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CONTROL NO: 753

FILE: INCIDENT REPORT

FROM: Duke Power Co. Charlotte, N.C. A.C. Thies		DATE OF DOC 1-20-75	DATE REC'D 1-23-75	LTR xxxx	TWX	RPT	OTHER
TO: Mr. Norman C. Moseley		ORIG 1-signed	CC	OTHER	SENT AEC PDR <u>xxxx</u> SENT LOCAL PDR <u>xxxx</u>		
CLASS	UNCLASS xxxx	PROP INFO	INPUT	NO CYS REC'D 1	DOCKET NO: 50-269		

DESCRIPTION:  
Ltr trans the following

*ACKNOWLEDGED*

*DO NOT REMOVE*

PLANT NAME: Oconee UNIT 1

ENCLOSURES:  
Unusual Event #74-9 on 12-4-74 concerning  
Reacto Building Cooling Unit Logic Error....

FOR ACTION/INFORMATION 1-24-75 JGB

- |                         |                            |                             |                        |
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|--|---|--|

DUKE POWER COMPANY  
POWER BUILDING  
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28201

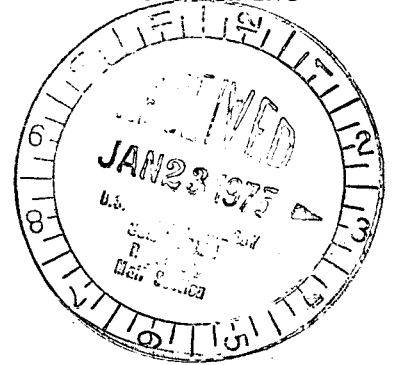
A. C. THIES  
SENIOR VICE PRESIDENT  
PRODUCTION AND TRANSMISSION

Regulatory

File 35

P. O. Box 2178

January 20, 1975



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 1  
Docket No. 50-269

Dear Mr. Moseley:

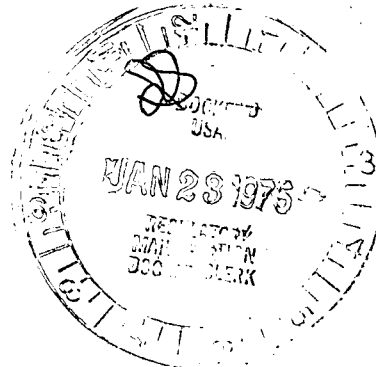
Pursuant to Sections 6.2 and 6.6.2 of the Oconee Nuclear Station  
Technical Specifications, please find attached Unusual Event  
Report UE-269/74-9.

Very truly yours,

A. C. Thies

ACT:vr  
Attachment

cc: Mr. Angelo Giambusso



DUKE POWER COMPANY  
OCONEE UNIT 1

Report No.: UE-269/74-9

Report Date: January 20, 1975

Event Date: December 4, 1974

Facility: Oconee Unit 1, Seneca, South Carolina

Identification of Event: Reactor Building Cooling Unit Logic Error

Conditions Prior to Event: Unit in Refueling Shutdown

Description of Event:

On December 4, 1974, the annual Reactor Building Cooling Unit (RBCU) Engineered Safeguard (ES) and Performance Test, PT/O/A/0160/03, was conducted for Oconee Unit 1. The test confirmed that RBCU fans 1A and 1B shifted from high speed to slow speed, as designed, when ES Channel 5 tripped. RBCU fan 1C, which was idle with its controller in the "auto" position, started and went to high speed as the other two fans shifted to slow speed. When ES Channel 6 was tested, RBCU fans 1B and 1C shifted from high speed to slow speed, as designed; however, RBCU fan 1A, which was idle with its controller in the "auto" position, started and went to high speed.

The Reactor Building Cooling System Design description in the Final Safety Analysis Report Section 6.3.2.1 states that upon receipt of a signal from the Engineered Safeguards Actuation System, the two operating fans reduce speed and the third fan starts in reduced speed. If both ES Channels 5 and 6 are actuated, this description is accurate; however, if only one channel is actuated, the third fan starts and goes to high speed as was described above.

Designation of Apparent Cause of Event:

The normal operating configuration of the RBCU fans is two in high speed and the third fan idle with its controller in the automatic position. If one fan fails, the third automatically starts in high speed and maintains normal Reactor Building ventilation.

The apparent cause of this event is the interface between the normal and Engineered Safeguards logic. As the two operating fans shift to slow speed, in response to a single channel ES actuation, the idle fan senses the loss of a high speed fan and starts in fast speed. The intent of the FSAR is that the actuation of a single ES channel will result in two fans in slow speed.

Analysis of Event:

Two Reactor Building cooling fans normally operate in high speed to maintain the Reactor Building environment. In the unlikely event of an ES actuation, all three fans are utilized in slow speed to remove the heat in the Containment atmosphere. The speed of the fans is reduced to offset increased power requirements due to the increased density of the building atmosphere. If an ES actuation had been required, and both ES Channels 5 and 6 had functioned properly, all three RBCU would have run in slow speed, as designed. If only one of these two ES channels had actuated, two fans would have operated in slow speed and one in high speed. It is possible that the high speed fan would have tripped; however, the two operating RBCU are sufficient for Reactor Building cooling under accident conditions and the Reactor Building Spray System provides full capacity, redundant cooling of the Reactor Building. Thus, it is concluded that the health and safety of the public was not affected.

Corrective Action:

A design review of the RBCU fan logic is in progress and appropriate modifications will be installed to ensure the proper operation of the Reactor Building Cooling Units. In the interim, the fan which is not normally operating will have its controller in the off position. This will allow the fan to respond properly to an ES signal; however, it will not automatically start should an operating fan fail in normal operation.