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FROM: Carolina Power & Light Co. Raleigh, N.C. E.E. Utley			DATE OF DOC 1-13-76	DATE REC'D 1-15-76	LTR XXX	TWX	RPT	OTHER
TO: N.C. Moseley			ORIG None	CC 31	OTHER	SENT AEC PDR SENT LOCAL PDR		
CLASS	UNCLASS XXX	PROP INFO	INPUT	NO CYS REC'D 31		DOCKET NO: 50-261		

DESCRIPTION:
Letter trans the following.....

ENCLOSURES:
Abnormal Occurrence # 76-1, on 1-2-76,
Concerning Failure of "B" Boric Acid
transfer Pump.....

(31 Copies Received)

PLANT NAME: H.B. Robinson # 2

FOR ACTION/INFORMATION

SAB 1-16-76

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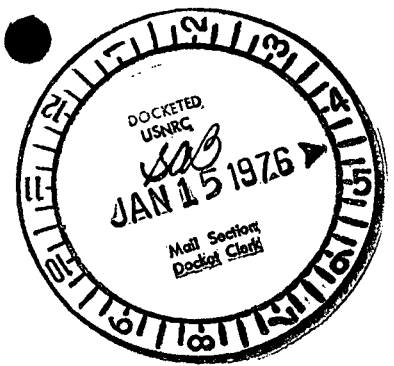


Carolina Power & Light Company

January 13, 1976

Regulatory

File Cy



FILE NO: NG-3513 (R)

SERIAL NO: NG-76-040

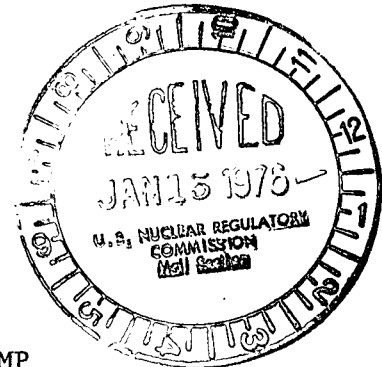
Mr. Norman C. Moseley, Director
U. S. Nuclear Regulatory Commission
Region II, Suite 818
230 Peachtree Street, N.W.
Atlanta, Georgia 30303

Dear Mr. Moseley:

H. B. ROBINSON UNIT NO. 2

DOCKET 50-261

FAILURE OF "B" BORIC ACID TRANSFER PUMP



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,

E. E. Utley
E. E. Utley
Vice-President
Bulk Power Supply

CSB:ka

cc: Mr. D. C. Knuth
Mr. W. G. McDonald

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ABNORMAL OCCURRENCE

1. Report No: 50-261/76-1
- 2a. Report Date: January 5, 1976
- 2b. Occurrence Date: January 2, 1976
3. Facility: H. B. Robinson
Hartsville, South Carolina 29550

4. Identification of Occurrence

Failure of "B" Boric Acid Transfer Pump constituted an abnormal occurrence in that it resulted in the failure of one component of an engineered safety feature that caused or threatened to cause the system to be incapable of performing its intended function. This is defined as an abnormal occurrence per paragraph 1.8.d of facility Technical Specifications.

5. Conditions Prior to Occurrence

The plant was operating at 100% power with 701 MWe net. "B" Boric Acid Storage Tank was being recirculated using "B" pump. All other systems were normal. "A" pump was operating at the time of the occurrence.

6. Description of Occurrence

At 0636 hours on January 2, 1976 recirculation of "B" Boric Acid Storage Tank was commenced using "B" Boric Acid Transfer Pump. At 0701 hours the operator noticed that the RTGB OFF light was illuminated for "B" pump. Attempts to restart the pump failed, and it was declared out of service. "A" Boric Acid Transfer Pump was operable and running at the time of the occurrence.

7. Designation of Apparent Cause of Occurrence

An inspection of the pump internals revealed a damaged rotor can which was caused by failure of the rear graphite bearing. Fragments of this bearing apparently entered the area between the rotor and stator, cutting the thin stainless can allowing boric acid solution to enter and short out the rotor.

8. Analysis of Occurrence

At the time of the failure and during the period when "B" Transfer Pump was inoperable, "A" Boric Acid Transfer Pump was operable and capable of providing the necessary supply of boric acid for any normal or emergency condition. At no time was there any threat to the public health and safety. The failed pump was returned to service within the twenty-four hour inoperative period allowed by facility Technical Specifications.

9. Corrective Action

"B" Boric Acid Transfer Pump was replaced with a spare pump and returned to service at 2031 hours on January 2, 1976.

The pump failure was attributed to the rear bearing failure. There was no indication of excessive bearing wear nor was the failure anticipated based upon past experience of bearing lifetime. The pump that failed had been rebuilt at the plant, and the replacement components, including bearings were inspected prior to assembling the pump. No bearing discrepancies were noted at that time. Therefore, it is concluded that this failure was of an isolated nature and may have resulted from an internal bearing flaw. In view of this, there has been no corrective action formulated for prevention of the reoccurrence.

The subject pump was a GE-20K Chempump with the modified stub shaft. The "stub shafting" of this pump was an effort to reduce the stress riser in the area near the keyway. It had been in service since July of 1975 and no problems have been experienced with shaft breakage on this pump. This failure was not related in any manner to the modified shaft. An inspection of the stub shaft showed it to be in good condition.

10. Failure Data

Manufacturer: Crane Chempump
Series: G
Model: GE-20K

The following is a list of previous failures involving bearings:

September 26, 1974 "B" Pump failed due to broken shaft, front bearing exhibited excessive wear.

December 4, 1974 "B" Pump failed due to broken shaft, front bearing exhibited excessive wear.

May 21, 1975 "B" Pump failed due to broken shaft, front bearing exhibited wear.