

ENCLOSURE 2

SUPPLEMENT TO THE SAFETY EVALUATION REPORT  
FOR SALEM UNITS 1 AND 2  
IMPLEMENTATION OF RECOMMENDATIONS FOR THE  
AUXILIARY FEEDWATER SYSTEM

II. IMPLEMENTATION OF OUR RECOMMENDATIONS

A. Short Term Recommendations

2. Recommendation GS-3

In our Safety Evaluation Report (SER) dated July 30, 1980 we required the licensee to perform a water hammer test on Unit 2 to demonstrate that unacceptable damage will not result due to water hammer effects. Our SER concluded that recommendation GS-3 was met pending successful performance of the water hammer test. A similar test was not required for Unit 1 based upon a letter dated November 3, 1979 from A. Schwencer, NRC, to F. Librizzi, PSE&G, which concluded that adequate steps had been taken to reduce the potential for steam generator water hammer and that no further action would be required of the licensee with regard to steam generator water hammer for Unit 1.

A water hammer test procedure was proposed by the licensee in a June 4, 1981 letter. The procedure consisted of tripping the plant, initiating Auxiliary Feedwater (AFW) flow to the steam generators and adjusting the flow so that 440 gpm would be supplied to each steam generator. Instrumentation would be in place to monitor the feedwater pipe response. The flow would be maintained until each steam generator feedwater ring was covered. By memorandum dated June 16, 1981 we approved the test procedure.

The water hammer test was performed by the licensee on July 23, 1981 in accordance with the approved procedure. The test results were reported in a December 3, 1981 letter from the licensee. Our review of the instrumentation and associated test records indicate an acceptable response of the feedwater system.

We conclude that the feedwater piping dynamic response fulfills the requirements of recommendation GS-3 as the initial AFW system flow did not cause any identifiable plant damage due to water hammer effects.

2. Recommendation

In our SER dated July 30, 1980 we stated that the Office of Inspection and Enforcement (I&E) would review the AFW pump endurance test results. However at a later date we recommitted to perform the review of the 48-hour endurance test results at the request of I&E. The pump endurance test results were submitted by letters dated June 10, 1980 and November 3, 1981 for Units 1 and 2 respectively. Further information was provided by letter dated August 18, 1982.

The pump endurance test submittals provided a description of the test conditions. The pumps were operated at points along the head capacity design curve. The pump and motor bearing temperatures were recorded and shown to be well below the associated alarm setpoints. The vibration measurements were recorded and were below the allowable limit.

The pump room temperature and humidity were monitored and were within the environmental qualification limits for equipment in the room.

We conclude that this recommendation has been met through the satisfactory evaluation of the Units 1 and 2 AFW pump endurance test results.

3. Recommendation

In our SER dated July 30, 1980, we stated that the safety grade requirements for the indication of auxiliary feedwater flow was under staff review. The Instrumentation and Control Systems Branch (ICSB) evaluations of the Unit 1 and 2 auxiliary feedwater flow indication systems were provided by memorandums dated May 29 and June 8, 1981 respectively. The review by ICSB concluded that the systems meet the safety grade requirements specified by NUREG-0578. The results of this review have been transmitted to DL.

C. Long Term Recommendations

3. Recommendation GL-5

In our SER dated July 30, 1980 we stated the safety grade automatic initiation signals and circuits for the AFW system were under staff review. The ICSB evaluations of the Unit 1 and 2 AFW automatic initiation systems were provided by memorandums dated May 29 and June 8, 1981 respectively. The review by ICSB concluded that safety grade requirements of NUREG-0578 are met. The results of this review have been transmitted to DL.