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TO:
Mr. Norman C. Moseley

FROM:
Duke Power Company
Charlotte, North Carolina
Mr. William O. Parker, Jr.

DATE OF DOCUMENT
2/9/77

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2/28/77

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DESCRIPTION

Ltr. trans the following:

PLANT NAME: Oconee Unit No. 1

(1-P)

ENCLOSURE

Licensee Event Report (RO 50-269/77-4) on 1/26/77 concerning primary coolant leak from incore instrument tube to incore instrument tank.....

DO NOT REMOVE

(2-P) **ACKNOWLEDGED**

NOTE: IF PERSONNEL EXPOSURE IS INVOLVED SEND DIRECTLY TO KREGER/J. COLLINS

FOR ACTION/INFORMATION 3/2/77 RJL

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2046

DUKE POWER COMPANY

POWER BUILDING

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

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

February 9, 1977

TELEPHONE: AREA 704
373-4083

REGULATORY DOCKET FILE COPY

Mr. Norman C. Moseley, Director
U. S. Nuclear Regulatory Commission
Suite 818
230 Peachtree Street, Northwest
Atlanta, Georgia 30303



Re: Oconee Unit 1
Docket No. 50-269

Dear Mr. Moseley:

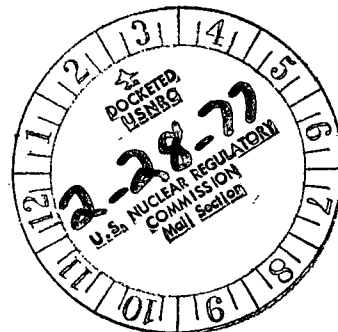
Pursuant to Sections 6.2 and 6.6.2 of the Oconee Nuclear Station Technical Specifications, please find attached Reportable Occurrence Report R0-269/77-4.

Very truly yours,

W. O. Parker, Jr.
William O. Parker, Jr. *By [Signature]*

LJB:ge
Attachment

cc: Director, Office of Management Information
and Program Control



DUKE POWER COMPANY
OCONEE UNIT 1

Report No.: RO-269/77-4

Report Date: February 9, 1977

Occurrence Date: January 26, 1977

Facility: Oconee Unit 1, Seneca, South Carolina

Identification of Occurrence: Primary coolant leak from incore instrument tube to incore instrument tank

Conditions Prior to Occurrence: Unit at 70 percent full power

Description of Occurrence:

On January 26, 1977, while monitoring the moveable incore detector systems in the incore instrument tank, it was discovered that primary coolant was leaking from incore instrument tube R-7 to the incore instrument tank. Action to evaluate the safety implications of the reactor coolant leakage was initiated as required by Oconee Technical Specification 3.1.6.5 and it was concluded that operation of the unit could safely continue.

The fault was isolated by a freeze plug on January 28, 1977 and the incore instrument tube was seal welded. Subsequent liquid dye-penetrant testing, showed that the pipe was enlarged in three different areas where the pipe had been frozen. Also, it was discovered that the freeze plug had been placed on a larger area than the original dye-penetrant testing had covered. A safety evaluation of the implications of the enlargements was conducted employing consultants from Babcock & Wilcox and ITT Grinnell. The evaluation concluded that the tube's structural integrity had not been affected.

Apparent Cause of Occurrence:

This occurrence resulted from a failure in the small instrument shroud line, 1/4 inch diameter, which extends through core guide tubes and the incore instrument tube to the incore instrument tank. The exact position of the shroud line failure and the mode of failure has not been determined.

Analysis of Occurrence:

A safety evaluation, as required by Oconee Technical Specification 3.1.6.5, was initiated upon discovery of the leak. Primary system leakage resulting from this occurrence was approximately 0.25 gallons per minute. Although non-isolable, the fault was not in the reactor coolant system strength boundary. The leak was contained within the incore instrument tank and due to the nature of the leak, i.e., through a 1/4 inch cable-filled line, the magnitude of the leakage would probably not have increased.

The enlargements of the incore instrument line due to the freeze plugging were evaluated and the standard wall thicknesses of the pipe were measured using ultrasonic testing. The evaluation concluded that the tube's structural integrity had not been affected as a result of the enlargements or the freeze plug operation.

Continued operation with this incore detector out of service will not deleteriously affect the incore detector system. It is therefore concluded that the health and safety of the public were not affected by this incident.

Corrective Action:

The fault was isolated by freeze plugging the incore detector tube and seal welding a plug fitted with a globe valve onto the incore detector.

U.S. E.C.
REGULATORY OPERATIONS
REGION II
ATLANTA, GA.
FEB 11 9 54 AM '77