NRR-PMDAPEm Resource

From: Mozafari, Brenda
Sent: Monday, June 13, 2011 4:15 PM
To: Rogalski, Rich
Subject: ME4912 Audit- HBR Implement EMF-2328.docx
Attachments: ME4912- HBR Implement EMF-2328.docx

Rich,

Attached is the Audit Plan provided by our Reactor Systems staff to guide you in preparation for the upcoming audit. We will have a phone discussion to narrow down the date for the audit when you have identified the needed documentation and determined where to carry out the audit.

Thanks

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"Rogalski, Rich" <Rich.Rogalski@pgnmail.com>
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H. B. Robinson Steam Electric Plant Unit 2

Audit of Request to Implement EMF-2328

Background

By letter dated October 20, 2010, Carolina Power & Light Co., the licensee for H. B. Robinson Steam Electric Plant, Unit 2, submitted a request to revise technical specifications (TS) as necessary to use fuel with AREVA proprietary M5 fuel cladding. The request included a proposal to add a reference to EMF-2328, "PWR Small Break LOCA Evaluation Model S-RELAP5 Based."

In order to complete its independent safety evaluation and determine that the proposed addition of EMF-2328 to the Robinson TS will provide for the emergency core cooling evaluation to be performed in accordance with 10 CFR 50.46 requirements, the NRC staff has identified a need for additional information.

Regulatory Audit Bases

The basis of the staff's audit activities is provided in 10 CFR 50.46(a)(1)(i), insofar as it requires the calculation of a number of postulated loss-of-coolant accidents of different sizes, locations, and other properties sufficient to provide assurance that the most severe postulated loss of coolant accident has been calculated. The staff intends to audit the plant-specific calculation performed in accordance with EMF-2328 to establish whether this requirement is satisfied.

EMF-2328 is an ECCS evaluation model based on the required and acceptable features described in 10 CFR 50, Appendix K. The staff's audit will serve as a means to collect information to determine whether the implementation of the evaluation model is consistent with the requirements of Appendix K.

Regulatory Audit Scope

The staff will audit the calculation notebook describing the small break loss of coolant accident analysis to establish whether EMF-2328 is proposed for implementation in accordance with 10 CFR 50.46 requirements, and will especially seek to determine the following:

- The analyzed break spectrum adequately identifies the largest break size that results in the PCT occurring before the cold leg accumulator discharge, and the smallest break size that results in the PCT occurring after the cold leg accumulator discharge.
- Mechanisms for hydraulic communication between the upper plenum and downcomer are appropriately modeled, including hot leg nozzle gaps and core barrel leakage paths.
- The clearing of the reactor coolant loop seals is appropriately modeled.

Logistics

This audit can be conducted as a desk activity, at a licensee-controlled facility near NRC HQ, at the Robinson site, or at the fuel vendor facility. The only anticipated need for personnel interface would be to clarify elements of the calculation notebook, which could be accomplished via teleconference during the audit.