

AEC DISTRIBUTION FOR PART 50 DOCKET MATERIAL
(TEMPORARY FORM)

CONTROL NO: 11093

FILE: _____

FROM: <u>Carolina Power & Light Co.</u> <u>Raleigh, N.C.</u> <u>E.E. Utley</u>		DATE OF DOC <u>10-28-74</u>	DATE REC'D <u>10-29-74</u>	LTR <u>xxx</u>	TWX	RPT	OTHER
TO: <u>Mr. Norman C. Moseley</u>		ORIG <u>1-signed</u>	CC	OTHER	SENT AEC PDR <u>xxxxxxxxxx</u> SENT LOCAL PDR <u>xxxxxxxxxx</u>		
CLASS	UNCLASS <u>xxxxxx</u>	PROP INFO	INPUT	NO CYS REC'D <u>2</u>	DOCKET NO: <u>50-261</u>		

DESCRIPTION: Ltr Trans the Following: <div style="text-align: center; font-size: 1.2em; font-weight: bold;">ACKNOWLEDGED</div> <div style="text-align: center; font-size: 1.2em; font-weight: bold;">DO NOT REMOVE</div> PLANT NAME: <u>H. B. Robinson Unit No. 2</u>	ENCLOSURES: Abnormal Occurrence # 74-23 on 10-15-74 regarding Valve V2-16C, Auxiliary Feedwater Pump discharge valve to " C " Steam Generator, failed to open.....
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FOR ACTION/INFORMATION 10-30-74 JGB

BUTLER (L) W/ Copies	SCHWENCER (L) W/ Copies	ZIEMANN (L) W/ Copies	REGAN (E) W/ Copies
CLARK (L) W/ Copies	STOLZ (L) W/ Copies	DICKER (E) W/ Copies	<u>LEAR</u> (L) <u>W/ Copies</u>
PARR (L) W/ Copies	VASSALLO (L) W/ Copies	KNIGHTON (E) W/ Copies	W/ Copies
KNIEL (L) W/ Copies	PURPLE (L) W/ Copies	YOUNGBLOOD (E) W/ Copies	W/ Copies

INTERNAL DISTRIBUTION

<u>REG FILE</u> <u>AEC PDR</u> <u>OGC, ROOM P-506A</u> <u>MUNTZING/STAFF</u> <u>CASE</u> <u>GIAMBUSSO</u> <u>BOYD</u> <u>MOORE (L) (BWR)</u> <u>DEYOUNG (L) (PWR)</u> <u>SKOVHOLT (L)</u> <u>GOLLER (L)</u> <u>P. COLLINS</u> <u>DENISE</u> <u>REG OPR</u> <u>FILE & REGION (3)</u> <u>MORRIS</u> <u>STEELE</u>	<u>TECH REVIEW</u> <u>SCHROEDER</u> <u>MACCARY</u> <u>KNIGHT</u> <u>PAWLICKI</u> <u>SHAO</u> <u>STELLO</u> <u>HOUSTON</u> <u>NOVAK</u> <u>ROSS</u> <u>APPOLITO</u> <u>TEDESCO</u> <u>LONG</u> <u>LAINAS</u> <u>BENAROYA</u> <u>VOLIMER</u>	<u>DENTON</u> <u>GRIMES</u> <u>GAMMILL</u> <u>KASTNER</u> <u>BALLARD</u> <u>SPANGLER</u> <u>ENVIRO</u> <u>MULLER</u> <u>DICKER</u> <u>KNIGHTON</u> <u>YOUNGBLOOD</u> <u>REGAN</u> <u>PROJECT LDR</u> <u>HARLESS</u>	<u>LIC ASST</u> <u>DIGGS (L)</u> <u>GEARIN (L)</u> <u>GOULBOURNE (L)</u> <u>KREUTZER (E)</u> <u>LEE (L)</u> <u>MAIGRET (L)</u> <u>REED (E)</u> <u>SERVICE (L)</u> <u>SHEPPARD (L)</u> <u>SLATER (E)</u> <u>SMITH (L)</u> <u>TEETS (L)</u> <u>WILLIAMS (E)</u> <u>WILSON (L)</u>	<u>A/T IND</u> <u>BRAITMAN</u> <u>SALTZMAN</u> <u>B. HURT</u> <u>PLANS</u> <u>MCDONALD</u> <u>CHAPMAN</u> <u>DUBE w/input</u> <u>E. COUPE</u> <u>D. THOMPSON (2)</u> <u>KLECKER</u> <u>EISENHUT</u>
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EXTERNAL DISTRIBUTION

