

NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL
(TEMPORARY FORM)

CONTROL NO: **2750**

FILE: INCIDENT REPORT FILE

FROM: Carolina Power & Light Co Raleigh, NC 27602 N B Bessac			DATE OF DOC 3-7-75	DATE REC'D 3-12-75	LTR XXX	TWX	RPT	OTHER
TO: Mr Moseley			ORIG one signed	CC	OTHER	SENT AEC PDR XX SENT LOCAL PDR XX		
CLASS	UNCLASS XXXX	PROP INFO	INPUT	NO CYS REC'D 1	DOCKET NO: 50-261			
DESCRIPTION: Ltr trans the following:				ENCLOSURES: Abnormal occurrence #75-5 on 2-25 & 26-75 concerning failure of "B" boric acid transfer pump.....				
PLANT NAME: H B Robinson #2								

FOR ACTION/INFORMATION 3-13-75 ehf

BUTLER (L) W/ Copies	SCHWENCER (L) W/ Copies	ZIEMANN (L) W/ Copies	REGAN (E) W/ Copies
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INTERNAL DISTRIBUTION

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EXTERNAL DISTRIBUTION

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- 1 - NSIC (BUCHANAN)	- 1 - W. PENNINGTON, Rm E-201 GT		- 1 - BROOKHAVEN NAT LAB
- 1 - ASLB	- 1 - CONSULTANTS		- 1 - G. ULRIKSON, ORNL
- 1 - Newton Anderson	- NEWMARK/BLUME/AGBABIAN		- 1 - AGMED (RUTH GUSSMAN) Rm B-127 GT
- 5 - ACRS SENT TO LIC ASST Teets			- 1 - J. D. RUNKLES, Rm E-201 GT
** SEND ONLY TEN DAY REPORTS			

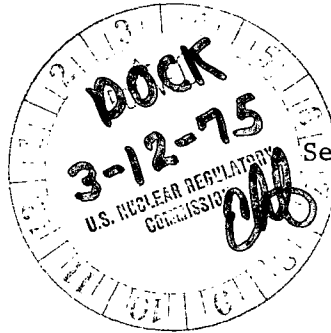


Carolina Power & Light Company

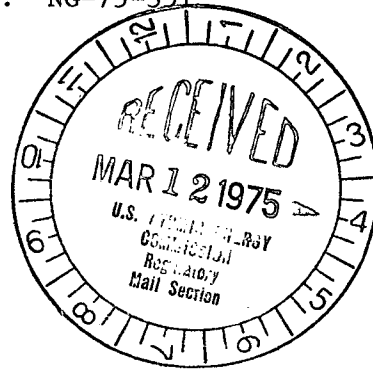
March 7, 1975

File: NG-3513 (R)

50 - 261



Serial: NG-75-351




Mr. Norman C. Moseley, Director
U. S. Nuclear Regulatory Commission
Region II, Suite 818
230 Peachtree Street, N. W.
Atlanta, Georgia 30303

H. B. ROBINSON UNIT NO. 2
LICENSE NO. DPR-23
FAILURE OF "B" BORIC ACID TRANSFER PUMP

Dear Mr. Moseley:

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, Revision 1.

Yours very truly,


N. B. Bessac
Manager
Nuclear Generation

ACT:TAW:jwk

Attachment

cc: Messrs. T. E. Bowman
P. W. Howe
R. E. Jones
D. Knuth
J. B. McGirt
D. B. Waters

2750

Abnormal Occurrence Report

1. Report No. 50-261/75-5
- 2a. Report Date March 7, 1975
- 2b. Occurrence Date February 25 and 26, 1975
3. Facility H. B. Robinson Unit No. 2
Hartsville, South Carolina 29550

4. Identification of Occurrence

Failure of "B" Boric Acid Transfer Pump constituting an Abnormal Occurrence as defined in Section 1.8.d of the Technical Specifications.

5. Conditions Prior to Occurrence

The plant was operating at 100% nuclear power with 697 MW net electrical output. "B" Boric Acid Transfer Pump was lined up to recirculate with Boric Acid Tank "B". "A" Boric Acid Transfer Pump was lined up to recirculate "A" Boric Acid Tank.

