

ENCLOSURE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2  
INCORRECT SOLENOIDS IN CVCS VALVES  
NCR 1P

FINAL REPORT

Description of Deficiency

During preoperational testing of portions of the chemical volume and control system (CVCS), valve stroke times for four flow control and containment isolation valves in the normal RCS letdown line were found to be much longer than that specified. This was due to construction personnel neglecting valve assembly drawings which instructed them to install a particular solenoid onto a particular valve. This failure to follow design drawings resulted in incorrect solenoids with undersized orifices being installed on these valves.

Safety Implications

The affected valves are located in the normal RCS letdown line. During accident conditions, the function of these valves is to provide containment isolation. The most severe case in this situation would be a break in the letdown line downstream of the outboard isolation valve FCV 62-77 (see FSAR figure 9.3-13). This would constitute an isolatable LOCA outside of containment. The slow closure time of the deficient valves would permit blowdown of radioactive coolant in excess of that allowed by the original design. Thus, under these circumstances, an accident of this type would be more severe than a similar accident in the original design with correctly installed solenoids on valves.

Corrective Action

The deficiency affected only the portion of the Westinghouse supplied air operated valves (AOV's) which were delivered to the site unassembled. All of these valves were inspected to determine if installation had been made in accordance with the current Westinghouse supplied assembly drawings. This inspection revealed that 25 AOV's in the CVCS and 2 AOV's in the RCS were assembled with incorrect solenoids. It was further determined that all of these AOV's had been assembled under the guidance of one individual who did not follow established procedures when selecting individual parts for valve assembly. Increased emphasis has been placed on ensuring that individuals responsible for field assembly of components adhere to established procedures. All affected AOV's have been reassembled with correct solenoids.

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