

50-261

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MEMORANDUM FOR: Richard C. DeYoung, Director  
Office of Inspection and Enforcement

Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

FROM: C. J. Heltemes, Jr., Director  
Office for Analysis and Evaluation  
of Operational Data

SUBJECT: VAPOR BINDING OF AUXILIARY FEEDWATER PUMPS

Enclosed is an engineering evaluation report on the vapor binding of the auxiliary feedwater (AFW) pumps at H. B. Robinson Nuclear Power Plant, Unit 2. The safety implication of the events at Robinson is that the leakage of main feedwater to the AFW system constitutes a common cause failure that can render both trains of the AFW system inoperable, although only single trains have been adversely affected to date. Similar events have also occurred at D. C. Cook, Unit 2.

The potential for the loss of AFW system due to backleakage appears generic because the designs of the systems at Robinson and Cook are typical of other PWRs, i.e., isolation between the steam conversion system and the AFW system is accomplished by check valves and motor-operated valves. AEOD has initiated a case study to better define the generic implications and establish the bases for revising the technical specifications to ensure that the AFW temperature is monitored and/or that the inservice inspection programs test the isolation capability of the check valves.

In the interim until the case study is completed, the Office of Inspection and Enforcement is requested to issue an Information Notice to promptly notify PWR licensees of these events and alert them to the potential for leakage from the feedwater system to the AFW system and steam binding of the AFW pumps.

The Office of Nuclear Reactor Regulation is provided a copy of the report at this time to highlight the significance of the events and provide an input into ongoing NRR activities. We have only recently become aware of TIA 82-66 entitled, "Robinson/Crystal River 3 - AFW Check Valve Leakage," and endorse the action to evaluate generic technical specification changes. It is important to note that Robinson events analyzed in the enclosed report have occurred since the TIA was initiated in 1982. These events may provide additional information pertinent to the resolution of the TIA.

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If you require any additional information, please contact Wayne Lanning at 492-4433. He is available to assist you in resolving this important issue.

Original Signed by  
C. J. Heltemes, Jr.

C. J. Heltemes, Jr., Director  
Office for Analysis and Evaluation  
of Operational Data

Enclosure:  
As stated

cc w/enclosure:  
JOlshinski, Region II  
GHolahan, NRR  
JPage, NRR  
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bcc w/enclosure:  
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DATE	11/17/83	11/18/83	11/18/83	11/21/83			