

## DUKE POWER COMPANY

POWER BUILDING

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

WILLIAM O. PARKER, JR.  
VICE PRESIDENT  
STEAM PRODUCTION

May 19, 1978

TELEPHONE: AREA 704  
373-4083

Mr. James P. O'Reilly, Director  
U. S. Nuclear Regulatory Commission  
Suite 1217  
230 Peachtree Street, Northwest  
Atlanta, Georgia 30303

RE: Oconee Units 1, 2, and 3  
Docket Nos. 50-269, -270, and -287

Dear Mr. O'Reilly:

Pursuant to Sections 6.2 and 66.2 of the Oconee Nuclear Station Technical Specifications, please find attached Reportable Occurrence Report RO-269/78-12.

Very truly yours,

*William O. Parker Jr. by WAH*  
William O. Parker, Jr.

KRW:scs

Attachment

cc: Director, Office of Management Information  
and Program Control

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A002  
5/1/1

DUKE POWER COMPANY  
OCONEE UNITS 1, 2, & 3

Report Number: RO-269/78-12

Report Date: May 19, 1978

Occurrence Date: April 17, 1978

Facility: Oconee Nuclear Station, Seneca, South Carolina

Identification of Occurrence: Keowee Hydro Unit 2 Inoperable

Conditions Prior to Occurrence: Unit 1 100% FP  
Unit 2 Cold S/D  
Unit 3 100% FP

Description of Occurrence:

At approximately 1610 on April 17, 1978, it was determined that an instrumented relay ( $^{231}\text{Y/T}$ ) in the Keowee Unit 2 Field Flashing Breaker trip circuitry had activated at some time during an eight hour period which could have precluded the start-up of the unit. The possibility that this might have prevented Keowee Unit 2 from starting constitutes operation in a degraded mode.

On April 7, 1978 instrumentation was installed to investigate the field flashing breaker failures of Keowee Unit 2. The relay in question was monitored only to determine if it actuated at any time. No indication of time or duration was installed on this particular relay. The relay was checked at 0800 on April 17, 1978 and the relay had not operated. When it was checked at 1600 the instrumentation indicated that the relay had indeed operated at some time. Therefore, at some time between 0800 and 1600 the unit might not have started. The unit was started on two occasions during this period, 1337 and 1404, without incident.

Cause of Occurrence:

No cause for the relay operation has been determined. The relay is not believed to be malfunctioning. Rather, a spurious trip signal is thought to have caused the incident.

Analysis of Occurrence:

The two Keowee Hydro Units are sources of emergency power for the Oconee Station. Each is independently capable of supplying sufficient power for all three Oconee units. This occurrence may have prevented one of the units (Unit 2) from starting on ES Signal from Oconee although two successful starts were carried out during this period. The other Keowee Unit was available to provide power, if required, for all except three minutes during the period in question. During those three minutes, Keowee Unit 2 was connected to the underground feeder cable and verified to be operable as required by Technical Specifications. Additionally there are several sources of off-site power which were available if needed. This incident did not adversely affect public health and safety.

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OCONEE UNITS 1, 2, & 3

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Corrective Action:

Analysis and investigation of circuitry related to the Oconee Field Flashing breaker failures will continue. This will include investigation of any possible spurious trip signals and their sources.

LICENSEE EVENT REPORT

EXHIBIT A

CONTROL BLOCK: \_\_\_\_\_ (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01 | S | C | N | E | E | 1 | 2 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 4 | 1 | 1 | 1 | 1 | 4 | 5  
7 8 9 14 18 26 28 30 37 40 44 48 50

CONT  
01 | L | 6 | 0 | 5 | 0 | 0 | 0 | 2 | 6 | 9 | 7 | 0 | 4 | 1 | 7 | 7 | 8 | 8 | 0 | 5 | 1 | 9 | 7 | 8 | 9  
7 8 60 61 68 69 74 75 80

02 | During investigation of the field flashing breaker problems at Keowee Unit 2

03 | a situation was discovered whereby the unit may have been unalbe to start.

04 | One of the relays in the breaker's trip circuitry had operated between 0800

05 | and 1600. If a startup had been attempted while it was actuated, the unit

06 | might not have functioned properly. Several alternate sources of emergency

07 | power were available to the Oconee Station, if required.

08 | \_\_\_\_\_

09 | E E 11 | X 12 | X 13 | R E L A Y X 14 | A 15 | Z 16  
7 8 9 10 11 12 13 18 19 20

17 | 7 8 | 0 1 2 | 0 3 | L | 0  
21 22 24 26 28 30 32

X 18 | X 19 | Z 20 | Z 21 | 0 0 0 0 22 | Y 23 | N 24 | L 25 | S 4 4 0  
33 34 35 36 37 40 41 42 43 44 47

10 | CAUSE DESCRIPTION AND CORRECTIVE ACTIONS 27

11 | No cause for the relay operation has been determined. No problems have

12 | been noted in the relay. It is thought that a spurious trip signal probably

13 | caused the occurrence. No source for the signal has been located. Corrective

14 | action will include continued monitoring of all the circuitry related the

15 | field flash breaker, which includes the relay in question.

15 | E 28 | 1 0 0 0 29 | NA 30 | C 31 | during related investigation 32  
7 8 9 10 12 13 44 45 46 48 50

16 | Z 33 | Z 34 | NA 35 | NA 36  
7 8 9 10 11 44 45 48 50

17 | 0 0 0 0 37 | Z 38 | NA 39  
7 8 9 10 11 12 13 44 48 50

18 | 0 0 0 0 40 | NA 41  
7 8 9 10 11 12 13 44 48 50

19 | Z 42 | NA 43  
7 8 9 10 11 12 13 44 48 50

20 | N 44 | NA 45  
7 8 9 10 11 12 13 44 48 50