

DUKE POWER COMPANY  
OCONEE NUCLEAR STATION

Report No.: UE-270/75-18

Report Date: November 19, 1975

Event Date: October 24, 1975

Facility: Oconee Unit 2, Seneca, South Carolina

Identification of Event: Failure of Reactor Building Electrical Penetration

Conditions Prior to Event: Unit at 75% Full Power

Description of Event:

On October 24, 1975, routine monthly checks of SF<sub>6</sub> gas pressure were being performed to verify the integrity of Reactor Building electrical penetrations. This gas is used as a quenching agent and normally is maintained at a pressure of 50 psig or greater for this type penetration. It was determined that penetration to WMV-2, Type A penetration for the 2B2 reactor coolant pump motor, indicated zero pressure. Attempts to determine the leakage rate were not successful since gas pressure could not be maintained in the penetration. As reactor operation could not continue with reactor coolant pump 2B2 secured (reactor coolant pump 2B1 was not in operation at that time), a reactor shutdown was initiated in order that the penetration could be examined and the reason for the leakage identified and corrected.

Designation of Apparent Cause of Event:

The apparent cause of this event was a cracked bushing in the electrical penetration on the penetration room side allowing SF<sub>6</sub> gas to escape.

Analysis of Event:

A bushing located on the penetration room side of the electrical penetration had cracked, allowing the SF<sub>6</sub> gas to escape to the penetration room. Visual inspection indicated that the penetration was leaking only on the penetration room side. Additionally, a test was performed to verify that the Reactor Building side bushings were intact and would provide containment integrity. Therefore, it is concluded that the health and safety of the public was not affected.

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Corrective Action:

The cracked bushing was replaced with the penetration in place and subsequently tested for leakage. This was the first failure of this type electrical penetration at Oconee and, therefore, continued monthly surveillance is considered adequate to detect any future failures in a timely manner.