PMSTPCOL NPEmails

From: Govan, Tekia
Sent: Thursday, March 11, 2010 1:20 PM
To: 'Scheide, Richard'
Cc: STPCOL
Subject: ~~PROPRIETARY:~~ STP SER Section 5.4.6 Slides (~~PROPRIETARY~~)
Attachments: STP SER Section 5 4 6 ACRS slides ~~PROPRIETARY~~ (Scarbrough).ppt

Dick:

Please complete a proprietary review on the attached draft slides for the 5.4.6 presentation to ACRS.

Thanks
Tekia

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Recipients:
"STPCOL" <STP.COL@nrc.gov>
Tracking Status: None
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Tracking Status: None

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SER Section 5.4.6
Reactor Core Isolation Cooling System

- Standard Departure (STD DEP) T1 2.4-3, “RCIC Turbine/Pump,” from ABWR DCD
- STP FSAR reflects new RCIC turbine-pump design
- Proprietary Toshiba Technical Report UTLR-0004-P (Rev. 0, June 2009), “Application of Turbine Water Lubricated (TWL) Pump to South Texas Project Units 3 & 4 RCIC Turbine-Pump,” describes new RCIC turbine-pump design

~~PROPRIETARY~~
RCIC Turbine-Pump Design

- Monoblock design (pump-turbine within same casing)
- No shaft seal required
- No barometric condenser required
- No oil lubrication
- No steam bypass line required for warm-up
- Less complex auxiliary systems

NRC Staff Review of RCIC Turbine-Pump Design

- NRC staff reviewed RCIC turbine-pump topical report at STP Rockville office on April 29, 2009
- NRC staff requested STP to submit topical report as proprietary document in support of COL application
- NRC staff prepared RAIs on topical report with STP response provided on July 7, 2009
- NRC staff conducted audit to discuss RCIC turbine-pump design and RAI responses with STP personnel on November 10 and 11, 2009, at STP Rockville office

RCIC Turbine-Pump RAI Responses and Audit Results

- STP indicated in RAI response that RCIC turbine-pump will be qualified using ASME Standard QME-1-2007, but topical report does not specify functional qualification provisions
- Surveillance not specified for small non-safety-related pump that assists with shaft bearing lubrication during standby conditions
- QA program for RCIC turbine-pump will satisfy 10 CFR 50, Appendix B
- RCIC turbine-pump included in IST program as described in FSAR Section 3.9.6
- Potential flow-induced vibration for RCIC turbine-pump will be addressed as specified in ABWR DCD

SER Open Items 05.04.06

- Open Item 05.04.06-1
  - Audit follow-up items:
    - Revise topical report to specify functional qualification provisions for RCIC turbine pump
    - Specify surveillance testing for RCIC standby lubrication pump
- Open Item 05.04.06-2
  - RAI requests STP to submit results of pump calculations showing available NPSH margin when head loss for new ECCS suction strainer is determined