

ENCLOSURE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2
PARTITIONS NOT INSTALLED IN ACCORDANCE WITH DESIGN REQUIREMENTS
NCR MEB 79-42 AND NCR 1938
10 CFR 50.55(e)
FINAL REPORT

Description of Condition

During a preoperational test of the total flooding CO₂ fire protection systems, the partitions above several doors were damaged by the CO₂ pressure. A review of this condition revealed that the partitions did not meet the 1-1/2 hour fire barrier design requirements. This was caused by a detailed drawing which was never revised to reflect the current design. It was also discovered that the design of the total flooding CO₂ hazard area enclosures did not consider CO₂ pressures.

Safety Implications

These partitions are a part of the fire protection compartmentation design requirements. Thus, had this condition gone uncorrected, it could have been possible for a fire to spread from one safety-related area to another. In addition, the inability of the partitions to maintain the required CO₂ concentration in the compartments would have inhibited the ability of the total flooding CO₂ systems to mitigate a fire.

Corrective Action

The damaged partitions will be replaced by panels with a minimum of a 1-1/2 hour fire barrier rating. The design of the new partitions has been upgraded so that the partitions have a pressure withstanding capability of 50 pounds per square foot in areas where total flooding CO₂ fire protection systems are used. Other partitions and walls in total flooding CO₂ fire protection areas will be reevaluated to determine their pressure withstanding capability. The CO₂ systems in areas where damaged partitions were replaced will be retested to verify that the pressure withstanding capability of the new partitions is sufficient.

The new partitions will be installed and verification tests will be performed before initial criticality of unit 1.

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