

AEC DISTRIBUTION FOR PART 50 DOCKET MATERIAL  
(TEMPORARY FORM)

CONTROL NO: 1240

FILE: INCIDENT REPORT

FROM: Carolina Power & Light Co Raleigh, N.C. E.E. Utley		DATE OF DOC 1-30-75	DATE REC'D 2-3-75	LTR xxxx	TWX	RPT	OTHER
TO: Mr. Norman C. Moselgy		ORIG 2-signed	CC	OTHER	SENT AEC PDR <u>xxxx</u> SENT LOCAL PDR <u>xxxx</u>		
CLASS	UNCLASS xxxxxxx	PROP INFO	INPUT	NO CYS REC'D 1	DOCKET NO: 50-261		

DESCRIPTION:

Ltr trans the following:

ENCLOSURES:

Abnormal Occurrence #75-2 on 1-20-75 concerning failure of pressurizer level channel II to generate a reactor trip signal.....

PLANT NAME: H.B. Robinson #2

FOR ACTION/INFORMATION

2-3-75 JGB

BUTLER (S)	SCHWENCER (S)	ZIEMANN (S)	REGAN (E)
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INTERNAL DISTRIBUTION

<u>REG FILE</u>	<u>TECH REVIEW</u>	<u>DENTON</u>	<u>LIC. ASST.</u>	<u>A/T IND</u>
✓ AEC PDR	✓ SCHROEDER	GRIMES	DIGGS (S)	BRAITMAN
✓ OGC, ROOM P-506-A	✓ MACCARRY	CAMMILL	GEARIN (S)	SALTZMAN
✓ MUNTZING/STAFF	✓ KNIGHT	✓ KASTNER	GOULBOURNE (S)	B. HURT
✓ CASE	✓ PAWLICKI	BALLARD	KREUTZER (E)	
GIAMBUSSO	✓ SHAO	SPANGLER	LEE (S)	<u>PLANS</u>
BOYD	✓ STELLO		MAIGRET (S)	MCDONALD
MOORE (S) (BWR)	✓ HOUSTON	<u>ENVIRO</u>	REED (E)	CHAPMAN
DEYOUNG (S) (PWR)	✓ NOVAK	MULLER	SERVICE (S)	DUBE w/input
SKOVHOLT (S)	✓ CROSS	DICKER	SHEPPARD (S)	E. COUPE
GOLLER (S)	✓ PIPOLITO	KNIGHTON	SLATER (E)	✓ R. Hartfield (2)
P. COLLINS	TEDESCO	YOUNGBLOOD	SMITH (S)	✓ KLECKER
DENISE	✓ LONG	REGAN	✓ TEETS (S)	✓ F. WILLIAMS
<u>REG OPR</u>	✓ LAINAS	PROJECT LDR	WILLIAMS (E)	
<u>FILE &amp; REGION</u>	✓ BENAROYA		WILSON (S)	
✓ T.R. WILSON	✓ STEELE	<u>HARLESS</u>	INGRAM (S)	
	✓ VOLIMER			

EXTERNAL DISTRIBUTION

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1-NSIC (BUCHANAN)	1-CONSULTANTS	1-G. ULRIKSON, ORNL
1-ASLB	NEWMARK/BLUME/AGBABIAN	1-AGMED (RUTH GUSSMAN)
1-NEWTON ANDERSON		RM B-127 G.T.
5-ACRS SENT TO LIC. ASST. <i>TEETS</i>		1-J. RUNKLES, RM E-201 G.T.



Carolina Power & Light Company

50-261

January 30, 1975

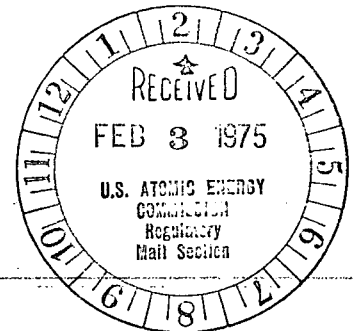
File: NG-3513 (R)

Serial: NG-75-140

Regulatory

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Washington, D. C. 20545



Dear Sirs:

