

AEC DISTRIBUTION FOR PART 50 DOCKET MATERIAL
(TEMPORARY FORM)

CONTROL NO: 132

FILE: _____

FROM: Carolina Power & Light Co. Raleigh, N.C. 27602 E.E. Utley			DATE OF DOC 1-3-75	DATE REC'D 1-6-75	LTR X	TWX	RPT	OTHER
TO: Mr. Norman C. Moseley			ORIG 2 signed	CC 37	OTHER	SENT AEC PDR <u>XX</u> SENT LOCAL PDR <u>XX</u>		
CLASS	UNCLASS XXXX	PROP INFO	INPUT	NO CYS REC'D 39		DOCKET NO: 50-261		
DESCRIPTION: Ltr trans the following:				ENCLOSURES: Abnormal Occurrence AO-50-261/ 74-32 on 12-25-74 involving <u>KX</u> failure to conduct incore detector traverses following control rod motion.... (39 cys encl rec'd)				
PLANT NAME: H.B. Robinson Unit 2								

FOR ACTION/INFORMATION DHL 1-7-75

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>✓</u> LEAR (L) W/4 Copies
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>✓</u> REG FILE	TECH REVIEW	DENTON	LIC ASST	A/T IND
<u>✓</u> AEC PDR	<u>✓</u> SCHROEDER	GRIMES	DIGGS (L)	BRAITMAN
<u>✓</u> OGC, ROOM P-506A	<u>✓</u> MACCARY	<u>✓</u> GAMMILL	GEARIN (L)	SALTZMAN
<u>✓</u> MUNTZING, STAFF	<u>✓</u> KNIGHT	KASTNER	GOULBOURNE (L)	B. HURT
<u>✓</u> CASE	<u>✓</u> PAWLICKI	BALLARD	KREUTZER (E)	PLANS
GIAMBUSSO	<u>✓</u> SHAO	SPANGLER	LEE (L)	MCDONALD
BOYD	<u>✓</u> STELLO	ENVIRO	MAIGRET (L)	CHAPMAN
MOORE (L) (BWR)	<u>✓</u> HOUSTON	MULLER	REED (E)	DUBE w/input
DEYOUNG (L) (PWR)	<u>✓</u> NOVAK	DICKER	SERVICE (L)	E. COUPE
SKOVHOLT (L)	<u>✓</u> ROSS	KNIGHTON	SHEPPARD (L)	
GOLLER (L)	<u>✓</u> PPOLITO	YOUNGBLOOD	SLATER (E)	<u>✓</u> THOMPSON (2)
P. COLLINS	<u>✓</u> TEDESCO	REGAN	SMITH (L)	<u>✓</u> KLECKER
DENISE	<u>✓</u> LONG	PROJECT LDR	TEETS (L)	EISENHUT
REG OPR	<u>✓</u> LAINAS	HARLESS	WILLIAMS (E)	
<u>✓</u> FILE & REGION (2)	<u>✓</u> BENAROYA		WILSON (L)	
<u>✓</u> MORRIS	<u>✓</u> WOLIMER			
STEELE				

EXTERNAL DISTRIBUTION

<u>✓</u> - LOCAL PDR <u>Hartville, S.C.</u>	<u>✓</u> - NATIONAL LABS	1 - PDR SAN/LA/NY
<u>✓</u> - TIC (ASERNATHY) (1)(2)(10)	1 - ASLSP/IE W Bldg, Rm 5291	1 - BROOKHAVEN NAT LAB
<u>✓</u> - NSIC (BUCHANAN)	1 - W. PENNINGTON, Rm E-201 GT	1 - G. ULRIKSON, ORNL
1 - ASLB	1 - B&M S. WINEBROOK, Rm E-201 GT	1 - AGMED (RUTH GLESSMAN)
1 - Newton Anderson	1 - CONSULTANTS	Rm B-127 GT
<u>✓</u> - ACRS XXXXXXXX SENT TO	NEWMARK, BLUME, AGBABIAN	1 - R. D. MUELLER, Rm E-100
<u>✓</u> LIC. ASST. S. TEETS 1-7-75		CT



Carolina Power & Light Company

January 3, 1975

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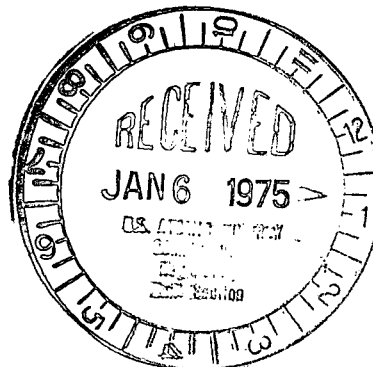
1975

File: NG-3513 (R)

Serial: NG-75-010

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



Mr. Donald Knuth, Director
Directorate of Regulatory Operations
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dear Sirs:

