

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8010080445 DOC. DATE: 80/10/02 NOTARIZED: NO
 FACIL: 50-269 Oconee Nuclear Station, Unit 1, Duke Power Co.
 AUTH. NAME: JONES, J.L. AUTHOR AFFILIATION: Duke Power Co.
 RECIP. NAME: REGION 2, Atlanta, Office of the Director

DOCKET #
05000269

SUBJECT: LER 80-027/03L-0: on 800902, rod 8 of group 7 dropped resulting in reactor tilt in excess of Tech Specs. Caused by pin being pushed out of place in connector & allowing C phase on stator to open. Repairs completed.

DISTRIBUTION CODE: A002S COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 3+1
 TITLE: Incident Reports

NOTES: M Cunningham: all amends to FSAR & changes to Tech Specs. AEOD, OrNSTein:icc. 05000269

ACTION:	RECIPIENT ID CODE/NAME		COPIES		RECIPIENT ID CODE/NAME	COPIES	
			LTR	ENCL		LTR	ENCL
	REID, R.	04	3	3			
INTERNAL:	A/D COMP&STRU06		1	1	A/D ENV TECH 07	1	1
	A/D MATL & QU08		1	1	A/D OP REACT009	1	1
	A/D PLANT SYS10		1	1	A/D RAD PROT 11	1	1
	A/D SFTY ASSE12		1	1	A/D TECHNOLOG13	1	1
	ACC EVAL BR 14		1	1	AEOD	2	2
	ASLBP/J. HARD		1	1	AUX SYS BR 15	1	1
	CHEM ENG BR 16		1	1	CONT SYS BR 17	1	1
	CORE PERF BR 18		1	1	D/DIR, HUM FAC19	1	1
	DIR, ENGINEER I20		1	1	DIR, HUM FAC S21	1	1
	DIR, SYS INTEG22		1	1	EFF TR SYS BR23	1	1
	EQUIP QUAL BR25		1	1	GEOSCIENCES 26	1	1
	I&C SYS BR 29		1	1	I&E 05	2	2
	JORDAN, E./IE		1	1	LIC GUID BR 30	1	1
	LIC QUAL BR 31		1	1	MATL ENG BR 32	1	1
	MECH ENG BR 33		1	1	MPA	3	3
	NRC PDR 02		1	1	OP EX EVAL BR34	3	3
	OR ASSESS BR 35		1	1	POWER SYS BR 36	1	1
	RAD ASSESS BR39		1	1	REACT SYS BR 40	1	1
	REG FILE 01		1	1	REL & RISK A 41	1	1
	SFTY PRG EVA42		1	1	STRUCT ENG BR44	1	1
	SYS INTERAC B45		1	1			
EXTERNAL:	ACRS	46	16	16	LPDR 03	1	1
	NSIC	05	1	1	TERA: DOUG MAY	1	1

OCT 9 1980

70
69 ENCL 70
69

TOTAL NUMBER OF COPIES REQUIRED: LTR

91

DUKE POWER COMPANY
OCONEE NUCLEAR STATION, UNIT 1

Report Number: RO-269/80-27

Report Date: October 2, 1980

Occurrence Date: September 2, 1980

Facility: Oconee Unit 1, Seneca, South Carolina

Identification of Occurrence: CRD Group 7 Dropped Rod

Conditions Prior to Occurrence: Oconee 1 ~ 70% FP

Description of Occurrence:

At 1950 hours on September 2, 1980, Rod 8 of Group 7 in Unit 1 dropped. This resulted in a reactor tilt in excess of Technical Specification Steady State Limits Task 3.5-1. Power was reduced to less than 60% as required by Technical Specification 3.5.2.d.

Apparent Cause of Occurrence:

The cause for the rod drop was due to the C phase on the stator opening due to a pin being pushed out of place in a connector.

