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Carolina Power & Light Co. Raleigh, N. C. E. E. Utley	5-28-74	6-3-74	X			

TO:	ORIG	CC	OTHER	SENT AEC PDR XXX SENT LOCAL PDR XXX
John F. O'Leary	2 signed	38		

CLASS	UNCLASS	PROP INFO	INPUT	NO CYS REC'D	DOCKET NO:
	XXX			40	50-261

DESCRIPTION:

Ltr trans the following.....

** Denotes Letter Only

PLANT NAME: H. B. ROBINSON UNIT #2

ENCLOSURES:

Unusual Event of 5-6-74 re failure of left main steam stop valve to close

ACKNOWLEDGED
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(40 cys encl rec'd)

FOR ACTION/INFORMATION 6-3-74 GMC

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BOYD	✓SHAO		MAIGRET (L)	MCDONALD
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SKOVHOLT (L)	✓NOVAK	DICKER	SHEPPARD (L)	INFO
✓** GOLLER(L)	✓ROSS	KNIGHTON	SLATER (E)	C. MILES
P. COLLINS	✓IPPOLITO	YOUNGBLOOD	SMITH (L)	✓KLECKER
DENISE	✓** TEDESCO	REGAN	✓TEETS (L)	✓EISENHUT
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CP&L
Carolina Power & Light Company

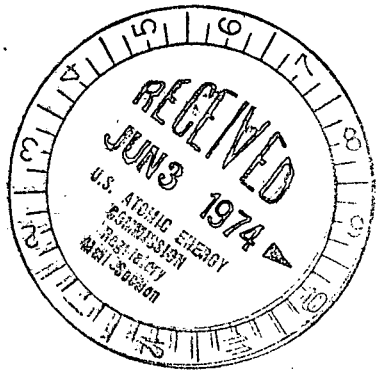
May 28, 1974

File: NG-3513 & NG-3514 Serial: NG-74-652

Mr. John F. O'Leary, Director
Directorate of Licensing
Office of Regulation
U. S. Atomic Energy Commission
Washington, D. C. 20545

50-261

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



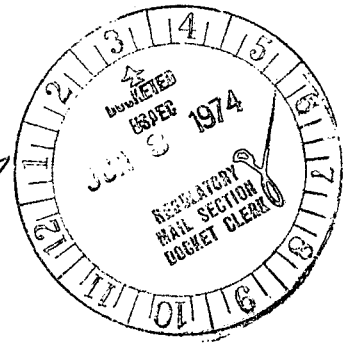
Dear Sirs:

H. B. ROBINSON UNIT NO. 2
LICENSE DPR-23
UNUSUAL EVENT - FAILURE TO CLOSE OF A TURBINE STOP VALVE

In accordance with Section 6.6.2g of the Technical Specifications, the attached unusual event report concerning failure of a turbine stop valve to close completely during plant shutdown on May 6, 1974, at the H. B. Robinson Unit No. 2 Plant is submitted for your information. This report fulfills the requirements for a written report within thirty days of an unusual event.

Yours very truly,

E. E. Utley
Vice-President
Bulk Power Supply



DBW:mvp
Attachment

cc: Messrs. N. B. Bessac
B. J. Furr
W. E. Graham
D. V. Menscer
D. B. Waters
R. A. Watson

336 Fayetteville Street • P. O. Box 1551 • Raleigh, N. C. 27602

UNUSUAL EVENT

1. Event Date: May 6, 1974

2. Identification of Event: Failure of left main steam stop valve to close.

3. Conditions Prior to Event:

The plant was in the process of being shutdown in preparation for a refueling outage.

4. Description of Event:

While performing Periodic Test 15.2 at 0105 on May 6, 1974, the valve position instrumentation did not show that the left turbine stop valve closed. Investigation revealed that the left stop valve did not close completely when the close push button was depressed in the control room. The unit shutdown was continued as scheduled.

5. Designation of Apparent Cause of Event:

The event was the result of buildup of phosphate derivatives between the valve shaft and bushings which restricted the shaft rotating movement.

6. Analysis of Event:

The turbine was in the process of being shutdown for an extended outage. All other valves in the system operated properly and turbine speed decayed as expected. The turbine was put on turning gear for the outage.

7. Corrective Action:

A stop valve modification to limit the phosphate buildup around the shaft is planned for the 1974 refueling outage which is in progress. This modification consists primarily of a new shaft and bushings and field modification of the bearing end cover, the valve arm, and the servo support housing. Steam generators are being operated in accordance

with the most recent chemistry recommendations from Westinghouse, and moisture carry over is well with specifications.

8. Failure Data:

The turbine stop valves are 25-inch flapper type valves manufactured by Westinghouse Large Turbine Division in Lester, Pennsylvania.

On November 7, 1972, the left stop valve showed sticky operation during the weekly periodic test. The turbine control valves began to oscillate as a result of the hesitant operation of the stop valves, and the turbine was manually tripped. Disassembly of both valves revealed a deposit of white scale on the valve operating shaft and bushings. The valves were thoroughly cleaned, reassembled, and test operated satisfactorily.

Samples of the scale were sent to Westinghouse for chemical analysis. X-ray analysis indicated that the deposit was composed of a mixture of sodium pyrophosphate ($Na_4P_2O_7$), sodium silicate (Na_2SiO_5), and iron phosphate ($Fe_3(PO_4)_2$). The predominant compound, sodium pyrophosphate, results from the dehydration of sodium phosphate and occurs at sustained high temperatures.

The proposed modification to the valves is designed to restrict the access of entrained moisture into critical areas of the valve operator.