

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8804280572 DOC.DATE: 88/04/21 NOTARIZED: NO DOCKET #
 FACIL:50-261 H.B. Robinson Plant, Unit 2, Carolina Power & Light C 05000261
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 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 88-007-00:on 880218,containment fan cooler failed to
 close on safeguard sequence during special test.

W/8 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 4
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

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	AEOD/DSP/ROAB	2 2	AEOD/DSP/TPAB	1 1
	ARM/DCTS/DAB	1 1	DEDRO	1 1
	NRR/DEST/ADS 7E	1 0	NRR/DEST/CEB 8H	1 1
	NRR/DEST/ESB 8D	1 1	NRR/DEST/ICSB 7	1 1
	NRR/DEST/MEB 9H	1 1	NRR/DEST/MTB 9H	1 1
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	NRR/DEST/SGB 8D	1 1	NRR/DLPQ/HFB 10	1 1
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	NRR/DREP/RAB 10	1 1	NRR/DREP/RPB 10	2 2
	NRR/DRIS/SIB 9A	1 1	NRR/PMAS/ILRB12	1 1
	REG FILE 02	1 1	RES TELFORD,J	1 1
	RES/DE/EIB	1 1	RES/DRPS DIR	1 1
	RGN2 FILE 01	1 1		
EXTERNAL:	EG&G GROH,M	4 4	FORD BLDG HOY,A	1 1
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	NRC PDR	1 1	NSIC HARRIS,J	1 1
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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2	DOCKET NUMBER (2) 0 5 0 0 0 2 6 1	PAGE (3) 1 OF 0 3
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TITLE (4)
HVH-2 BREAKER FAILED TO CLOSE ON SAFEGUARD SEQUENCE DURING PERFORMANCE OF SPECIAL TEST

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)
0 2	1 8	8 8	8 8	0 0 7	0 0 0	0 4	2 1	8 8			0 5 0 0 0
											0 5 0 0 0

OPERATING MODE (9) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
	20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)			
POWER LEVEL (10) 0 0 0	20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)			
	20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		X OTHER (Specify in Abstract below and in Text, NRC Form 366A)			
	20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		information only			
	20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)					
	20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)					

LICENSEE CONTACT FOR THIS LER (12)									
NAME Freddie Legette SRO - Regulatory Compliance									
TELEPHONE NUMBER 8 0 3 3 8 3 - 1 2 5 3									

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPD		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPD	
X	B K	7 4	W 1 2 0	Y							

SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)										X NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

This LER is submitted to provide information of potential interest to the industry. On February 12, 1988, during the performance of a special test while in cold shutdown, a safety injection signal was initiated. Containment Fan Cooler (HVH-2) failed to start during the safeguard sequence. Investigation of the HVH-2 supply breaker revealed that the DB-50 breaker alarm switch operated erratically. The alarm switch was replaced and the breaker tested satisfactorily. Subsequent investigation revealed intermittent high resistance on 11 additional separate alarm switches on emergency bus switchgear. These alarm switches operated the associated breaker during the special test but were replaced due to the inconsistent resistance reading. The high resistance was apparently caused by accumulation of oxidation on the secondary contacts in the alarm switches due to inadequate periodic inspections/cleaning of the alarm switch contacts as a result of the lack of specific guidance in the procedures used to perform the refueling interval inspection. The preventive maintenance procedure is being revised to provide more specific guidance for the alarm switch check on DB-type breakers.

8804280572 880421
PDR ADOCK 05000261
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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2	0 5 0 0 0 2 6 1	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	0 2	OF	0 3
		8 8	— 0 0 7	— 0 0			

TEXT (If more space is required, use additional NRC Form 366A's) (17)

I. DESCRIPTION OF EVENT

While in cold shutdown, February 12, 1988, at 1526 hours, during performance of a special test,¹ Containment Fan Cooler (HVFH-2) supply breaker failed to close during the safeguard sequence. Based on this event, an investigation team was assembled to evaluate possible causes for the containment fan cooler breaker failure to close. Through detailed evaluation, on February 17, 1988, it was concluded that the alarm switch² located in the closing circuit had failed. This alarm switch failure prevented the fan cooler breaker from closing.

