

CONTROL BLOCK:

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0	1	S	C	H	B	R	2	2	0	0	-	0	0	0	0	0	-	0	0	3	4	1	1	1	1	1	4			5	
7	8	LICENSEE CODE						14	15	LICENSE NUMBER										25	26	LICENSE TYPE					30	57	CAT 58		

CON'T

0 1 7 8 REPORT SOURCE L 6 0 5 0 0 0 2 6 1 7 0 7 2 1 8 3 8 0 8 1 9 8 3 9 60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | On July 21, 1983, with the unit at 79% power, the Steam Driven Auxiliary Feedwater
0 3 | Pump was declared inoperable at 0400 hours due to steam binding resulting from
0 4 | feedwater backleakage through the discharge valves. A plant shutdown was performed
0 5 | on July 28, 1983, due to the expiration of the Limiting Condition for Operation
0 6 | time limit. This event resulted in operation in a degraded mode permitted by a
0 7 | Limiting Condition for Operation as defined by Tech. Spec. 3.4.1.b and is reported
0 8 | pursuant to 6.9.2.b.2. The Motor Driven Auxiliary Feedwater Pumps were operable so
there was no threat to the public health and safety.

09		SYSTEM CODE CH		11	CAUSE CODE E		12	CAUSE SUBCODE B		13	COMPONENT CODE VALVEX				14	COMP. SUBCODE E		15	VALVE SUBCODE D		16				
78		17 LER/RO REPORT NUMBER		21	EVENT YEAR 83		22	SEQUENTIAL REPORT NO. 016		23	OCCURRENCE CODE 03		24	REPORT TYPE L		25	REVISION NO. 0		26	27					
ACTION TAKEN B		FUTURE ACTION X		18	EFFECT ON PLANT A		19	SHUTDOWN METHOD A		20	HOURS 0022		21	ATTACHMENT SUBMITTED Y		22	NPRD-4 FORM SUB. N		23	PRIME COMP. SUPPLIER A		24	COMPONENT MANUFACTURER A391		25
33		34		35	36		37	38		39	40		41	42		43	44		45		46		47		

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The pump discharge valves V2-14A, V2-14B, and AFW-19 were repaired, and a leakage
1 1 evaluation was performed with satisfactory results. The Steam Driven Auxiliary
1 2 Pump was tested via PT-22.1A (Auxiliary Feedwater System Component Test) and de-
1 3 clared operable at 0030 hours on July 29, 1983. A shift check of all Auxiliary
1 4 Feedwater pumps is also being performed to detect any evidence of further back-
leakage problems.

8 9
FACILITY STATUS (1) (5) (E) (28) % POWER (0) (7) (9) (29) OTHER STATUS (30) N/A METHOD OF DISCOVERY (A) (31) DISCOVERY DESCRIPTION (32) Operator Observation
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
ACTIVITY CONTENT RELEASED OF RELEASE (1) (6) (Z) (33) (Z) (34) AMOUNT OF ACTIVITY (35) N/A LOCATION OF RELEASE (36) N/A
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
PERSONNEL EXPOSURES NUMBER (1) (7) (0) (0) (0) (37) (Z) (38) DESCRIPTION (39) N/A
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
PERSONNEL INJURIES NUMBER (1) (8) (0) (0) (0) (40) DESCRIPTION (41) N/A
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
LOSS OF OR DAMAGE TO FACILITY TYPE (1) (9) (Z) (42) DESCRIPTION (43) N/A
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
PUBLICITY ISSUED (2) (0) (N) (44) DESCRIPTION (45) N/A
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
NRC USE ONLY

NAME OF PREPARER Howard T. Cox

PHONE: (803) 383-4524

SUPPLEMENTAL INFORMATION
FOR
LICENSEE EVENT REPORT 83-016

I. Cause Description and Analysis

At approximately 0400 hours on July 21, 1983, with the unit at 79% power, steam was discovered at the suction vent and discharge drain of the Steam Driven Auxiliary Feedwater (SDAFW) pump during a routine check. The pump was vented and was operated satisfactorily on recirculation but was declared inoperable due to potential steam binding.

