

AEC DISTRIBUTION FOR PART 50 DOCKET MATERIAL
(TEMPORARY FORM)

CONTROL NO: 9376

FILE:

FROM: Carolina Power & Light Co Raleigh, NC 27602 EE Utley		DATE OF DOC 9-5-74	DATE REC'D 9-12-74	LTR XXX	TWX	RPT	OTHER
TO: Mr Case		ORIG 1 signed	CC	OTHER	SENT AEC PDR <u>xxx</u> SENT LOCAL PDR <u>xxx</u>		
CLASS	UNCLASS XXXXXX	PROP INFO	INPUT	NO CYS REC'D 1	DOCKET NO: 50-261		

DESCRIPTION:

Ltr trans the following:

ACKNOWLEDGED
DO NOT REMOVE

PLANT NAME: HB Robinson #2

ENCLOSURES:

REPORT: Abnormal Occurrence #74-19 on
8-31-74 re failure of Auxiliary Feedwater
Pump discharge valve to "C" Steam generator,
failed to open.

(1 cy rec'd)

FOR ACTION/INFORMATION

9-12-74

BUTLER (L)	SCHWENGER (L)	ZIEMANN (L)	✓ REGAN (E)
W/ CYS	W/ CYS	W/ CYS	✓ W/ CYS
CLARK (L)	STOLZ (L)	DICKER (E)	LEAR
W/ CYS	W/ CYS	W/ CYS	W/ CYS
PARR (L)	VASSALLO (L)	KNIGHTON (E)	
W/ CYS	W/ CYS	W/ CYS	W/ CYS
KNIEL (L)	PURPLE (L)	YOUNGBLOOD (E)	
W/ CYS	W/ CYS	W/ CYS	W/ CYS

INTERNAL DISTRIBUTION

✓ <u>REG FILE</u>	<u>TECH REVIEW</u>	DENTON	LIC ASST	A/T IND
✓ AEC PDR		GRIMES	DIGGS (L)	BRAITMAN
✓ OGC	✓ SCHROEDER	GAMMILL	GEARIN (L)	SALTZMAN
✓ MUNTZING/STAFF	✓ MACCARY	KASTNER	GOULBOURNE (L)	B. HURT
✓ CASE	✓ KNIGHT	BALLARD	KREUTZER (E)	
GIAMBUSSO	✓ PAWLICKI	SPANGLER	LEE (L)	<u>PLANS</u>
BOYD	✓ SHAO		MAIGRET (L)	MCDONALD
MOORE (L)(LWR-2)	✓ STELLO	<u>ENVIRO</u>	REED (E)	CHAPMAN
DEYOUNG (L)(LWR-1)	✓ HOUSTON	MULLER	SERVICE (L)	DUBE w/input
SKOVHOLT (L)	✓ NOVAK	DICKER	SHEPPARD (L)	E. COUPE
GOLLER (L)	✓ ROSS	KNIGHTON	SLATER (E)	
P. COLLINS	✓ IPPOLITO	YOUNGBLOOD	SMITH (L)	✓ D. THOMPSON (2)
DENISE	✓ TEDESCO	REGAN	✓ TEETS (L)	✓ KLECKER
✓ <u>REG OPR</u>	✓ LONG	PROJECT MGR	WILLIAMS (E)	✓ EISENHUT
FILE & REGION (2)	✓ LAINAS		WILSON (L)	
✓ MORRIS	✓ BENAROYA	<u>HARLESS</u>		
✓ STEELE	✓ VOLLMER			

EXTERNAL DISTRIBUTION

✓ 1 - LOCAL PDR <u>Hartsville, SC</u>	(1)(2)(10)-NATIONAL LABS	1-PDR-SAN/LA/NY
✓ 1 - TIC (ABERNATHY)	1-ASLBP(E/W Bldg, Rm 529)	1-BROOKHAVEN NAT LAB
✓ 1 - NSIC (BUCHANAN)	1-W. PENNINGTON, Rm E-201 GT	1-G. ULRICKSON, ORNL
1 - ASLB	1-B&M SWINEBROOK, Rm E-201 GT	1-AGMED (ROTH GUSMAN)
1 - Newton Anderson	1-CONSULTANTS	Rm B-127 GT
5 - ACRS SENT TO LIC ASST <i>Teets</i>	NEWARK/BLUME/AGABIAN	1-ED. MUELLER

Regulatory Docket File

CP&L

Carolina Power & Light Company

50 - 261

File: NG-3513 & NG-3514 (R)

Serial: NG-74-1078

Mr. Norman C. Moseley, Director
Directorate of Regulatory Operations
U. S. Atomic Energy Commission
Region II, Suite 818
230 Peachtree Street, N.W.
Atlanta, Georgia 30303

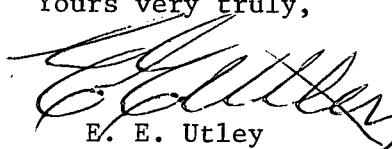
Mr. Edson G. Case, Deputy Director
Directorate of Licensing
U. S. Atomic Energy Commission
Office of Regulation
Washington, D. C. 20545

Dear Sirs:

