ENCLOSURE

SEQUOYAH NUCLEAR PLANT (SQN) UNIT 2
AND WATTS BAR NUCLEAR (WBN) PLANT UNITS 1 AND 2
DEFECTIVE REACTOR VESSEL UPPER INTERNALS GUIDE TUBE SUPPORT PINS
NCR'S SQN NEB 8006 AND WBN NEB 8001
10 CFR 50.55(e)
FIRST INTERIM REPORT

Description of Deficiency

This deficiency was discovered following a metallurgical evaluation of upper internals guide tube support pins from the OHI Nuclear Plant in Japan. Subsequent to this discovery, Westinghouse has determined that this deficiency is a generic problem in Westinghouse plants with an Upper Head Injection (UHI) System. Sequoyah and Watts Bar Nuclear Plants are the only TVA nuclear plants with UHI systems.

The original guide tube pins supplied by Westinghouse were, by virtue of their heat treatment, susceptible to stress corrosion cracking. After some length of service, the pins could fail and either release metallic pieces into the reactor coolant system or result in misalignment between guide tube and control rod and prevent control rod insertion.

Corrective Action

Westinghouse has initiated a detailed program for investigation of the upper internals guide tube support pins at both Sequoyah unit 2 and Watts Bar. This program will determine (1) if design changes are required to prevent misalignment between the control rod and the guide tube and (2) if, from a metallurgical standpoint, the present guide tube support pins can resist stress corrosion cracking in the reactor coolant environment for the life of the plant. The results and conclusions of this program will be the subject of a generic Westinghouse report to NRC-NRR. Westinghouse is evaluating the metallurgical properties of the pins in these reactors to determine if they are the same as the Sequoyah unit 1 pins which have been replaced or whether there are differences significant enough to preclude pin replacement. The replacement pins, if required, will be installed in unit 2 of Sequoyah Nuclear Plant and units 1 and 2 of Watts Bar Nuclear Plant before fuel loading for each respective unit.