From: Chawla, Mahesh
Sent: Friday, June 24, 2011 4:06 PM
To: gregory.myers@xenuclear.com
Cc: Sun, Summer; Ulses, Anthony; Wengert, Thomas; Pascarelli, Robert
Subject: PINGP - AST Methodology - ME2609 and ME2610

Greg:

The NRC staff has reviewed your response to the RAIs dated June 22, 2011 (ML111740145) and would like the following clarifications. Please arrange a teleconference to discuss the following request with the NRC staff:

(1) The first Appendix B of Enclosure 1 lists additional conditions for Facility Licensee no. DRP-42 for Unit 1. The proposed added conditions on pages B-3 and B-4 indicate that the AST LA will be implemented and a report to NRC will be submitted after installations of the "Unit 2" RSGs.

Should "Unit 2" RGSs be "Unit 1"?

(2) Page 2 of Enclosure 2 indicates that the MTO analysis is based on a power level of 1683 MWt, which corresponds to the current power level of 1677 MWt with uncertainties.

Is the licensee's intent to use the MRO analysis to support the AST application at current power level? Does the licenses plan to provide a separate MTO analysis based on a higher power level to support it's extended power uprate in the future?

(3) Table 2 lists the safety-related (SR), non-SR (NSR) and augmented quality (AQ) systems, components and instruments (SCIs) available for SGTR mitigation.

Please identify the NSR and AQ SCIs in Table 2 that are credited in the MTO or mass release analyses, discuss the functions of each identified SCIs, and address the acceptability of each of the NRS and AQ SCIs for consequences mitigation assumed in the analyses for supporting the licensing applications

(4) The operator action delay times for RCS depressurization are 4 minutes used in the MTO analysis and 7 minutes in the mass release analysis listed in Tables 5, and 6, respectively.

Provide bases for the different operator action times used for RCS depressurization, while the operator action times for RCS cooldown initiation (19 minumtes following reactor trip), SI termination (2minutes) and charging flow termination (15 minutes) remain the same in the MTO and mass releases analysis.

(5) Figures 11 and 16 show the RCS and SG pressures, and steam releases for the mass release analysis.

1. Figure 11 indicates that at about 2850 seconds, and 3100 seconds, there are sudden decreases in the intact SG pressure and RCS pressure, respectively. Explain the thermal hydraulic phenomena, mitigating systems, or operator actions that contribute to the decreases.

2. Figure 16 shows that for the ruptured SG, the steam releases suddenly increase and decrease between 100 to 200 seconds into the transient. At 800 seconds, the releases suddenly increase and then decrease gradually, following a deep gradual decrease at 1300 second until 1500 seconds. After 1500 seconds, the releases become a small, constant rate. Explain the changes identified above for the steam releases through the ruptured SG. For the intact SG, the first significant steam releases occur between 1200 – 1900 seconds. This is due to the operator action that opens the ADV for RCS cooldown. However, it is not clear what causes the second significant releases to occur after 2800 seconds until 4000 seconds when the presented results end. Explain the causes for the second significant releases.