

ENCLOSURE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2
AND WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
INSUFFICIENT FLEXIBILITY OF LOW HEAD INJECTION TEST LINES
NCR'S SWP 79-S-9 AND SWP 79-W-9
10 CFR 50.55(e)
FINAL REPORT

Description of Condition

The 3/4-inch test lines from the two 8-inch low head injection headers, as designed, do not allow for acceptable piping flexibility per ANSI B31.7. The piping was designed assuming that the movement of the two parallel 8-inch headers occurred simultaneously and in the same direction. These headers, however, may be operated independently during certain operating conditions thereby resulting in independent thermal movement. During the alternate analysis of the test lines at Watts Bar Nuclear Plant, it was discovered that the test lines at Sequoyah and Watts Bar Nuclear Plants had been improperly designed.

Safety Implications

A break in one or both of the 3/4-inch test lines could result in a small loss of flow from the 8-inch headers. This small loss of flow was not assumed in the ECCS analysis and thus poses an unanalyzed safety concern. During normal operations, normal containment leak detection monitoring of the reactor coolant system inventory and the inventory control operations would enable the reactor operators to detect any significant loss in primary coolant inventory.

Corrective Action

The 3/4-inch lines will be reanalyzed and rerouted to provide an adequate piping design. The design drawings have been revised and the rerouting of the lines will be completed before fuel loading at Sequoyah Nuclear Plant and during the normal construction sequence at Watts Bar Nuclear Plant.

7908280585