NRC FORM 195 (2-76)

U.S. NUCLEAR REGULATORY COMMISSION

DOCKET NUMBER 50-269

FILE NUMBER INCIDENT REPORT

# NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

TO:
Mr Norman C. Moseley

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

DATE OF DOCUMENT 4/5/77

DATE RECEIVED 4/26/77

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DESCRIPTION

Ltr. trans the following:

ENCLOSURE

Licensee Event Report (RO 50-269/77-11) on 3/22/77 concerning primary-to-secondary system leakage in "1B" once-through steam generator..

PLANT NAME:
Oconee Unit No. 1 (1-P) (2-P)

RJL

ACKNOWLEDGED DO NOT REMOVE

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

FOR ACTION/INFORMATION

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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

TELEPHONE: AREA 704
373-4083

April 5, 1977



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 RO-269/77-11.

Very truly yours,

William O. Parker, Jr.

LJB:vr
Attachment

cc: Director, Office of Management Information
and Program Control

DUKE POWER COMPANY
OCONEE UNIT 1

Report No.: RO-269/77-11

Report Date: April 5, 1977

Occurrence Date: March 22, 1977

Facility: Oconee Unit 1, Seneca, South Carolina

Identification of Occurrence: Primary-to-secondary system leakage in "1B" once-through steam generator

Conditions Prior to Occurrence: Unit at 100 percent full power

Description of Occurrence:

On March 22, 1977, a high radiation alarm was received on condenser steam air ejector monitor, RIA-40, indicating a possible primary-to-secondary system leak. Procedures to control and monitor secondary activity were promptly initiated. Analysis of a steam line sample confirmed that primary-to-secondary leakage was occurring in the "1B" once-through steam generator (OTSG). Within 2½ hours after the high radiation alarm, a reactor shutdown was commenced. Within five hours, reactor shutdown was completed.

The reactor coolant system was cooled and drained within 2½ days and an internal inspection of the "1B" OTSG was initiated.

Apparent Cause of Occurrence:

This occurrence resulted from a weld crack on the plug used to isolate tube 25 of row 77 in a previous outage. The weld had been inspected and approved at that time, and pressure and hydro tests had confirmed the integrity of the weld. The reason for the weld failure has not been determined.

Eddy current examination of 100 other tubes revealed no other tube leaks. However, eddy current signal distortions were found on tubes 3, 5, 8, 22, and 29 of row 77. Therefore, as a precautionary measure, these five tubes were plugged.

Analysis of Occurrence:

The weld leak developed on the top plug of tube 25 in row 77. A portion of this tube had been removed during an early March outage for steam generator tube repair. At that time, both ends of the tube had been closed by plugging. The welds were inspected, approved, and tested.

Primary-to-secondary system leakage, resulting from the weld leak, was approximately 0.2 gallons per minute and was detected by installed radiation monitoring equipment. The leakage did not exceed the operational limits of Oconee Technical Specification 3.1.6.1.

The calculated gaseous activity released to the environment via the air ejectors was 1.494 curies. This amount is considered insignificant in comparison to the station's annual release limit. Secondary side activity was closely monitored to assure control of radioactive material. It is considered that this incident did not affect the health and safety of the public.

Corrective Action:

The weld failure on tube 25 of row 77 was repaired and inspected. Five other tubes with questionable eddy current signals, tubes 3, 5, 8, 22, and 29 in row 77, were plugged utilizing a stabilizer rod.