

# DUKE POWER COMPANY

POWER BUILDING

422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER JR.  
VICE PRESIDENT  
STEAM PRODUCTION

TELEPHONE: AREA 704  
373-4083

September 18, 1981

Mr. James P. O'Reilly, Director  
U. S. Nuclear Regulatory Commission  
Region II  
101 Marietta Street, Suite 3100  
Atlanta, Georgia 30303

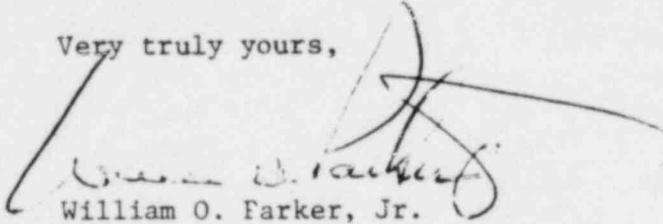
Re: Oconee Nuclear Station  
Docket No. 50-270



Dear Mr. O'Reilly:

Please find attached Reportable Occurrence Report RO-270/81-14. This report is submitted pursuant to Oconee Nuclear Station Technical Specification 6.6.2.1.a(3), which concerns a potential degradation in containment integrity, and describes an incident which is considered to be of no significance with respect to its effect on the health and safety of the public. My letter of September 4, 1981, addressed the delay in the preparation of this report.

Very truly yours,

  
William O. Parker, Jr.

JFK/php  
Attachment

cc: Director  
Office of Management & Program Analysis  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Mr. Bill Lavallee  
Nuclear Safety Analysis Center  
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Palo Alto, California 94303

Mr. F. Jape  
Resident Inspector-NRC  
Oconee Nuclear Station

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DUKE POWER COMPANY

OCONEE UNIT 2

REPORT NUMBER: 270/31-14

REPORT DATE: September 18, 1981

OCCURRENCE DATE: August 21, 1981

FACILITY: Oconee Nuclear Station, Unit 2  
Geneseo, South Carolina

IDENTIFICATION OF OCCURRENCE: Electrical Penetration for 2A1 RCP was discovered empty and could not be repressurized with SF<sub>6</sub> Gas.

CONDITION PRIOR TO OCCURRENCE: 100% F.P.

DESCRIPTION OF OCCURRENCE: At ~ 1030 hours on August 21, 1981, routine surveillance testing identified that EMV-2 electrical penetration (Power Supply for 2A1 RCP) was not pressurized with SF<sub>6</sub> dielectric. Attempts were made to repressurize the penetration but were unsuccessful. Unit power level was decreased, the 2A1 RCP was removed from service and the affected penetration was then isolated. A constant pressure from the SF<sub>6</sub> supply was applied to the penetration and a liquid leak detector was applied to the outside containment end of the penetration. No leaks were discovered. Based on the facts that one containment building boundary was intact, the low probability of propagation of the leak from one end of the penetration to the other, and a previous safety analysis which had determined that operation with one containment pressure boundary intact was acceptable, it was decided to reenergize the penetration, restart the 2A1 RCP and escalate back to full power. Additional precautions were taken which consisted of the following:

1. A "pancake" probe (RM-14) was attached to the penetration enclosure. This probe was monitored by Operations personnel. Since the activity in the containment was significantly higher than that in the penetration room, any leakage from the containment was expected to be indicated by the probe.
2. From August 21-25, 1981, the affected penetration was purged once per day with SF<sub>6</sub>. Commencing on August 25, 1981 a continuous N<sub>2</sub> purge was initiated on the penetration. These actions were to minimize any moisture buildup within the penetrations.

On September 13, 1981, following shutdown of Unit 2 for unrelated problems, a constant pressure from the SF<sub>6</sub> supply was again applied to the penetration and Performance personnel inspected the containment end of the penetration in an attempt to pinpoint the failure for Maintenance personnel to repair. Following unsuccessful attempts to locate the source of the leaks inside the containment, the outside containment end was again inspected. After reducing the SF<sub>6</sub> supply pressure, the source of the leak was determined to

be a leaking insulator bushing on the outside containment end of the penetration. Apparently, the velocity of the leakage was sufficient to prevent the liquid leak detector from locating the leakage source on the initial inspection performed on August 21, 1981. The insulator bushing was repaired and a local leak rate test was satisfactorily completed.

The loss of one of the two containment boundaries of the electrical penetration is considered to be potential primary containment degradation and is thus reportable pursuant to Technical Specification 6.9.2.1.a(1).

APPARENT CAUSE OF OCCURRENCE: The apparent cause of this occurrence was the failure of one of the insulator bushings on the outside containment end of the penetration.

ANALYSIS OF OCCURRENCE: Subsequent leak rate testing of penetration confirmed one of the two containment boundaries was intact. Since containment integrity was always intact during this occurrence, this incident is considered to be of no significance with respect to safe operation, and the health and safety of the public were not affected.

CORRECTIVE ACTION: The failed insulator bushing was repaired and a local leak rate test was successfully completed.