<u>1 - LOCAL PDR Hartsville, SC</u> <u>1 - TIC (ABERNATHY) (1)(2)(10)</u> <u>1 - NSIC (BUCHANAN)</u> <u>1 - ASLB</u> <u>1 - Newton Anderson</u> <u>1 - ACRS</u>	<u>1 - NATIONAL LABS</u> <u>1 - ASLBP (E/W Bldg, Rm 529)</u> <u>1 - W. PENNINGTON, Rm E-201 GT</u> <u>1 - B&M SWINEBROAD, Rm E-201 GT</u> <u>1 - CONSULTANTS</u> <u>NEWMARK/BLUME/AGBABIAN</u>	<u>1 - PDR-SAN/LA/NY</u> <u>1 - BROOKHAVEN NAT LAB</u> <u>1 - G. ULRIKSON, ORNL</u> <u>1 - AGMED (RUTH GUSSMAN)</u> <u>Rm B-127 GT</u> <u>1 - R. D. MUELLER, Rm E-201 GT</u>
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15 *SENT to Lic Asst.*
TEETS



Carolina Power & Light Company

50-261

October 28, 1974

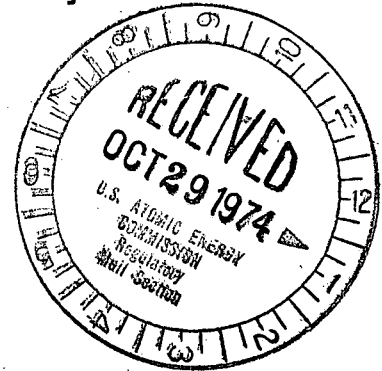
File: NG-3513 & NG-3514 (R)

Serial: NG-74-1293

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

Regulatory

File Cy.



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

Dear Sirs:

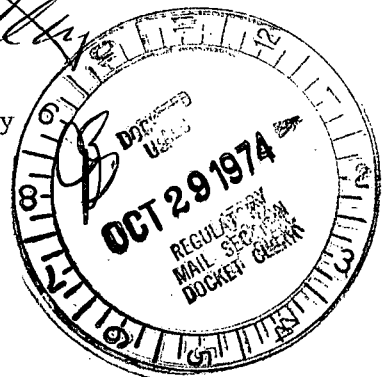
H. B. ROBINSON UNIT NO. 2
LICENSE NO. DPR-23

FAILURE OF AUXILIARY FEEDWATER 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, Revision 1.

Yours very truly,

E. E. Utley
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. 50-261/74-23
- 2a. Date October 22, 1974
- 2b. Occurrence Date October 15, 1974
3. Facility H. B. Robinson Unit No. 2
Hartsville, South Carolina 29550

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 at 100% nuclear power with all conditions normal. PT-22, "Auxiliary Feedwater System" (monthly) was being conducted.

6. Description of Occurrence

On October 15, 1974, in conjunction with PT-22, the Auxiliary Feedwater System was being tested. At 1747, a command was sent from the RCGB to cycle valve V2-16C, Auxiliary Feedwater Pumps discharge valve to "C" Steam Generator. Status lights on the control board indicated that the valve had not moved. After determination that the valve was inoperative the Steam Driven Auxiliary Feedwater Pump was test operated to insure 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

The valve plug was found to be tightly wedged against the seat rings. Heat was applied to the valve body in order to expand the valve seat and free the plug. Inspection of the Limitorque operator revealed that the torque switch was intermittently failing to turn off the drive motor when the motor had developed its maximum torque. Apparently, the previous time this valve had been cycled, the torque switch failed to stop the drive motor after the valve had seated. This resulted in wedging the valve plug against the seat so tightly that the drive motor could not develop enough torque to pull the valve plug free.

8. Analysis of Occurrence

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

The failure of this valve would have prevented addition of water to "C" Steam Generator from the motor driven Auxiliary Feedwater Pumps. However, since the failure occurred during a test of the

Auxiliary Feedwater System, feedwater to all steam generators was being supplied by the main feedwater pumps. Therefore the safe operation of the plant was not affected during the occurrence.

During normal plant operation the AFW Pumps are automatically started on low level in a steam generator, loss of both MFW pumps, loss of normal plant power, or by safeguards actuation. In the event of a similar failure of V2-16C during an automatic start of the AFW Pumps, 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 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 approximately 7½ hours.

9. Corrective Action

The Limitorque operator was repaired and the torque springs reset so that the minimum amount of torque necessary to seat the valve plug would be applied to the valve stem. V2-16C was reassembled and test operated several times without failure.

The failure rate of this particular valve is high compared to the other motor operated valves in use at this facility. To prevent future failures, an investigation is currently being undertaken to find an identical Limitorque operator on a valve located in a non-safety related system. This operator will then be used to replace the operator currently on V2-16C.

10. Failure Data

A. Three previous malfunctions of this valve have occurred:

1. On August 21, 1973, a damaged worm drive year in the Limitorque operator prevented valve stem movement. The worm year 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 replaced and returned to service.
3. On August 31, 1974, a burr on the valve seat wedged the valve plug against the seat rings preventing movement. The burr was filed off 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-00, 10ft-lb. Limitorque operator.