PMSTPCOL PEmails

From: Joseph, Stacy
Sent: Friday, July 10, 2009 12:01 PM
To: 'Tomkins, James'
Cc: STPCOL
Subject: RAI 2422
Attachments: RAI 2422.doc

Jim,

We had discussed this RAI a few months back. Tom Scarbrough and Weidong Wang subsequently went to the Reading Room to review the Toshiba RCIC Pump document. I believe they followed up with several questions (RAI 2777). Mr. Scarbrough would still like to issue this RAI (see attached) because this is a broader question about the RCIC turbine pump assembly, its design and qualification, pump performance and operating characteristics, and applicable ITAAC. It would be acceptable to cross reference the responses to avoid duplication in specific areas.

Please review again and let me know if we need to discuss.

Thank you,
Stacy

Hearing Identifier: SouthTexas34Public_EX
Email Number: 1434

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From: Joseph, Stacy

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Recipients:
"STPCOL" <STP.COL@nrc.gov>
Tracking Status: None
"'Tomkins, James'" <jetomkins@STPEGS.COM>
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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-***

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 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, please 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).