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ACCESSION NBR:8803180193 DOC.DATE: 88/03/11 NOTARIZED: NO DOCKET #
 FACIL:50-261 H.B. Robinson Plant, Unit 2, Carolina Power & Light C 05000261
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SUBJECT: LER 88-005-00:on 880213,inadvertent safety injection on high
 stream line delta "P" during maint test.

W/8 ltr.

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 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

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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 4		
TITLE (4) INADVERTENT SAFETY INJECTION ON HIGH STEAMLINE DELTA "P" DURING MAINTENANCE 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	3	8	8	8	8	8	0	0	5	0	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)													
POWER LEVEL (10) 0 0 0		20.402(b)				20.405(c)				X 50.73(a)(2)(iv)		73.71(b)				
		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)		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)						
		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 Don Sayre, Senior Specialist - Regulatory Compliance										TELEPHONE NUMBER 8 0 3 3 8 3 - 1 2 4 2						
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC						
X	EIK	IDIG	FLO110	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)

While in stable, cold shutdown February 12, 1988, the Plant received a spurious high steam line differential pressure Safety Injection (SI) signal at 2352 hours. The signal, procedurally blocked during cooldown, is automatically unblocked when Pressurizer pressure increases above 2000 psig. On this date, licensee Maintenance personnel were installing simulation prior to a surveillance test. Normal Pressurizer pressure was simulated, (>2000 psig), which unblocked the high steam line differential pressure signal normally present during cold shutdown conditions. The SI sequence started both Safeguards Trains and equipment responded as designed although the "A" emergency diesel generator tripped on apparent overspeed. There was no impact on safety. No SI was required. Both emergency busses were powered by offsite power and the "B" emergency diesel generator was available. The NRC was notified at 0215, February 13, pursuant to 10CFR50.72(b)(2)(ii). The SI was cleared. Plant systems were returned to proper configurations for cold shutdown. The test was rerun, successfully. The maintenance procedure will be revised to preclude recurrence. The apparent overspeed trip of the diesel generator is being investigated to determine root cause. This LER is submitted pursuant to 10CFR50.73(a)(2)(iv).

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PDR ADOCK 05000261
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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 S. E. PLANT, UNIT 2	0 5 0 0 0 2 6 1	8 8	0 0 5	0 0	0 2	OF	0 4

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

I. DESCRIPTION OF EVENT

While in a stable, cold shutdown condition, the Plant received a spurious Safety Injection (SI) signal at 2352 hours, Friday, February 12, 1988.^{1,2} The signal was initiated by a high steam line differential pressure for the three steam generators. This is a normal shutdown signal which is blocked during Plant cooldown, with the electronic block automatically overridden when Pressurizer pressure increases above 2000 psig. In addition, SI actuation is selectively disabled when the reactor coolant average temperature is less than 200 degrees Fahrenheit, to prevent an inadvertent SI. On this date, however, the signal was not disabled, in support of an unrelated component acceptance test for a modification to the "B" SI pump start logic.

The NRC Operations Center was notified by the licensee of a nonemergency four-hour reportable event pursuant to 10CFR50.72(b)(2)(ii) via the Emergency Notification System at 0215 hours, Saturday, February 13, 1988.

Licensee Maintenance personnel were preparing for performance of a periodic surveillance test procedure at the time. This required installing simulation of normal Pressurizer pressure to clear overtemperature differential temperature trip signals.³ In the process of simulating Pressurizer pressure signals, the SI signal was initiated by crossing 2000 psig and automatically unblocking the high steam line differential pressure signal. The SI sequence for both Safeguards Trains started, including a reactor trip signal, the starting of both emergency diesel generators, main feedwater isolation, Phase A containment isolation and isolation valve seal water actuation, containment ventilation isolation, and Control Room intake duct isolation. Safeguards equipment responded as designed. The "A" emergency diesel generator, however, tripped on apparent overspeed.⁴ Offsite power was available throughout the event.

