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FACIL:50-269 Oconee Nuclear Station, Unit 1, Duke Power Co. 05000269
AUTH.NAME AUTHOR AFFILIATION
LEWIS,S.R. Duke Power Co.
RECIP.NAME RECIPIENT AFFILIATION
Region 2, Atlanta, Office of the Director

SUBJECT: LER 79-026/03L-0 on 790802:while at 100% full power,Power Circuit Breaker 9 was opened momentarily making emergency power available from overhead feeder,Caused by decreases air pressure due to cycling air circuit breaker.

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DUKE POWER COMPANY
Oconee Nuclear Station

Report Number: RO-269/79-26

Report Date: August 31, 1979

Occurrence Date: August 2, 1979

Facility: Oconee Nuclear Station, Seneca, South Carolina

Identification of Occurrence: One Keowee Hydro Unit Unavailable to the Overhead Feeder

Conditions Prior to Occurrence: Unit 1 Cold Shutdown
Unit 2 100% Full Power
Unit 3 Cold Shutdown

Description of Occurrence:

At 0940 on August 2, 1979, power circuit breaker (PCB) 9 opened, making Keowee Hydro Unit 1 unavailable to provide emergency power to Oconee Nuclear Station by way of the overhead feeder. On August 1, 1979, problems were encountered in attempting to trip air circuit breaker (ACB) 4, which ties Keowee Unit 2 to the underground feeder. A trip relay for ACB 4 was replaced on August 2, and at 0932 ACB 4 was cycled several times to verify its operability. This repeated cycling resulted in a decrease in the air pressure available for operating the air circuit breakers, causing circuit protective equipment to lock out the transformer which provides power to the overhead feeder. The transformer lockout resulted in the opening of PCB 9. The lockout was reset, and PCB 9 reclosed at 0933. However, at 0934 operations personnel again cycled ACB 4, unaware of the effects of depleting the air supply. The transformer was again locked out and PCB 9 reopened. PCB 9 was reclosed at 0935. Operations personnel were made aware of the problems resulting from cycling ACB 4 several times quickly, and at 0940 ACB 4 was cycled slowly and was determined to be operating correctly.

Apparent Cause:

PCB 9 opened, making Keowee Unit 1 unavailable to the overhead feeder, as a result of cycling ACB 4 several times quickly. The repeated cycling caused a decrease in the air pressure to the air circuit breakers, and circuit protective equipment opened PCB 9. The operating manual does not provide information regarding an acceptable cycling frequency for the air circuit breakers, nor is the pressure at which a transformer lockout will occur specified.

Analysis of Occurrence:

The opening of PCB 9 made Keowee Unit 1 only momentarily unavailable to supply emergency power by way of the overhead feeder. In addition, the underground feeder was available to supply emergency power in the event that offsite power had been lost. It should be noted that Oconee Nuclear Station Technical Specification 3.7.2(c) permits the underground feeder to be inoperable for periods up to 72 hours during power operation due to the redundant sources of power which are available, although current specifications do not allow for the analogous case for the overhead feeder. Technical Specification 3.7.3 currently

requires that the units be placed in a hot shutdown condition within 12 hours provided the limiting conditions for operation are not met. However, shutdown of Unit 2 was not necessary since Keowee Unit 1 was made available to the overhead feeder almost immediately after each time PCB 9 opened. Therefore, this incident constitutes operation leading to a shutdown required by a limiting condition for operation, and must therefore be reported pursuant to Technical Specification 6.6.2.1.b(2), although it was of no significance with respect to safe operation, and the health and safety of the public were not affected.

Corrective Action:

The immediate corrective actions were to reset the transformer lockout and reclose PCB 9. When ACB 4 was cycled slowly, it operated properly. Proper operation of the air circuit breakers will be included in operator training, and operating procedures will be changed to caution against rapid cycling of these breakers. In addition consideration will be given to determining a maximum acceptable cycling frequency for the air circuit breakers. A revision to the technical specifications concerning auxiliary electrical systems had been previously submitted for NRC review. If the revision is approved, inconsistencies in the current specifications such as the one discussed above will be eliminated.

NRC FORM 366
(7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

EXHIBIT A

CONTROL BLOCK: | | | | | | | (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1	S C N E E 1 (2)	0 0 - 0 0 0 0 0 - 0 0 (3)	4 1 1 1 1 (4)		(5)
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0 1	REPORT SOURCE L (6)	0 5 0 0 0 2 6 9 (7)	0 8 0 2 7 9 (8)	0 8 3 1 7 9 (9)
	(60)	DOCKET NUMBER (61–68)	EVENT DATE (69–74)	REPORT DATE (75–80)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 While Units 1 and 3 were at cold shutdown and Unit 2 was at 100% full power,
0 3 power circuit breaker (PCB) 9 was opened, making Keowee Hydro Unit 1 unavail-
0 4 able to provide emergency power by way of the overhead feeder. The breaker
0 5 was opened only momentarily. In addition, the underground feeder was avail-
0 6 able to supply emergency power if required. Therefore, this incident is con-
0 7 sidered not to be significant with respect to safe operation, and the health
0 8 and safety of the public were not affected.

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
0 9	E E (11)	D (12)	Z (13)	C K T B R K (14)	A (15)	Z (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	7 9	—	0 2 6	/	0 3	L	—	0

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
X (18)	G (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	Y (24)	L (25)	W 1 2 0 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 PCB 9 was opened by circuit protective equipment as a result of a decrease in
1 1 air pressure due to cycling air circuit breaker (ACB) 4 several times rapidly.
1 2 PCB 9 was reclosed almost immediately. Operator training and procedures will
1 3 be revised to include cautions against repeatedly cycling the ACB's too
1 4 quickly.

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	E (28)	1 0 0 (29)	NA	A (31)	Operator Observation

	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
1 6	Z (33)	Z (34)	NA	NA

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION (39)
1 7	0 0 0 (37)	Z (38)	NA

PERSONNEL INJURIES

	NUMBER	DESCRIPTION (41)
1 8	0 0 0 (40)	NA

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
1 9	Z (42)	NA

PUBLICITY

	ISSUED	DESCRIPTION (45)	NRC USE ONLY
2 0	N (44)	NA	

NAME OF PREPARER S. R. Lewis PHONE: (704) 373-8285

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