

AEC DISTRIBUTION FOR PART 50 DOCKET MATERIAL
(TEMPORARY FORM)

CONTROL NO: 8622

FILE:

FROM: Carolina Power & Light Co Raleigh, NC EE Utley		DATE OF DOC 8-15-74		DATE REC'D 8-20-74		LTR X	TWX	RPT	OTHER
TO: Edson Case		ORIG 2 signed		CC 38	OTHER	SENT AEC PDR XXX SENT LOCAL PDR XXX			
CLASS.	UNCLASS	PROP INFO		INPUT	NO CYS REC'D 40		DOCKET NO: 50-261		
	XXX								

DESCRIPTION:

Ltr trans the following.....

ENCLOSURES:

Abnormal occurrence rpt #50-261/74-16 of
8-6-74 re failure of HVH Unit

**ACKNOWLEDGED
DO NOT REMOVE**

PLANT NAME: HB ROBINSON UNIT #2

(40 cys encl rec'd)

FOR ACTION/INFORMATION 8-21-74 GMC

BUTLER (L)	SCHWENCER (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/7 CYS
W/ CYS	VACCALLO (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	<u>LIC ASST</u>	A/T IND
✓AEC PDR	✓HENDRIE	GRIMES	DIGGS (L)	BRAITMAN
✓OGC	✓SCHROEDER	GAMMILL	GEARIN (L)	SALTZMAN
✓MUNTZING/STAFF	✓MACCARY	KASTNER	GOULBOURNE (L)	B. HURT
✓CASE	✓KNIGHT	BALLARD	KREUTZER (E)	
GIAMBUSO	✓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 (3)	✓LAINAS		WILSON (L)	
✓MORRIS	✓BENAROYA	HARLESS		
✓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. ULRIKSON, ORNL
1 - ASLB	1-B&M SWINEBROAD, Rm E-201 GT	1-AGMED (RUTH GUSMAN)
✓1 - P. R. DAVIS	1-CONSULTANTS	Rm B-127 GT
✓5 - ACRS SENT TO LIC ASST TEETS 8-21-74	NEWMARK/BLUME/AGBABIAN	1-RD..MUELLER, Rm F-304
		GT



Carolina Power & Light Company

August 15, 1974

File: NG-3513 and NG-3514

Serial: NG-74-1042

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

00 - 261

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

Dear Sirs:

H. B. ROBINSON UNIT NO. 2
LICENSE DPR-23
FAILURE OF HVH UNIT

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

Yours very truly,

E. E. Utley
Vice-President
Bulk Power Supply

ACT:mvp
Attachment

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

REGULATORY DOCKET FILE COPY

8622

ABNORMAL OCCURRENCE REPORT

1. Report No. 50-261/74-16
- 2a. Date August 14, 1974
- 2b. Occurrence Date August 6, 1974
3. Facility H. B. Robinson Unit No. 2
Hartsville, S. C. 29550

4. Identification of Occurrence

Failure of HVH Unit

5. Conditions Prior to Occurrence

The plant was operating normally at 100% reactor power. Three Containment Air Recirculation (HVH) Units were running.

6. Description of Occurrence

At 0850, August 6, 1974, while operating at power with HVH Units No. 1, 3 and 4 running, a fourth HVH (No. 2) was started to afford more air circulation in Containment. Nine minutes later, at 0859, HVH-4 tripped on low air flow. The unit was restarted two times and tripped on low air flow each time after running for a few minutes. HVH-4 was declared inoperable, and both Containment Spray Pumps and their associated valves were demonstrated to be operable as required by Technical Specifications.

7. Description of Apparent Cause of Occurrence

Investigation revealed that the two flow switches on HVH-4 were chattering. These flow switches are paddle type switches mounted in the vertical ducting of the fan discharge. They are electrically wired in parallel such that a low flow condition on either is sufficient after a twenty-second time delay to trip the fan. The switches were inspected and found to be in good condition.

Each of the four HVH Units discharges into the ventilation ring header above the operating deck in Containment. Testing revealed that when all four units were run simultaneously, the air turbulence and vibration increased enough to cause the flow switches in the HVH-4 discharge duct to chatter. The continuous and simultaneous chattering of these switches was apparently sufficient to satisfy the twenty-second time delay feature of the relay which trips the fan.

The HVH Unit flow switches have been observed to chatter in the past (without tripping the units), and some switches have been relocated in an attempt to place them in more stable flow areas of the ducting. However, this is a trial-and-error procedure, and, due to the high sensitivity of the switches, has not been wholly satisfactory.

8. Analysis of Occurrence

The safety of plant operation was not jeopardized since three HVH Units were operable, and only two are required under accident conditions. In addition, during LOCA conditions the density of the air being pumped is approximately three times normal. Since the low switches are the paddle type and react to the mass of air passing them, it is likely that the switches on HVH-4 would have indicated positive flow and permitted the fan to operate under LOCA conditions.

9. Corrective Actions

- A. The low flow trip for HVH-4 was disabled electrically, and the fan was tested and returned to service at 1747 on August 6, 1974.
- B. Consideration is being given to permanently removing the low flow trip feature from the HVH Units.

10. Failure Data

- A. There have been no previous failures of HVH Units due to low flow.
- B. The switches are McDonnell No. AF 1 Air Flow switches manufactured by McDonnell & Miller ITT.