Subsequent investigation revealed that discharge valve V2-14B was allowing backleakage from the feedwater system to enter the SDAFW pump resulting in steam in the pump casing. This condition can cause pump cavitation and a subsequent trip on low discharge pressure following automatic start.

Initial repair efforts were unsuccessful and a plant shutdown was commenced at 0055 hours on July 28, 1983, due to the approaching Limiting Condition for Operation (LCO) time limit of seven days.

This event resulted in a degraded mode permitted by a Limiting Condition for Operation as defined by Technical Specification 3.4.1.b which is reportable pursuant to 6.9.2.b.2. Throughout this event, the two Motor Driven Auxiliary Feedwater Pumps were operable; therefore, there was no threat to the public health and safety.

II. Corrective Action

Throughout the LCO period, the SDAFW pump could have been operated if necessary by venting the pump prior to starting except during the repair efforts on the discharge valves. However, the steam backleakage might have caused a pump trip upon receiving a normal start signal. The initial corrective actions performed prior to plant shutdown did not resolve the backleakage problem as anticipated. This effort included replacing the valve disk and seat gasket on V2-14B.

Further investigation of V2-14B revealed a pin hole in the valve seat ring seal weld which was allowing backleakage. Also, the pump discharge check valve AFW-19 was allowing slight backleakage. V2-14B was weld repaired in accordance with a special procedure. This work was also performed under the guidance of a vendor representative.

AFW-19 was repaired by replacing the valve disk and seat assembly. Also, the seats on valve V2-14A were lapped to ensure a good seal. Valve V2-14C did not require any repairs. A leakage evaluation was then performed by hydro-testing of each discharge line with satisfactory results. PT-22.1A was performed, and the SDAFW pump was declared operable at 0030 hours on July 29, 1983.

III. Corrective Action to Prevent Recurrence

The above action is believed adequate to prevent recurrence. However, a special procedure, SP-491, was implemented to require venting of both the Steam Driven and Motor Driven Auxiliary Feedwater Pumps on a four-hour interval with provision for increasing the interval to hourly if vapor is discovered during the venting. This special procedure was used until the Auxiliary Operator's Log Sheet was revised on August 17, 1983, to include checking the AFW pumps for vapor once each shift. This frequency is considered adequate based on the current pump and line temperatures which indicate minimal backleakage is present. Although the corrective actions described in this report are considered sufficient with respect to the SDAFW pump event, an engineering evaluation of the entire Auxiliary Feedwater System is in progress. This evaluation should be complete by the Steam Generator Replacement Outage.

CP&L

Carolina Power & Light Company

83 AUG 24 A9:12

H. B. ROBINSON STEAM ELECTRIC PLANT
POST OFFICE BOX 790
HARTSVILLE, SOUTH CAROLINA 29550

AUG 19 1983

Robinson File No: 13510C

Serial: RSEP/83-1096

Mr. James P. O'Reilly
Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, N. W., Suite 3100
Atlanta, Georgia 30303

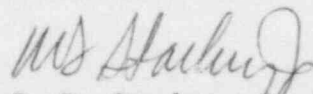
H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261
LICENSE NO. DPR-23
LICENSEE EVENT REPORT 83-016

Dear Mr. O'Reilly:

In accordance with Section 6.9.2 of the Technical Specifications for the H. B. Robinson Steam Electric Plant, Unit 2, the enclosed Licensee Event Report is submitted. This report fulfills the requirements for a written report within thirty (30) days of a reportable occurrence and is in accordance with the format set forth in NUREG-0161, July, 1977.

This report also fulfills the requirement of Technical Specification 3.4.4.a for submittal of a Special Report.

Very truly yours,



R. B. Starkey, Jr.
General Manager
H. B. Robinson SEG Plant

HHC:FMG:JMC/bss

Enclosure

cc: R. C. DeYoung (30)
R. A. Hartfield (3)

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IE 22/1