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LER#78-024/01T-0 on 781012: during refueling outage noted that 7 OTSG tubes which should have been plugged during earlier outages were not plugged. Caused by placement of plugs in wrong tubes due to personnel errors.

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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

November 15, 1978

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

RE: Oconee Unit 1
Docket No. 50-269

Dear Mr. O'Reilly:

Pursuant to Sections 6.2 and 6.6.2 of the Oconee Nuclear Station
Technical Specifications, please find attached Reportable Occurrence
Report R0-269/78-24.

Very truly yours,

William O. Parker, Jr.
By [Signature]

William O. Parker, Jr.

WOP:scd

Attachment

cc: Director, Office of Management Information
and Program Control

REGULATORY DOCUMENT COPY

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DUKE POWER COMPANY

OCONEE UNIT 1

Report Number: RO-269/78-24Report Date: November 15, 1978Occurrence Date: October 12, 1978Facility: Oconee Unit 1, Seneca, South CarolinaIdentification of Occurrence: Operation with degraded Reactor
Coolant System (OTSG tubes misplugged)Condition Prior to Occurrence: Cold Shutdown (Refueling)Description of Occurrence:

On October 3, 1978, the "1B" Once-Through-Steam-Generator (OTSG) was hydrostatically tested following the inservice inspection (ISI) carried out during the refueling outage. A large leak was observed in tube 85-125. This tube had been severed during the ISI at the 13th tube support plate for removal of a tube sample and had apparently not been properly plugged. When the generator was drained to plug the leaking tube, further investigation revealed other possible errors in tube plugging. Consequently, a review of previously plugged tubes was initiated. The results of this investigation revealed the following plugging errors existed prior to that outage:

<u>Tube</u>	<u>Outage Plugged</u>	<u>Remarks*</u>
15-75	1977 ISI (September 1977)	LTS plug intended for 17-79
**17-79	1977 ISI	LTS plug missing
21-89	1977 ISI	LTS plug intended for 22-92
**22-92	1977 ISI	LTS plug missing
61-86	OTSG Repairs (January 1973)	LTS and UTS plugged, intended for 61-89
**61-89	OTSG Repairs	Both plugs missing
68-127	1977 ISI	LTS and UTS plugged, intended for 69-128
**69-128	1977 ISI	Both plugs missing
**73-129	OTSG Repairs	Not plugged following FOAK (first- of-a-kind) instrument removal as intended.

<u>Tube</u>	<u>Outage Plugged</u>	<u>Remarks*</u>
96-4	2/77 leak outage	UTS plug intended for 101-4
**101-4	2/77 leak outage	UTS not plugged
132-55	1977 ISI	LTS plug intended for 133-56
**133-56	1977 ISI	LTS not plugged.

*Both ends of tube generally plugged--UTS indicates upper tubesheet plug and LTS indicates lower tubesheet plug.

**Tubes not plugged which were to have been removed from service for indicated reasons.

The errors in which tubes were not removed from service (**) constitutes operation of the unit with a degraded RCS boundary.

Apparent Cause of Occurrence:

The cause of the occurrence was basically inadequate procedural direction compounded by personnel errors. Normally, after the decision to plug a tube is made, it is located by counting rows and tubes. The appropriate tube is marked and another individual verifies the proper location. Considering that there are approximately 15,000 tubes per generator, the possibility exists for error. This is compounded by the potential accidental relocation of the markers. Additionally, exposure levels in the generators are such that personnel with less experience in the plugging operations (i.e. with lower exposures) are used in the final stages of an extended ISI. A combination of one or more of the above sources of error resulted in several misplugged tubes and specifically in the failure to plug the seven tubes listed above.

Analysis of Occurrence:

The operation of the unit with seven degraded tubes did not constitute undue risk to public health and safety. None of the tubes had been or became a source of primary-to-secondary leakage. If indeed one had degraded to failure it would have been quickly detected in a normal manner and appropriate corrective action would have been taken.

Corrective Action:

The errors in tube plugging were corrected by plugging the tubes which were to have been plugged earlier and by completion of plugging for those tubes inadvertently plugged on only one end.

The procedure by which the tubes are located has been improved. Action will be taken to use more experienced personnel to the degree possible and to better familiarize personnel with the OTSG layout. A thorough analysis as to any other possible improvements will be made and implemented to the extent possible.