DUKE POWER COMPANY
OCONEE UNIT 2

Report No.: RO-270/77-17.

Report Date: January 26, 1978

Occurrence Date: December 29, 1977

Facility: Oconee Unit 2, Seneca, South Carolina

Identification of Occurrence: Control Rod Stator Failure

Conditions Prior to Occurrence: 75 percent full power

Description of Occurrence:

At 0603 on December 29, 1977 Rod 4 Group 6 dropped into the core causing a reactor runback to 55 percent full power. At 0640 a power reduction of 10%/hr was commenced to reduce the quadrant tilt. Personnel determined that a short had occurred between phase AA and the neutral which prevented any rod withdrawal. At 2116 a unit shutdown was commenced. The stator and the O-rings were replaced on December 31.

Apparent Cause of Occurrence:

The cause of the incident was a short in the AA phase. An O-ring seal failure allowed excessive moisture to build up in the stator causing the short.

Analysis of Occurrence:

The dropped rod resulted in an immdiate power runback to 55 percent due to an asymmetric control rod configuration. The maximum encountered quadrant tilt was 7.0% which is less than the error adjusted Technical Specification of 8.05% (T.S. 3.5.2.4.(c)). The reactor instrumentation and control systems controlled runback and shutdown functions correctly, resulting in safe reactor conditions at all times. The reactor was shutdown to replace the stator and perform other unrelated maintenance. The health and safety of the public were not endangered by this incident.

Corrective Action:

The control rod stator and the O-ring seals were replaced on the failed stator.

NRC FORM 366
(7-77)

U. S. NUCLEAR REGULATORY COMMISSION

EXHIBIT A

LICENSEE EVENT REPORT

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

0 1 | S C N E E 2 (2) LICENSEE CODE | 0 0 - 0 0 0 0 0 - 0 0 (3) LICENSE NUMBER | 4 1 1 1 1 (4) LICENSE TYPE | | | (5) CAT

CON'T 0 1 | REPORT SOURCE L (6) | 0 5 0 0 0 2 7 0 (7) DOCKET NUMBER | 1 2 2 9 7 7 (8) EVENT DATE | 0 1 2 6 7 8 (9) REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 During normal operation while control rod 4 group 6 was being withdrawn,
0 3 it dropped into the core causing a power runback to 55%. Attempts to
0 4 raise rod were unsuccessful. It was determined that a short in the stator
0 5 caused the rod to drop. The reactor was shut down for replacement of the
0 6 stator.
0 7
0 8

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

(17) LER/RO REPORT NUMBER — EVENT YEAR	7 7
	—
SEQUENTIAL REPORT NO.	0 1 7
	/
OCCURRENCE CODE	0 3
REPORT TYPE	L
	—
REVISION NO.	0

ACTION TAKEN	A (18)
FUTURE ACTION	Z (19)
EFFECT ON PLANT	B (20)
SHUTDOWN METHOD	Z (21)
HOURS (22)	0 0 0 0
ATTACHMENT SUBMITTED	Y (23)
NPRD-4 FORM SUB.	Y (24)
PRIME COMP. SUPPLIER	N (25)
COMPONENT MANUFACTURER	0 1 5 0 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The stator short was probably due to excessive moisture buildup and
1 1 failure of O-ring seals. The stator and the O-ring seals were replaced.
1 2 The stator was a model R70-046133. Both the O-ring seals and the stator
1 3 are made by Diamond Power.
1 4

1 5 FACILITY STATUS	E (28)
% POWER	0 7 5 (29)
OTHER STATUS (30)	NA
METHOD OF DISCOVERY	A (31)
DISCOVERY DESCRIPTION (32)	Operator Observation
1 6 ACTIVITY RELEASED	Z (33)
CONTENT OF RELEASE	Z (34)
AMOUNT OF ACTIVITY (35)	NA
LOCATION OF RELEASE (36)	NA
1 7 PERSONNEL EXPOSURES NUMBER	0 0 0 (37)
TYPE	Z (38)
DESCRIPTION (39)	NA
1 8 PERSONNEL INJURIES NUMBER	0 0 0 (40)
DESCRIPTION (41)	NA
1 9 LOSS OF OR DAMAGE TO FACILITY (43) TYPE	Z (42)
DESCRIPTION	NA
2 0 PUBLICITY ISSUED	Z (44)
DESCRIPTION (45)	NA

NRC USE ONLY

NAME OF PREPARER K. R. Wilson

PHONE: (704) 373-8197