the design of the RCIC turbine and pump assembly in favor of an improved monoblock design. However, the pump performance in the form of characteristic curves has not been provided for the new integrated design.

~~RG. 1.206 C.I.6.3.2 states that the applicant should provide pump characteristic curves and pump power requirements. In accordance with the guidance described in RG 1.206 C.I.6.3.2, please p~~Provide the RCIC pump performance or operating characteristics for the new monoblock design of the RCIC turbine/pump.

06.03-***

~~**RAI 6D-1 STD DEP Admin in Section 6D.2.4:**~~

~~In the formula, value 70.68 is changed to 0.69. The change in the formula should be consistent with the Figure 6D-1 in the DCD. We (G.Thomas and Tom Scarbrough) require a call with the Applicant to fully understand the Figure 6D-1 before we approve the change.~~

SEE RAI 2470