

2

From: Karen Cotton
To: John Lubinski
Date: 08/29/2007 9:08:09 AM
Subject: Farley Update

John,

The report in question was in fact the August 17, 2007, report as per our discussion yesterday.

In summation the purpose of the inspection was to examine the causes for and actions taken related to the Cooling Water Systems Performance Indicator (PI) crossing the threshold from Green to White for both Units 1 and 2 in the second quarter of 2006.

The open issue is that the Inspectors found significant weaknesses relating to the thoroughness and quality of several root cause evaluations. Based on these significant weaknesses, a parallel White inspection finding was opened.

Attached is a copy of the inspection report for more details. Please feel free to call (x-1438) or contact me if you have any further questions.

Thanks,

Karen

CC: Evangelos Marinos

B-2

Farley Ctmt Sump Valve SDP Summary

1. Licensee - The use of the ctmt sump will not be needed for certain LOCAs and RHR providing shutdown cooling is a success. Specifically:

50% of all SBLOCAs will not drain the RHR loop provided there is HHSI initially and then charging is making up to the RCS with SI terminated

All RCP Seal LOCAs when secondary side cooling is available and charging is making up to the RCS with SI terminated

NRC - The staff input on this is not available yet. Therefore, full credit consistent with the licensee's input will be used. However, this is liberal in that:

The EOP does not provide clear direction to terminate SI if a LOCA is known to be in progress

The decision point to RHR shutdown cooling is a decision made in concert with the TSC. There is an HRA component here & using RHR vs. recirculation is never 100%.

2. Licensee - The valve failing at approximately 15% open is due to a combination of hammerblow from the motor operator and pitting on the torque switch contacts. This is specific to this particular valve - common cause is not involved and t/2 is applicable.

NRC - As evidenced by the licensee's video showing the torque switch contacts hanging up, the hammer blow is not a contributor. It appears that the contacts are failing on the closing cycle and sit in that failed state until the next demand. Therefore, this is not a t/2 exposure time and the exposure time should be doubled from the preliminary SDP. Also, the encapsulated valves (8811A & B) are in the same general high humidity environment and the pitting, which significantly contributes to the contact failure, could be environmental. The lab results could not rule out common cause and the pitting can not be seen except at the lab - the other MOV could have the pitting too. Common cause should still be included in the risk quantification.

3. Licensee - The likelihood that the mid-position MOV will be repetitively cycled until fully opened is much higher than portrayed in the prelim SDP. Procedures, complexity and training/experience are better characterized as nominal. Reducing anyone of these performance shaping factors drops the color to White.

NRC - Based upon the description of crew actions at the Regulatory Conference, the best probability is 0.5. There is high dependency between the 2nd and 3rd cycling. No matter how likely the 2nd cycling is, the third at least meets the high dependency description in the SPAR-H worksheet. Also, this is liberal since it assumes success on the third attempt every time.

4. Licensee - Given the circumstances the operating crew may energize the LHSI pump with the suction valve in mid-position. Based upon calculations the pump would have adequate NPSH and core cooling would be maintained.

NRC - There is no procedural direction to accomplish this action. In fact there is a

procedure, given a failure of sump recirculation. This is the direction operators have been trained to follow. Unfortunately, as stated in the licensee's docketed information, the actions to refill the RWST or any of the other actions in the ECP are not a success path. Also, although full staff review has not been completed, the licensee's NPSH calculation does not appear to use a containment over-pressure condition consistent with SBLOCA after a number of hours and could be invalid.

The new 'numbers' are being generated but even when segmenting the LOCA to RHR ratio consistent with the licensee's input (this is a 40% CDF reduction), the delta CDF point estimate looks about $2E-5$. The exposure time is doubled and a .5 HRA will be applied. These two pretty much cancel out.