

AEC DISTRIBUTION FOR PART 50 DOCKET MATERIAL  
(TEMPORARY FORM)

CONTROL NO: 13023

FILE: \_\_\_\_\_

FROM: Duke Power Company Charlotte, N.C. 28201 A.C. Thies			DATE OF DOC 12-26-74	DATE REC'D 12-30-74	LTR X	TWX	RPT	OTHER
TO: N.C. Moseley			ORIG 1 signed	CC	OTHER	SENT AEC PDR <u>XXX</u> SENT LOCAL PDR <u>XXX</u>		
CLASS	UNCLASS	PROP INFO	INPUT	NO CYS REC'D 1		DOCKET NO: 50-287		

DESCRIPTION:

Ltr reporting an abnormal Occurrence at the Oconee Nuclear Facility... trans the following....

ENCLOSURES:

Abnormal Occurrence No. A0-287/74-11.... concern.....Failure to monitor reactor quadrant power tilt.....

(1 cy encl re'cd)

PLANT NAME: Oconee

FOR ACTION/INFORMATION

12-30-74

JB

BUTLER (L)	SCHWENCER (L)	ZIEMANN (L)	REGAN (E)
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**ACKNOWLEDGED**

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INTERNAL DISTRIBUTION

<u>REG FILE</u>	<u>TECH REVIEW</u>	<u>DENTON</u>	<u>LIC ASST</u>	<u>A/T IND</u>
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✓ OGC, ROOM P-506A	✓ SCHROEDER	GAMMILL	DIGGS (L)	SALTZMAN
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✓ CASE	✓ KNIGHT	BALLARD	GOULBOURNE (L)	
GIAMBUSSO	✓ PAWLICKI	SPANGLER	KREUTZER (E)	<u>PLANS</u>
BOYD	✓ SHAO		LEE (L)	MCDONALD
MOORE (L) (BWR)	✓ STELLO	<u>ENVIRO</u>	MAIGRET (L)	CHAPMAN
DEYOUNG (L) (PWR)	✓ HOUSTON	MULLER	REED (E)	DUBE w/ input
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✓ FILE & REGION (2)	✓ LAINAS		WILLIAMS (E)	
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DUKE POWER COMPANY

POWER BUILDING

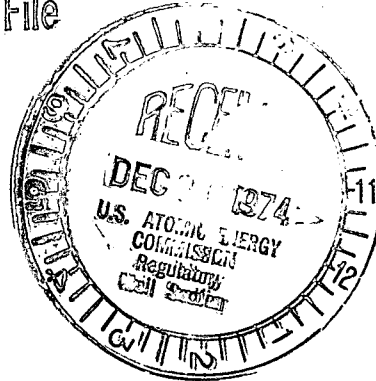
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28201

A. C. THIES  
SENIOR VICE PRESIDENT  
PRODUCTION AND TRANSMISSION

P. O. Box 2178

December 26, 1974

Regulatory Docket File



Mr. Norman C. Moseley, Director  
Directorate of Regulatory Operations  
U. S. Atomic Energy Commission  
Region II - Suite 818  
230 Peachtree Street, Northwest  
Atlanta, Georgia 30303

Re: Oconee Unit 3  
Docket No. 50-287

Dear Mr. Moseley:

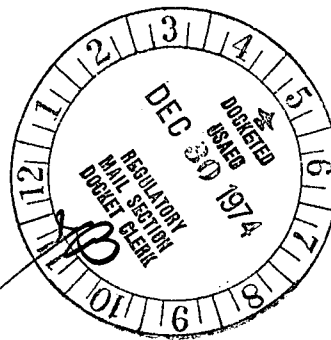
Pursuant to Sections 6.2 and 6.6.2 of the Oconee Nuclear Station  
Technical Specifications, please find attached Abnormal Occurrence  
Report AO-287/74-11.

Very truly yours,

A. C. Thies

ACT:vr  
Attachment

cc: Mr. Angelo Giambusso



13023

DUKE POWER COMPANY  
OCONEE UNIT 3

Report No.: AO-287/74-11

Report Date: December 26, 1974

Occurrence Date: December 10, 1974

Facility: Oconee Unit 3, Seneca, South Carolina

Identification of Occurrence: Failure to monitor reactor quadrant power tilt

Conditions Prior to Occurrence: Unit at 40 percent full power

Description of Occurrence:

On December 10, 1974, Oconee Unit 3, 40 percent power physics testing was being performed. The dropped rod test, which was in progress, had induced some quadrant power tilt. A computer failure, shortly after 1600, caused the test to be aborted; the loss of computer procedure was initiated. This procedure provides for hand calculation of certain reactor parameters. The control rods were returned to their normal position and quadrant power tilt was observed to decrease.

At 1800, the quadrant power tilt was computed using OP/0/1103/19, Power Imbalance and Quadrant Power Tilt Calculation Using the Backup Incore Detector System. The results achieved appeared inconsistent with previous computer calculated tilt, and at 1845 it was determined that some of the backup incore detectors had not been calibrated. The power range detectors were used and a quadrant power tilt calculation was complete by 1930. Although an attempt was made to monitor quadrant tilt within the required minimum frequency of two hours, 3½ hours elapsed between accurate quadrant power tilt measurements.

Designation of Apparent Cause of Occurrence:

Quadrant power tilt is normally calculated by the computer using the power range channels. When the computer failed, the operator incorrectly used the procedure which utilizes the backup incore detector system. This procedure is intended for use when one power range channel is inoperable, and the computer is also inoperable. The operator should have used the power range channels to manually calculate quadrant power tilt.

Analysis of Occurrence:

The Oconee Nuclear Station Technical Specification 3.5.4 requires that the incore detector system be operable if the reactor is above 80 percent full power. Oconee Unit 3 had been in power escalation testing at 40 percent full power and had not yet achieved 80 percent full power. Thus, all of the

incore detectors had not been calibrated, nor were they necessary, at the time of this incident.

The amount of quadrant power tilt introduced during the dropped rod test was known and within expected limits. Aborting the test, after the loss of computer, and returning the control rods to their normal positions reduced the tilt, as expected. This was verified by direct observation of the power range detectors. The safe operation of the reactor and the health and safety of the public was not affected by this incident.

Corrective Action:

Operations supervisors have been instructed in the measurement of quadrant power tilt, as follows:

1. The power range detectors must be used to calculate quadrant power tilt.
2. If one power range channel is inoperable and the computer is operable, use the computer calculation of quadrant power tilt with input from the incore detectors.
3. If one power range channel and the computer are inoperable, the backup incore monitors shall be used in accordance with OP/0/1103/19.