Subsequent checks of the alarm switches on other emergency switchgear supply breakers revealed 11 additional switches that demonstrated intermittent high resistance reading. The alarm switch would have operated its associated breaker but the high resistance readings did indicate a potential for an additional breaker failure. The alarm switches in question were replaced.

II. CAUSE OF EVENT

Inadequate periodic inspection/cleaning of the alarm switch apparently allowed oxidation to build up on the secondary contacts of the alarm switch.³ This caused the alarm switch to fail, thus preventing the containment fan cooler breaker from closing. The purpose of the alarm switch is to prevent the breaker from closing on an overcurrent fault. The switch does not provide an alarm function. A separate alarm switch is provided with an alarm feature. With oxidation buildup on the contacts, the circuit was open, thus preventing the closing coil from being energized. Without the closing coil being energized, the breaker will not close electrically.

III. ANALYSIS OF EVENT

- A. This issue was reviewed for reportability under 10CFR21. Based on this review, it was determined not to be reportable under 10CFR21 because failure of the alarm switch was caused by inadequate periodic preventive maintenance instruction. This issue is reported to the NRC for information only.

¹Special Procedure No. 796, Revision 0: Verification of Safety Injection Pump Availability and Safeguards Sequencer Functions.

²EIIS Codes: System - BK; Component - 74; Manufacturer - W120

³Cause Code: X

NRC Form 366A
(9-83)

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2	0 5 0 0 0 2 6 1	8 8	- 0 0 7	- 0 0	0 3	OF	0 3

TEXT (If more space is required, use additional NRC Form 366A's) (17)

B. Safety Assessment

Failure of one of four containment fan cooler units presents no significant hazard in cold shutdown. With the unit in cold shutdown (i.e., reactor subcritical and RCS temperature <200°F), Plant Technical Specifications do not require any HVH unit to be operable.⁴ If the RCS temperature was >200°F or at power and a design basis accident occurred, the consequences of a failure of one HVH unit would be mitigated because any of the following combinations of equipment would provide sufficient heat removal capability to maintain the post-accident containment pressure below the design value: 1) Both containment spray pumps, 2) two of three remaining containment cooling units and one containment spray pump. There have been no previous experiences with the HVH units failure to start. HVH units are started and stopped on a monthly basis while performing an operational surveillance test. These tests have been routinely performed without incident.

IV. CORRECTIVE ACTION

A. Short Term

After the cause was determined, the alarm switch on HVH-2 was replaced and the alarm switches on all other emergency switchgear breakers were checked. As a result of the inspection, 11 other breaker alarm switches were replaced.

B. Long Term

The preventive maintenance procedure for the breaker is being revised to provide more specific guidance for electrical checks on DB-type breakers to preclude the occurrence of a similar condition.

V. ADDITIONAL INFORMATION

A. Failed Component: Containment Fan Cooler (HVH-2) supply breaker alarm switch Type PF 8#-1625 900

B. Previous Similar Events

None.

⁴H. B. Robinson Unit No. 2 is a Westinghouse pressurized water reactor nuclear power plant in commercial operation since March 1971.



Carolina Power & Light Company

ROBINSON NUCLEAR PROJECT DEPARTMENT
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APR 21 1988

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Serial: RNP/88-1866
(10 CFR 50.73)

United States Nuclear Regulatory Commission
Attn: Document Control Desk
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H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261
LICENSE NO. DPR-23
LICENSEE EVENT REPORT 88-007-00

Gentlemen:

The enclosed Licensee Event Report (LER) is submitted in accordance with
10 CFR 50.73 and NUREG-1022 including Supplements No. 1 and 2.

Very truly yours,

R. E. Morgan
General Manager
H. B. Robinson S. E. Plant

FLL:lko

Enclosure

cc: Dr. J. N. Grace
Mr. L. W. Garner
INPO

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