NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Cooper Nuclear Station	0 5 0 0 0 2 9 8	1 OF 0 2

TITLE (4)
Microswitch Failure in Reactor Vessel Water Level Indicating Switch

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 1	2 0	8 4	8 4	0 0 1	0 0	0 2	2 4	8 4		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
N		20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)		20.405(a)(1)(i)	50.36(c)(1)	X 50.73(a)(2)(v)	73.71(c)
0 9 9		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	TELEPHONE NUMBER
R. W. Krause, Instrument & Control Engineer	AREA CODE 4 0 2 — 8 2 5 - 3 8 1 1

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
X	J C	L I S	B 0 8 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)

While performing a monthly functional test on NBI-LIS-101B (Reactor Vessel Water Level Indicating Switch), this high level microswitch tripped at the proper level, but failed to reset when the simulated high level signal was removed. The high level microswitch closes the High Pressure Coolant Injection (HPCI) inboard steam isolation valve (HPCI-MO-15) and trips the HPCI turbine. After the microswitch resets on decreasing level, and a subsequent low reactor vessel water level is reached, valve HPCI-MO-15 will reopen and the system will restart. Therefore had the microswitch failed to reset following an actual required low level injection signal, subsequent automatic system operation would have been prevented. The microswitch was replaced and proper operation verified.

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

During normal operation, while performing Surveillance Procedure 6.1.9 (Reactor Vessel Low-High Water Level Calibration and Functional/Functional Test), the high level microswitch of NBI-LIS-101B tripped at the proper level, but failed to reset when the test pressure was reduced. The microswitch was replaced and proper operation verified.

The high level microswitch of NBI-LIS-101B operates a relay, with contacts in the High Pressure Coolant Injection (HPCI) turbine trip circuitry and the HPCI inboard steam isolation valve (HPCI-MO-15) circuitry. During an injection by HPCI, when the high level trip point is reached, valve HPCI-MO-15 closes and the HPCI turbine trips. When the high level trip resets, HPCI-MO-15 valve control goes to an open permissive status (the valve remains shut, but may be opened using the control switch in the Control Room). The turbine trip signal remains until a subsequent low level is reached or the manual reset switch in the Control Room is operated. When a subsequent low level is reached, valve HPCI-MO-15 will reopen, the turbine trip signal will clear, and the system will automatically start supplying water to the reactor vessel. This sequence will repeat automatically as required to maintain level with no operator action.

Had this microswitch failure occurred during an event which required injection, the system would have started and raised the reactor vessel level to the high level trip point, then shut down as described above. However, when the microswitch failed to reset, subsequent automatic operation would have been prevented because HPCI-MO-15 would remain closed.

The apparent cause for the microswitch failure was component end-of-life. The microswitch was replaced and proper operation of the microswitch contacts verified within the allowable time as specified in Table 3.2.B Note 1A of the Cooper Station Technical Specifications. The failure rate of this type of microswitch has been less than two percent per year over the last five years, with more than 100 of this type of indicating switch in service at Cooper Station. No further action is planned. A ten (10) day extension for report submittal was granted by D. M. Hunnicutt, NRC Region IV.

Nebraska Public Power District

COOPER NUCLEAR STATION
P.O. BOX 98, BROWNVILLE, NEBRASKA 68321
TELEPHONE (402) 825-3811

Docket Number 05000-298
CNSS840066

February 24, 1984

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Dear Sir:

Enclosed please find Licensee Event Report No. 84-001 for Cooper Nuclear Station. A ten (10) day extension for submittal was granted by D. M. Hunnicutt, NRC Region IV. A copy of this report has been submitted to the NRC Regional Office (Region IV) in Arlington, Texas.

Sincerely,

P. V. Thomason

P. V. Thomason
Division Manager of
Nuclear Operations

PVT:lb
cc: J. T. Collins
L. G. Kuncl
J. M. Pilant
INPO Records Center

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