WATTS BAR NUCLEAR PLANT UNIT 1
SIS TRAIN B FLOW DEFICIENT
NCR WBN NEB 8004
10 CFR 50.55(e)
FIRST INTERIM REPORT

Description of Condition

During the performance of Preoperational Test W-3.1E on the SIS system performance, the train B cold leg injection rate was found to be only 4000 gal/min, as compared to the required 4500 to 5000 gal/min. The cause of the deficiency is thought to be a continuation of the problem of insufficient system pressure drop discussed in NCR SWP 79-W-10 (copy attached). The flow restrictors added as a corrective action to that NCR corrected the problems in SQN 1 and 2, and WBN 1, train A. It is suspected, however, that minor configurational differences in WBN 1, train B, resulted in transferring the site of cavitation from the RHRS flow control valve to some other component of the system causing choking (two-phase) flow and reduced flow rates.

Corrective Action

In mid-April 1980 a limited test was completed to determine that the location of the flow control valve immediately downstream of an elbow would not by itself cause a flow reduction. That test showed that with sufficient back pressure in the system, the flow control valve can pass the required flow rate with no cavitation and with predicted pressure drops.

The entire flow injection path will not be available for further testing until mid-June. At that time, the specific cause of the flow reduction will be determined.

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