6. Description of Occurrence

At 0701 hours, February 25, 1975, "B" Boric Acid Transfer Pump was started to recirculate "B" Boric Acid Tank. At 0800 hours the pump was stopped after a sample of the system was taken. At 0844 hours "B" Boric Acid Transfer Pump was started to recirculate the Boron Injection Tank with "B" Boric Acid Tank. At 0853 hours, "B" Boric Acid Pump was noted to have stopped. The thermal overload at the breaker was checked but was found to be in "reset" position. The pump had stopped due to the actuation of the strap-on thermal output switch. "A" Boric Acid Transfer Pump was running at this time and was thus proven operable. "B" pump was removed from service, disassembled, and inspected. No defective parts or abnormal conditions could be

found. The pump was reassembled, installed, test operated, and returned to service at 1632, and was run for 53 minutes recirculating the Boron Injection Tank with satisfactory results.

On February 26, 1975, at 0717 hours, "B" Boric Acid Transfer Pump was started to recirculate "B" Boric Acid Tank. At 0758 hours, "B" pump again stopped due to high motor temperature. "A" Boric Acid Transfer Pump was running at this time. An investigation was conducted throughout the morning including checking pump motor current, rotation, discharge pressure, noise level, and valve lineup. During this period the pump again stopped on high temperature while a test run was in progress recirculating the Boron Injection Tank. "B" pump suction valve was disassembled and inspected and was in good condition. "B" pump was replaced with a pump from stock, and a successful test run was made by recirculating the Boron Injection Tank from 1930 to 2138 at which time the pump was returned to service. It has operated satisfactorily since.

As a further check to find the cause, on February 28, 1975, "B" pump was run first to recirculate "A" Boric Acid Tank (not a normal lineup) and then to recirculate "B" Boric Acid Tank (a normal lineup). This test would identify the recirculation path valves normally associated with "B" pump as a possible cause. The pump discharge pressure, suction pressure, and temperature rise as measured by the heat tracing recorder were essentially the same in both lineups, indicating that valves were not the cause.

7. Designation of Apparent Cause of the Incident

Thorough inspection of the pump, motor, and the pump suction valve, and the tests described in Section 6 above have revealed no identifiable cause for the incident.

8. Analysis of Occurrence

In each case, upon determining that "B" Boric Acid Transfer Pump was inoperable, "A" Boric Acid Transfer Pump was running and its operability

was thus verified. Plant safety, therefore, was not jeopardized, and no limiting condition for operation was violated. No personnel injuries, undue exposure, releases of radioactive materials, or threat to the public health and safety resulted from this occurrence.

9. Corrective Action

Following the failure on February 25, 1975, the pump was removed, disassembled, and visually inspected. The pump bearings, circulation filter, circulation tube, and bearing housings were inspected and were found in good condition. The pump motor was meggered and bridged with normal results. Valve lineups were checked and were correct. Heat tracing displayed no abnormalities.

Following the failure on February 26, 1975, the pump was left in place until additional checks were made. The valve lineups were checked and Valve CVC-379, "B" Pump Discharge Valve, was found about one-half open. It was opened completely and is not considered a cause since the pump had tripped on February 25, 1975 and during a test run on February 26, 1975 when this valve was fully open.

The pump was test run to check motor run current (normal at 24 amps), rotation (correct), discharge pressure (normal at approximately 110 psig), noise level (normal), and temperature with a contact pyrometer. The pyrometer readings were in reasonable agreement with the heat trace recorders with the hottest temperatures at the middle of the motor on the stator casing. The pump casing itself was much cooler than the motor.

After the above tests, the pump suction valve was disassembled and inspected and was in good condition. "B" Boric Acid Transfer Pump was then replaced with a pump from stock. The removed pump was again disassembled and inspected. The bearings, circulation tube, and bearing housings were again found in good condition. The circulation filter was removed from the pump for close inspection and was in good condition.

Chempump technical representatives were contacted by telephone and given the details of this incident. They could offer no satisfactory explanation.

The GE-20K stub shaft modification referred to in previous reports is in progress, and these shafts will be put into use when modification and testing are complete.

10. Failure Data

August 15, 1973, Crane Chempump Model G.E. 20K broken shaft near keyway.
December 4, 1973, Crane Chempump Model G.E. 20K broken shaft near keyway.
March 20, 1974, Crane Chempump Model G.E. 20K broken shaft near keyway.
August 8, 1974, Crane Chempump Model G.E. 20K broken shaft near keyway.
August 26, 1974, Crane Chempump Model G.E. 20K broken shaft at rotor (pump end).
December 4, 1974, Crane Chempump Model G.E. 20K broken shaft at rotor (pump end).
January 14, 1975, Crane Chempump Model G.E. 20K broken shaft near keyway.