

From: Thadani, Mohan
Sent: Thursday, July 15, 2010 9:10 AM
To: Harrison, Albon
Cc: Dittman, Bernard; Sun, Summer
Subject: ME3967_Request for Additional Information

Wayne:

By letter dated May 19, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. [ML101450115](#)), STP Nuclear Operating Company (STPNOC) submitted a license amendment request (LAR) for Residual Heat Removal (RHR) System changes to South Texas Project Electrical Generating Station (STPEGS) Units 1 & 2.

The proposed change would reduce the system/equipment diversity that ensures isolation of low pressure Residual Heat Removal (RHR) System from high pressure Reactor Cooling System (RCS).

The NRC staff has completed its preliminary evaluation of the May 19, 2010 LAR, and has identified a need for additional information that would aid our completion of the review of the licensee's LAR.

To ensure timely completion of the review of your LAR, the NRC staff requests your response to the following request for additional information, (RAI) by August 15, 2010. If your response to this RAI will be delayed, please contact me to discuss a mutually convenient alternate schedule.

Best regards,

Mohan C Thadani

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REQUEST FOR ADDITIONAL INFORMATION
SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION, UNITS 1 & 2,
LICENSE AMENDMENT REQUEST (NOC-AE-10002532) FOR
RESIDUAL HEAT REMOVAL ISOLATION INSTRUMENTATION
TAC Numbers ME3967 & ME3968

The NRC staff has determined that additional information is required to evaluate the compliance of South Texas Project Electric Generating Station (STPEGS) Units 1 & 2 LAR against U.S. Nuclear Regulatory Commission's Standard Review Plan (SRP) (NUREG-0800), Section 7.6 "Interlock Systems Important to Safety," Branch Technical Position (BTP) 7-1 "Guidance on Isolation of Low-Pressure Systems from the High-Pressure Reactor Coolant System," and BTP 5-4, "Design Requirements of the Residual Heat Removal System," (03/2007 Revision).

- 1) Describe STPEGS Unit 1 & 2 compliance to the automatic closure function of BTP 7-1 Position #2 that states that the valve operators should receive a signal to close automatically whenever the primary system pressure exceeds the subsystem design pressure.

Otherwise, if compliance is not intended then the licensee should either:

- a) Explain the proposed alternative to the SRP criteria and demonstrate that it provides an acceptable method of complying with the Commission's regulations; or
- b) Provide information that demonstrates that the exception allowed by BTP 7-1 Position #5 is applicable.

- 2) Describe STPEGS Unit 1 & 2 compliance to the independence, diversity and system pressure criteria of (a) BTP 7-1 Position #2 that states both motor-operated valves should have independent and diverse interlocks to prevent both from opening unless the primary system pressure is below the subsystem design pressure, and (b) BTP 5-4 Position # B.2.A.iii that states that the valves should have independent diverse interlocks to protect against one or both valves being open during an RCS pressure increase above the design pressure of the RHR system, to the extent that such interlocks will not degrade high system reliability during shutdown operations (see Generic letter 88-17). This information should fully describe the independence and diversity of the interlocks in relationship to the system pressure magnitudes.

Otherwise, if compliance is not intended then the licensee should either:

- a) Explain the proposed alternative to the SRP criteria and demonstrate that it provides an acceptable method of complying with the Commission's regulations; or
- b) Provide information that demonstrates that the exception allowed by BTP 7-1 Position #5 is applicable.

- 3) The licensee should explain why the manufacturer diversity that is proposed for deletion, and the associated pressure sensing technology diversity, are not necessary for STPEGS Unit 1 & 2 compliance to BTP 7-1 Position #2, and BTP 5-4 Position # B.2.A.iii . Within this explanation, the licensee should:
 - a) Provide a deterministic analysis that addresses the adequacy of the remaining diversity to prevent each set of series motor-operated valves in each RHR loop from opening unless the RCS pressure is below the RHR System design pressure. The analysis should identify any vulnerability associated with the proposed change to permit a single pressure transmitter manufacturer, with its associated pressure sensing technology, and should address the plant's ability to cope with the identified vulnerabilities; and
 - b) Describe the independence and diversity provided by the operating procedures and manual actions that govern closing the isolation valves and activating/deactivating the power lock out from the motor control center. This information should include the alarms and indications that govern these procedures and actions, identify their sources, and describe the degree of independence and diversity from the RHR system pressure sensors (PT-405, PT-406, and PT-407).
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E-mail Properties

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From: Thadani, Mohan

Created By: Mohan.Thadani@nrc.gov

Recipients:

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