H. B. ROBINSON UNIT NO. 2
LICENSE NO. DPR-23
FAILURE OF VALVE V2-16C TO OPEN

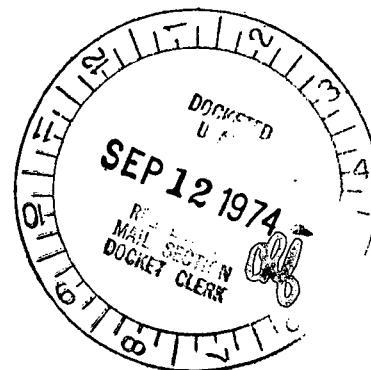
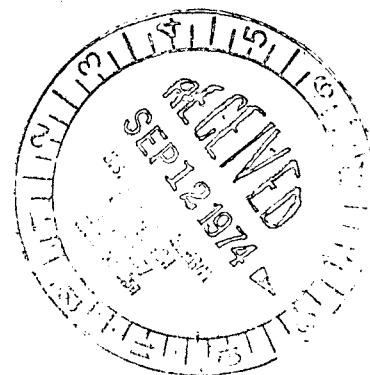
In accordance with Section 6.6.2 of Technical Specifications for H. B. Robinson Unit No. 2, the attached Abnormal Occurrence Report is submitted for your information. This report fulfills the requirements for a written report within ten days of an abnormal occurrence and is in accordance with the format set forth in Regulatory Guide 1.16.

Yours very truly,


E. E. Utley
Vice-President
Bulk Power Supply

KPY:DBW:mvp
Attachment

cc: Messrs. N. B. Bessac
W. B. Howell
J. B. McGirt
D. V. Menscer
D. B. Waters



ABNORMAL OCCURRENCE REPORT

1. Report No. 50-261/74-19
- 2a. Date September 5, 1974
- 2b. Occurrence Date August 31, 1974
3. Facility H. B. Robinson Unit No. 2
Hartsville, S. C.

4. Identification of Occurrence

Valve V2-16C, Auxiliary Feedwater Pump discharge valve to "C" Steam Generator, failed to open.

5. Conditions Prior to Occurrence

The plant was in the hot shutdown condition due to a short maintenance outage. "B" Condensate Pump and "B" Main Feedwater Pump were running to supply water to the steam generators. "A" Condensate Pump was out of service for maintenance and "A" MFP was not in use.

6. Description of Occurrence

During the shutdown it was decided to de-energize and isolate "B" Main Feedwater Pump (MFP) for maintenance work. Normally "A" MFW Pump would be started before "B" MFW Pump was stopped. However, this was not possible since "A" Condensate Pump which supplies flow to "A" MFP, was out of service. Therefore, at 1100 on August 31, "B" MFW Pump was stopped, flow from "B" condensate pump was diverted to "A" FMW Pump, and "A" MFP was immediately started. This resulted in both MFW pumps being momentarily stopped, which automatically started the two motor driven auxiliary feedwater pumps. The motor driven AFW pumps discharge valves opened except for V2-16C, discharge valve to "C" Steam Generator. The failure of this valve to open was detected by observation of valve indication on the RTGB. After determination that the valve was inoperative, the Steam Driven Auxiliary Feedwater Pump was test operated satisfactorily to insure that feedwater flow to all steam generators would be maintained during an emergency condition. An investigation was undertaken to determine the cause of V2-16C's failure to open.

7. Designation of Apparent Cause of the Occurrence

Valve V2-16C was disassembled and the valve plug was found to be tightly wedged against the seat rings. Removal of the plug revealed a small metal burr on one of the seat rings. The burr was removed by filing and, the valve reassembled. The valve was test operated several times without failure.

Apparently the burr caused the valve plug to tightly wedge against the seat rings. When the signal to open the valve was received by the valve motor, the motor could not develop enough torque to pull the plug free.

8. Analysis of Occurrence

There were no personnel injuries nor was any radioactive materials involved in the occurrence.

The failure of this valve prevented addition of water to the "C" Steam Generator from the motor driven auxiliary feedwater pumps. However, the plant was in a hot shutdown condition at the time of the occurrence. In this condition only one steam generator is necessary to remove decay heat from the reactor. During the short time the AFW pumps provided feedwater to the steam generators, only feedwater to "C" steam generator was interrupted. Decay heat from the reactor was being removed by the remaining two steam generators which was more than sufficient. Also "A" MFW Pump was immediately started, re-establishing feedwater flow to "C" Steam Generator. Also, the Steam Driven Auxiliary Feedwater Pump was demonstrated to be operable. Therefore, the safety of the plant was not jeopardized during the occurrence.

If a similar failure occurred with the reactor at power, the safety of the plant would not be endangered unless in the unlikely event both MFW pumps and the Steam Driven FW Pump were out of service. Even then two steam generators would still be operable, allowing time for corrective action to be taken. (Technical Specification 3.1.1.2 states that whenever average primary coolant temperature is above 350°F, at least two steam generators must be operable.)

Valve V2-16C was out of service for 32 hours. During that time the plant remained in hot shutdown condition.

9. Corrective Action

The burr on the seat ring was filed off and the valve reassembled. The valve was test operated several times without failure and returned to normal service.

On August 31, 1974, the PNSC met and recommended test operating all motor driven valves of similar construction which were located in safety related systems. The testing took place later that same day. One valve, 844A, Containment Vessel Spray Pump Suction Isolation Valve, failed to close on a valve closing signal. The cause was determined to be a loose nut in the limitorque operator. Failure of this valve does not constitute an abnormal occurrence since it is a normally open valve and is closed only when its associated spray pump has to be isolated for maintenance. The failure did not endanger the intended operation of the Containment Vessel Spary System.

10. Failure Data

A. Two previous malfunctions of this valve have occurred due to problems with its limitorque operator:

1. On August 21, 1973, a damaged worm drive gear in the motor operator prevented valve stem movements. The worm gear was replaced and the valve returned to service.

2. On December 17, 1973, binding in the operator gear drive prevented the valve from fully opening. The operator was repaired and the valve returned to service.
- B. Valve V2-16C is a Chapman, 4", L-900 W,E,O.S. Pressure Seal Gate Valve with a SMB-000 limit torque operator.