

DUKE POWER REGION
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DUKE POWER COMPANY

POWER BUILDING

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

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

April 13, 1982

TELEPHONE: AREA 704
373-4083

Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region 1I
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

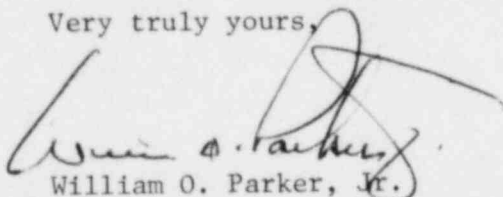
Re: Oconee Nuclear Station
Docket No. 50-270



Dear Mr. O'Reilly:

Please find attached Reportable Occurrence Report RO-287/82-04. This report is submitted pursuant to Oconee Nuclear Station Technical Specification 6.6.2.1.a(9), which concerns the discovery of conditions not specifically considered in the safety analysis report or Technical Specifications that require corrective measures to prevent the existence or development of an unsafe condition, 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 March 16, 1982 addressed the delay in preparation of this report.

Very truly yours,


William O. Parker, Jr.

JFN/php
Attachment

cc: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. W. T. Orders
NRC Resident Inspector
Oconee Nuclear Station

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Office of Nuclear Reactor Regulation
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DUKE POWER COMPANY
OCONEE NUCLEAR STATION UNIT 2

Report Number: PO-270/82-04

Report Date: April 13, 1982

Occurrence Date: March , 1982

Facility: Oconee Unit 2 , Seneca, South Carolina

Identification of Occurrence: The 2A2 HPI and normal makeup nozzle thermal sleeve was found loose and the safe end to pipe area was cracked.

Conditions Prior to Occurrence: Cold shutdown

Description of Occurrence: As a result of HPI-makeup nozzle safe end cracks at Crystal River in Florida and Oconee Unit 3, non-destructive examinations of Unit 2 HPI nozzle areas were conducted. Radiographic Tests (RT) and Ultrasonic Tests (UT) revealed that the 2A2 thermal sleeve was loose and that the safe end and upstream piping inside diameters were cracked. The RT of 2B1 indicated the thermal sleeve was loose, and the RT of 2B2 indicated the thermal sleeve had a 360° circumferential crack in the rolled region. RT of 2A1 showed the thermal sleeve to be tight and in position. UT revealed no anomalies on 2A1, 2B1 or 2B2.

Apparent Cause of Occurrence: The apparent cause of the 2A2 cracked safe end and pipe seems to be thermal fatigue. There appears to be a direct link between loose thermal sleeves and cracks in this area, but exactly why the thermal sleeves are loose is not known at this time. A Babcock and Wilcox owners group task force is investigating this problem to determine the cause.

Analysis of Occurrence: The material involved in the cracked safe end and upstream piping is type 316 stainless steel which should exhibit a leak before break. If the cracks had not been found and a leak progressed to a pipe rupture, it would have resulted in a small break loss of coolant accident (LOCA). A small break LOCA has been analyzed in the FSAR and that analysis indicates that the plant would be able to safely shut down. Thus, the health and safety of the public were not affected by this incident.

Corrective Action: The 2A2 cracked safe end, piping and thermal sleeve were replaced. The 2B2 thermal sleeve was also replaced. The new thermal sleeve design incorporates features which should better resist movement. The 2B1 thermal sleeve safe end contact area was hard roll expanded to return the thermal sleeve to its intended condition.