

ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2  
CONTROL LOOP BISTABLES FAIL TO UNDESIRABLE POSITION  
ON LOSS OF POWER  
NCR MEB 79-9  
REVISED FINAL REPORT

Description of Deficiency

Bistable contacts in the auxiliary control loops of the pressurized power relief valves were found to fail in an undesirable position on loss of control power. The problem was found during preoperational testing of the unit 1 facility auxiliary control room controls and was due to an error in the wiring of the bistable. The problem does not exist in the main control room instrumentation.

The wiring of the pressurizer auxiliary spray valves and the pressurizer backup heater bistables was also in question.

Safety Implications

Had the deficiency gone uncorrected, the air-operated pressurizer power relief valve, given loss of control power to the valve bistables, would fail open. This would result in depressurization of the reactor coolant system. Inadvertent lifting of a pressurizer relief valve is evaluated as a fault of moderate frequency in Section 15.2 of the Watts Bar Final Safety Analysis Report.

The control loop wiring for the pressurizer auxiliary spray valve and the pressurizer backup heater bistables was evaluated and has been determined to be correct.

Corrective Action

The wiring diagram for the pressurizer relief valve bistables has been corrected such that the bistables will fail open on loss of control power. This ensures that the valves will fail in their preferred closed position. The wiring corrections for each unit will be performed before its respective fuel load date. Upon examination of all other control loops in the auxiliary control room controls for similar configurations, no discrepancies were found.

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