

STATE CHANGE HISTORY

Initiate



by admin

Done  
4/25/2002 5:52 30 AM  
Owner (None)

SECTION 1

Activity Request Id: CAP017075  
Activity Type: CAP Submit Date: 3/20/1997 1:00.00 AM

One Line Description: Questions and concerns about the use of operator action to control AFW flow

Detailed Description: A dedicated operator is currently being used to adjust the P-38A+B discharge pressure control valves AF-4012 and AF-4019 via the controllers on C01 for the motor driven AFW pump's to prevent pump motor trip on overcurrent when powered by a diesel generator at high frequency. The following questions and concerns are being raised with respect to the use of operator action to control AFW flow. During the accident when AFW flow is most needed (i.e., complete loss of offsite power accident), P-38A+B would be powered by the EDGs and the instrument air (IA) compressors (and SA compressors) would be stripped on loss of voltage. If instrument air is lost, PCVs AF-4012 and AF-4019 would fail open and the dedicated operator would not be able to adjust flow via the PCV controller on C01. Additional operator action would then be needed to control flow by manually starting an IA compressor to regain control of the PCV or to manually gag the PCV or throttle the discharge MOV in the AFW pump room. In a seismic event, the loss of all offsite AC Accident Analysis Basis Document (AABD Module 11) and FSAR 14.1.10 list the only required operator action for AFW flow as the switchover of the AFW suction supply from the CSTs to the Service Water system. Since AF-4012 and 4019 are fail open AOVs, and the IA system is non-seismic, a seismic event could result in loss of air to these valves requiring additional operator action to gag the pump discharge AOV or to throttle on the discharge MOV to control flow and prevent possible motor trip on overcurrent. It can be noted that Calculation P-87-001 shows that when the PCV fails open, flow from P-38A or P-38B would be above the 240 gpm limit established on the dedicated operator instructions even with SG pressure above 1000 psig and assuming normal power supply frequency. AOP-5B, Loss Of Instrument Air, lists that AF-4012 and AF-4109 fail open and that the mini-recirc valves fail shut, however the AOP only addresses the need to maintain a minimum flow by gagging open the mini-recirc valves. The only specified direction with respect to maximum flow is to utilize the turbine driven AFW pump to prevent excessive cooldown due to loss of flow control on the motor driven pump. The AOP does not address gagging AF-4012 and AF-4019 to limit flow to a maximum value. Significance: The additional operator actions described above may also need to be addressed in the dedicated operator issue of controlling flow from the motor driven AFW pumps to prevent motor trip on overcurrent due to high flow rates. In a seismic event, the accident analysis basis document (AABD Module 11) and FSAR 14.1.10 list the only necessary operator action for AFW as the suction supply switchover from the CSTs to the SW system. The analysis does not describe the possible need to manually throttle flow in the AFW pump room if Instrument Air is lost during a seismic event. This may require a licensing basis change via 50.59. AOP-5B, Loss Of Instrument Air, does not provide specific instructions to limit flow from P-38A/B if AF-4012/4019 fails open.

Initiator: SCHROEDER, JOHN A Initiator Department: EESN Engineering  
Equipment Systems NSSS  
Mech PB

Date/Time of Discovery: 4/25/2002 5:52:30 AM Date/Time of Occurrence: 4/25/2002 5:52:30 AM

Identified By: (None) System: AF PB

Equipment # (1st): (None) Equipment Type (1st): (None)

Equipment # (2nd): (None) Equipment Type (2nd) : (None)

Equipment # (3rd): (None) Equipment Type (3rd) : (None)

Site/Unit: Point Beach - Common

Why did this occur?:

A/166