H. B. ROBINSON UNIT NO. 2  
LICENSE NO. DPR-23  
PRESSURIZER LEVEL CHANNEL NUMBER II

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  
Vice-President  
Bulk Power Supply

JBM:TAW:mvp  
Attachment

cc: Messrs. N. B. Bessac  
W. E. Graham  
P. W. Howe  
J. B. McGirt  
D. B. Waters



## ABNORMAL OCCURRENCE REPORT

1. Report No. 50-261/75-2
- 2a. Report Date January 28, 1975
- 2b. Occurrence Date January 20, 1975
3. Facility H. B. Robinson Unit No. 2  
Hartsville, South Carolina 29550

4. Identification of Occurrence

Failure of pressurizer level channel II to generate a reactor trip signal or a safety injection signal upon insertion of simulated high and low levels.

5. Conditions Prior to Occurrence

The reactor was at 100% power with all parameters normal. A periodic test, P.T. 5.3 "Pressurizer Water Level Protection Channel Testing - Protection Channel Set II," was in progress.

6. Description of Occurrence

At 0950 on January 20, 1975, comparator LC-460A was removed from service for the performance of P.T. 5.3. In the process of conducting the P.T., an input signal for high pressurizer level was inserted. The test signal of 4.64 volts did not result in a high level trip function. The test signal was increased to 5 volts, with no trip. A low level safety injection signal equivalent to 1.24 volts was then injected into the comparator with no safety injection function resulting. The test signal was then reduced to 1 volt with no response. Therefore, at 0956 it was determined that comparator LC460A had malfunctioned. The comparator was immediately removed and a replacement comparator calibrated and installed. Channel II was returned to service at 1050 hours January 20, 1975.

7. Designation of the Apparent Cause of the Occurrence

Bench testing of the defective comparator resulted in satisfactory operation. However, reinsertion of the comparator into the control loop on January 23, 1975, resulted in a test failure.

Investigation revealed that filter capacitor C.3 had malfunctioned causing the +15 D.C. power supply to see an increased noise level.

This noise level combined with loop noise of this channel caused the comparator to be inoperative in the loop but functioned on the test bench.

A new 50  $\mu$ f filter capacitor was placed in this comparator on January 23, 1975.

The comparator was then checked in the loop satisfactorily.

8. Analysis of Occurrence

To obtain a reactor trip from high pressurizer level, inputs from two of the three channels are required. Per table 3.5-2 of the Technical Specifications the minimum operable channels for this function is two with one degree of redundancy required. These conditions were met from the time the periodic test was commenced in that comparators 459A and 461A were functional, and the bistables associated with LC460A (BS 460-A1 and BS 460-A2 - high level reactor trip and low level safety injection respectively) were placed in a tripped mode prior to testing the channel. Tripping of the bistables provided one of the two required inputs to initiate a reactor trip and thus, by definition, redundancy and operability requirements were met.

To obtain a safety injection signal due to low pressurizer level coincident with low pressurizer pressure only one of three channels is required. Table 3.5-3 of the Technical Specifications requires a minimum of two operable channels and one degree of redundancy for this function. The operability of comparators 459A and 461A in combination with the LC460A tripped bistable met these requirements.

Therefore from the initiation of the periodic test, prior to any knowledge of the malfunctioned comparator, until completion of repairs all minimum channel availabilities were met and no limiting condition of operation requiring operator action existed. Likewise there were no injuries, exposures, releases of radioactive materials, or other potential threats to the public health and safety involved with this occurrence.

9. Corrective Action

A new comparator was calibrated and placed in service at 1050 hours, January 20, 1975.

The faulty comparator was bench tested satisfactorily, but reinsertion in its control loop again produced failure. The comparator was again removed from the loop and a 50  $\mu$ f filter capacitor replaced. Reinsertion in the loop resulted in satisfactory operation. The replacement comparator was placed back into normal service, and the repaired comparator will be rechecked and placed back in stock.

10. Failure Data

A previous occurrence, October 3, 1974, resulted from failure of a 50  $\mu$ f capacitor. This was reported per abnormal occurrence report 74-22 and related the failure of overtemperature and overpower comparator TC-412C.