Analysis of Occurrence:

When the rod dropped, it caused a power tilt of + 5.63%. This was greater than the error adjusted steady state limit of 3.47%. The power was reduced to less than 60%. A power distribution analysis was performed and the rods were realigned to correct the tilt. When a tilt is caused by a misaligned rod, it can be reduced by moving the remaining rods in the group closer to the position of the misaligned rod. Therefore, after verifying with the EPRI-NODE reactor simulator computer code that acceptable power distributions would result, CRA Group 7 was inserted to about 65% WD. The tilt continued to decrease slowly as steady operation continued at approximately 55% FP with Group 7 at 65% WD. The unit was operated at reduced power through September 10, 1980, as permitted by Technical Specification 3.5.2.2.d.2.b.

The Integrated Control System is (ICS) assymmetric rod runback effectively prevents approaching any core power distribution limits when a dropped rod occurs. Since the runback is initiated when the dropped rod reaches 9 inches difference in position from the group average position, a rapid power level reduction begins before appreciable changes in tilt and other core power distribution parameters occur.

The only limit that was exceeded was the steady state error adjusted tilt limit of 3.47%. The transient tilt limit was not exceeded when the rod dropped, it failed in the conservative direction. All other rods still operated properly, and borated water was available for shutdown. No safety related functions were impaired by this failure. Therefore, this incident was of no significance with respect to safe operation, and the health and safety of the public were not affected.

Corrective Action:

Power was reduced to less than 60% FP when the rod dropped. A study of the power tilt was conducted, and on September 3, 1980 the rods were adjusted to reduce the tilt to within the Steady State Limit as required by Technical Specification 3.5.2.4.c. On September 11, 1980, the cause for the loss of C phase was determined and repairs were made. The stator now functions properly.

LICENSEE EVENT REPORT

EXHIBIT A

CONTROL BLOCK: [] (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

[01] S C N E E 1 [2] 00 - 000000 - 000 [3] 41111 [4] [] [5]

CONT [01] REPORT SOURCE [8] L [6] 05000269 [7] 090280 [8] 100280 [9]

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

[02] At 1915 on September 2, 1980 Rod 8 of the Group 7 in Unit 1 dropped. This [03] resulted in a reactor tilt in excess of Technical Specification Steady State [04] Limits Task 3.5-1. Power was reduced to less than 60% as required by Technical [05] Specification 3.5.2.d. The only limit that was exceeded was the steady state [06] error adjusted tilt limit of 3.47%. No safety-related functions were impaired. [07] Thus, this incident was of no significance with respect to safe operation and [08] the health and safety of the public were not affected.

[09] SYSTEM CODE [11] A CAUSE CODE [12] E CAUSE SUBCODE [13] X COMPONENT CODE [14] I N S T R U [15] P [16] Z [17] LER/RO REPORT NUMBER [21] 8 [22] 0 [23] [24] 0 [25] 2 [26] 7 [27] [28] [29] 0 [30] 3 [31] [32] 0 [33] B [34] Z [35] Z [36] Z [37] 0 [38] 0 [39] 0 [40] 0 [41] Y [42] Y [43] L [44] X [45] 9 [46] 9 [47] 9

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

[10] The cause for the rod drop was due to the C phase on the stator opening due to a [11] pin being pushed out of place in a connector. The power was reduced to less [12] than 60%. A study was conducted and the rods were adjusted to reduce the tilt [13] to within the Steady State Limit. After discovery of the cause, repairs were [14] made.

[15] FACILITY STATUS [28] E % POWER [29] 0 [30] 7 [31] 0 OTHER STATUS [30] NA METHOD OF DISCOVERY [31] A DISCOVERY DESCRIPTION [32] Operator Observation

[16] ACTIVITY CONTENT [33] Z [34] Z AMOUNT OF ACTIVITY [35] NA LOCATION OF RELEASE [36] NA

[17] PERSONNEL EXPOSURES NUMBER [37] 0 [38] 0 TYPE [39] Z DESCRIPTION [39] NA

[18] PERSONNEL INJURIES NUMBER [40] 0 [41] 0 DESCRIPTION [41] NA

[19] LOSS OF OR DAMAGE TO FACILITY TYPE [42] Z DESCRIPTION [42] NA

[20] PUBLICITY ISSUED [44] N DESCRIPTION [44] NA

NAME OF PREPARER J. L. Jones

PHONE: (704) 373-8197

8010080 445