H. B. ROBINSON UNIT NO. 2
LICENSE NO. DPR-23
FAILURE TO CONDUCT INCORE DETECTOR
TRAVERSES FOLLOWING CONTROL ROD MOTION

In accordance with Section 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

DBW:bn

Attachment

cc: Messrs. N. B. Bessac
J. B. McGirt
D. V. Menscer
D. B. Waters
W. E. Graham

DL

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ABNORMAL OCCURRENCE REPORT

1. Report No. 50-261/74-32 1-3-75
- 2a. Report Date December 31, 1974
- 2b. Occurrence Date December 25, 1974
3. Facility H. B. Robinson Unit No. 2
Hartsville, South Carolina
4. Identification of Occurrence

The occurrence consisted of the failure to perform incore detector traverses at 10-minute and subsequent intervals following control rod motion. This constitutes an abnormal occurrence as defined in Technical Specification 1.8.g regarding inadequacy of implementation of procedural controls.

In this case, the inadequacy consisted of a failure to properly execute procedures regarding the Axial Power Distribution Monitoring System (APDMS) resulting in a violation of Specification 4.11.2 of the proposed Specifications to meet the Appendix K ECCS Analysis requirements.

5. Conditions Prior to Occurrence

The plant was recovering from a runback that occurred at approximately 0135 hours on December 25, 1974. The power level was approaching 100% with all systems normal.

6. Description of Occurrence

An APDMS scan sequence was initiated by control rod motion at 0229 hours on December 25, 1974. The next programmed scan occurred at 0239 but was not completed due to jamming of "C" incore detector. The plant control operator was aware that the core peaking factor was well within its limit prior to the runback, and in his preoccupation with the runback operational maneuvers he did not notice that the APDMS automatic scan sequence was interrupted. It was at 0400 with the plant stabilized at 100% power when the

alarm light on the APDMS panel was noticed. The problem was investigated and "C" detector was cleared. A manual scan was then conducted at 0418 and several scans initiated until 0540 to verify "C" detector operability. The scan sequencers were then rezeroed. However, after rezeroing it is necessary to initiate a manual scan to restart the sequence, otherwise the sequencer remains in a non-scan mode unless energized by control rod motion. The required manual scan was not initiated and no automatic scans were obtained until 1540 when the relieving shift foreman realized that no APDMS data had been obtained for a 10-hour period. He initiated a manual scan at 1541. The automatic scanning then operated properly. It was assumed at that time that the failure to obtain automatic scanning was due to the failure of a scan sequencer. Over the occurrence period the 10, 30, 60, 120, 240, 360, and 480 minute traverses required following control rod motion were not obtained.

7. Designation of Apparent Cause of Occurrence

The cause of the occurrence was operator error in failure to detect the APDMS automatic scan interruption and to take appropriate alternate action of initiating manual scans or utilizing constant axial offset control procedures. Initially it was assumed that an APDMS scan sequencer had failed resulting in the failure of automatic scan. However, after further investigation maintenance personnel found no malfunction of the sequencer, and it was determined that the improper zeroing of the sequencer was the problem. The contributing causes of the operator error were failure of "C" detector to complete a scan, preoccupation with operational run-back procedures, and insufficient corrective action taken in freeing the jammed detector. The jammed detector was a result of a partial failure of the helical wrap of the detector drive cable. The wrap ultimately failed on December 29, 1974.

8. Analysis of Occurrence

The core suffered a runback of approximately 20% just prior to the occurrence. The runback was of short duration and had little influence on the core power shape and core stability during the occurrence. Manual scans run during the earlier portion of the violation period showed the measured peaking factors to be well below the limits. Later in the 10-hour period, when no core surveillance was conducted, the axial power shape was normal with respect to axial offset, and there is no reason to suspect that the peaking factors were violated during this period. If a more severe power shape had been encountered, rod movement initiated by the operator would have triggered the scan sequence and thus supplied him with the necessary data. An alarm on the panel would have alerted him to the scan.

9. Corrective Action

Once the violation was apparent, immediate action involved initiation of the scan sequence. To prevent further occurrence of this type, the operators have been instructed to monitor the APDMS output more closely and to periodically initiate manual scans. The frequency for these manual scans are specified at six-hour intervals, starting at 0230 each day. These manual traverses have been added to the APDMS normal surveillance data sheet and a section has been added to this sheet requiring the shift formman's review and signature. Also the procedure involving incore surveillance of $F_Z S(Z)$ is being revised to define in more detail the alignment method for rezeroing the scan sequencer.

10. Failure Data

The failure of the APDMS to automatically scan was in itself not a violation of the proposed Technical Specification. The violation resulted from the failure of the operator to properly follow the instructions given in the procedure on incore surveillance of $F_Z S(Z)$ and to take proper alternate

action following the APDMS failure. No previous failure of this type has occurred.