### ENCLOSURE

## SEQUOYAH AND WATTS BAR NUCLEAR PLANTS UNDETECTABLE FAILURE IN THE SOLID STATE PROTECTION SYSTEM P-4 SIGNAL NCR'S NEB 79-4 AND NEB 79-5 10 CFR 50.55(e) FINAL REPORT

#### Description of Condition

Westinghouse has identified an undetectable failure which could exist in a circuit associated with engineered safeguards and which is required for reactor protection. The specific circuit involved is the P-4 permissive to the solid state protection system. The present testing procedures do not provide for checking the operation of the P-4 contacts or the interconnecting wiring. Therefore, a potential failure of the P-4 contacts or in the wiring would be undetectable. Westinghouse has reported this condition to NRC under 10 CFR Part 21 in a letter from T. M. Anderson to V. Stello, dated November 7, 1979.

#### Safety Implications

The failure modes of the P-4 contacts are (1) contacts fail to close when the reactor trip breakers open, or (2) contacts fail to open when the breakers are closed. Failure mode (1) could prevent the normal mode of resetting and blocking Safety Injection (SI) and alter the sequence of switchover operations from injection to recirculation phase. The consequences of failure mode (2) are such that following a previous initiation of SI and manual reset and block, the block of SI could remain following the reset of the reactor trip breakers and when the plant was returned to power.

#### Corrective Action

TVA will revise the appropriate procedures to require tests to verify the P-4 contact status following automatic reactor trip or any condition requiring opening of the reactor trip breakers. The tests will be repeated following reclosure of the reactor trip breakers and before rod withdrawal.

The test will follow the Westinghouse recommentations contained in the letter from T. M. Anderson to V. Stello dated November 7, 1979.

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