¹H. B. Robinson Steam Electric Plant, Unit No. 2 is a 740MWe Westinghouse Pressurized Water Reactor power plant in commercial operation since March 1971.

²Safety Injection signal EIIS Codes: System - JE; Component - Not available; Manufacturer - W120.

³Plant Operating Manual Maintenance Surveillance Test procedure MST-003, Revision 10, TAVG AND DELTA-T PROTECTION CHANNEL TESTING was being used to prepare for performing MST-011, Revision 12, REACTOR PROTECTION LOGIC TRAIN "A" AND "B" AT "O" POWER SAFEGUARD RELAY RACK TRAIN "A" AND "B".

⁴Emergency diesel generator EIIS Codes: System - EK; Component - DG; Manufacturer - F010.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

II. CAUSE OF EVENT

The spurious SI signal was caused by a procedure deficiency. The Maintenance surveillance test procedure lacked sufficient guidance for preventing an inadvertent SI during the simulation of normal Pressurizer pressure signals with SI actuation enabled. The procedure should have provided instruction to assure that potential SI initiating signals were properly blocked or disabled prior to the portion of the test for simulating Pressurizer pressure above 2000 psig.

The root cause of the apparent overspeed trip of the "A" emergency diesel generator is under investigation.

III. ANALYSIS OF EVENT

The spurious SI while in a stable, cold shutdown condition was of no impact to Plant safety. The "B" emergency diesel generator and the required Safeguards equipment performed as designed. Offsite power was available and being supplied to both emergency busses throughout the event.

IV. CORRECTIVE ACTIONS

Licensed operators cleared the SI immediately and restored Plant systems to the proper configuration for a stable, cold shutdown condition.

The normal Pressurizer pressure simulated signals were removed by licensee Maintenance personnel following the SI. Later, the pressure was resimulated and the surveillance test procedure performed successfully, with potential SI initiations properly blocked or disabled as appropriate.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

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

The Maintenance surveillance test procedure will be revised to assure inadvertent SI initiation is precluded during the simulation of normal Pressurizer pressure signals.

The "A" emergency diesel generator was removed from service by the licensee pending resolution of the apparent overspeed trip condition. An investigation to determine root cause is currently in progress. The apparent overspeed trip is being handled separate from this event by the licensee.

V. ADDITIONAL INFORMATION

A. Failed Component Identification

The "A" emergency diesel generator is a Fairbanks-Morse Model 38TD8 1/8, 12-cylinder, opposed piston, fuel injected, turbocharged, air start 12,442 cubic inch displacement engine rated at 3600 horsepower, with a 2500 kilowatt 480 volt AC generator.

B. Previous Similar Events

On January 30, 1986, during Plant cooldown from a hot to a cold shutdown condition, an SI signal from a high steam line differential pressure on one of three steam generators resulted in a reactor trip. The spurious SI was caused by inadequate guidance in the General Procedure for operations, GP-007, to assure this SI feature was blocked. (LER-86-006-00)

On August 26 and September 8, 1987, the "A" emergency diesel generator tripped on apparent overspeed. The overspeed trips were believed to have been caused by a relaxation of the trip device weight spring due to age and high load limiter setting on the diesel governor. (LER-87-023-00)

C. Other

This LER is submitted in accordance with 10CFR50.73(a) (2)(iv).



Carolina Power & Light Company

ROBINSON NUCLEAR PROJECT DEPARTMENT
POST OFFICE BOX 790
HARTSVILLE, SOUTH CAROLINA 29550

MAR 11 1988

Robinson File No: 13510C

Serial: RNP/88-1147
(10 CFR 50.73)

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

REFERENCE: Serial: RNP/88-1090

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261
LICENSE NO. DPR-23
LICENSEE EVENT REPORT 88-005-00

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.

Please note that LER-88-004-00 was submitted March 1, 1988, as LER-88-S01-00 for a 10 CFR 73.71 reportable event (Reference).

Very truly yours,

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

Enclosure

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

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