ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
CHANGING OF INTERMEDIATE BREAK LOCATIONS
ON PRESSURIZER SURGE LINE
NCR CEB 79-25
10 CFR 50.55(e)

FINAL REPORT

Description of Condition

The initial piping analysis of the pressurizer surge line was conducted by EDS. Based on their analysis, break locations were postulated and evaluated by TVA, and break mitigative devices were designed. However, since this initial analysis, Westinghouse has been determined to be responsible for the piping analysis of the surge line. The Westinghouse analysis considered several significant factors which were not included in the initial analysis by EDS. These factors are as follows:

1. RCS overpressurization transients have been recognized and were utilized by Westinghouse in their analysis.

2. Seismic input has been revised and has been incorporated in the Westinghouse analysis.

3. The initial temperature distribution used by EDS along the process pipe, varying linearly from pressurizer temperature to RCS temperature, has recently been determined by Westinghouse to be unconservative. In the analysis completed by Westinghouse, an initial temperature equivalent to the RCS temperature throughout the surge line has been used.

Safety Implications

Had the deficiency gone uncorrected, pipe whip mitigation of a postulated surge line break may have been inadequate. Therefore, a break in the surge line could have resulted in unacceptable damage to surrounding equipment and could have resulted in the safe shutdown of the plant being adversely affected.

Corrective Actions

Use of the Westinghouse analysis has resulted in changing of the intermediate break locations for the surge line. Several trusstype protective device members will require modification, and two additional pipe sleeves will have to be added.

TVA has completed the load analysis for the new intermediate breaks. The design calculations and modifications for the mitigative devices, and the additional sleeves for the new intermediate breaks are in progress.

Actual equipment modifications on each unit will be completed before its respective initial criticality. This deficiency affects only the Watts Bar plant.