

From: Sonia Burgess
To: Michael Kunowski; Paul Krohn; Ronald Langstaff
Date: 12/26/01 7:30AM
Subject: Re: Another Consideration for the Point Beach AFW/IA Issue

Paul,

The way I understand it, it's not a new consideration. The same scenario (loss of IA) and the time frame for action. The plant could throttle back AFW flow within 5 minutes on a Rx trip (as happened this summer during the alewives fish issue, operators throttled AFW flow within 3 minutes). This happens because the plant could be concerned with RCS temperature cooldown rate (step 1 of EOPs) before the SGs level (step 4 of EOPs). Since the original procedure change focused on valve position, within 3-5 minutes the operator may see the recirc valve position "open" with the loss of IA because of residual air header pressure. The valve may later change due to decreasing air header pressure and the operator may not catch the valve position change before realizing AFW pump dead-heading.

Sonia

>>> Paul Krohn 12/20/01 06:04PM >>>
Mike and Ron,

Today (12/20) the Point Beach PRA staff identified another scenario/permutation to the AFW/Loss of IA issue. The scenario is one where instrument air does not fail catastrophically but bleeds down over a period of a few minutes (say 2 to 5 minutes).

In the worst case scenario with all AFWPs lighting off, ~600 gpm flows to each Unit (400 TDAFWP and 200 MDAFWP). By the design basis, only 200 gpm is required to remove decay heat. The PRA staff has identified that a control room operator may react early to throttle back AFWP flow since excess flow is available. Then after IA bleeds off a few minutes later and the recirc valve goes shut, the possibility exists that (with the AFWP throttled back too far initially and with the recirc valve shut), sufficient cooling flow for the AFWP may not be available.

As of 1800 on 12/20, a temporary procedure change is being written to add increased guidance to EOP 0.0 (Trip Response), EOP 0.1 (Trip Recovery), and ECA 0.0 (Loss of all AC Power). The procedure change should make it to the control room at about 1830 with a crew briefing to follow. The guidance will be on the fold out page making it a continuous action statement. The guidance tells the operator that if the 'Instrument Air Header Pressure' Low alarm comes in, the minimum AFWP flow requirements apply (ie ensure 50 gpm for the MDAFWP and 75 gpm for the TDAFWP or shut the AFWP down).

I will examine this issue further in the morning but my first impression is that no new operability issues have been raised. This seems to be a PRA refinement to the previous issue, one that warrants a procedure revision to increase the probability of operator success.

What I do believe this new scenario points out is that the PB PRA staff is ahead of the Operations staff in responding to the whole AFW/IA issue. Two weeks ago when all the simulator drills were being run, I would have expected OPS to have identified this scenario vice the PRA staff one and a half weeks after the issue was initially raised. The issue identified

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today becomes another consideration as we progress through human factors considerations and the SDP process. More to follow in the morning.

Paul Krohn, SRI
Point Beach
12/20, 1815

CC: Geoffrey Grant; John Grobe; John Jacobson; Michael Parker; Michelle Castanedo; Raymond Powell; Roger Lanksbury; Steven Reynolds