NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

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)
High Pressure Coolant Injection Overspeed Trip Control Valve Diaphragm Failure

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 5 0 0 0
0 1	2 9	8 6	8 6	—	0 0 2	— 0 0	0 2	2 8	8 6		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)
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
	AREA CODE
E. M. Mace, Plant Engineering Supervisor	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	B J P	C V	R 2 9 0	Y							

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X YES (If yes, complete EXPECTED SUBMISSION DATE)	NO		0 4	0 1	8 6

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

At 1414, January 29, 1986, lube oil was visually discovered leaking from the High Pressure Coolant Injection (HPCI) system overspeed trip auto reset control valve diaphragm actuator. The reactor was operating at 99 percent of rated thermal power and a HPCI system operability surveillance was in progress at the time this condition was detected. The HPCI system operability surveillance was subsequently terminated and the HPCI system was declared inoperable. Corrective action was taken to repair the leaking control valve diaphragm actuator. Following the repair, the HPCI system was tested and declared operable.

The control valve diaphragm failure is being evaluated by the Terry Turbine Corporation (supplier of the HPCI turbine). A supplemental report will be submitted pending the completion of this diaphragm failure evaluation. A similar failure of this control valve diaphragm was reported in Cooper Nuclear Station Licensee Event Report 84-011 and 84-011, Revision 1.

IE22
1/1

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Cooper Nuclear Station	0 5 0 0 0 2 9 8	8 6	— 0 0 2	— 0 0	0 2 OF 0 2

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

At 1414, January 29, 1986, a station operator visually observed lube oil leaking from the High Pressure Coolant Injection (HPCI) system overspeed trip auto reset control valve diaphragm actuator. A HPCI system operability surveillance was being conducted at the time of this event, during which the HPCI system turbine driven pump is operated at design flow and pressure (in accordance with station Technical Specifications). The HPCI system operability surveillance was subsequently terminated at 1523. At 1537, the HPCI system was declared inoperable so that immediate corrective action could be initiated to replace the failed control valve diaphragm. Replacement of the control valve diaphragm was completed at 1628. Accordingly, HPCI system operability testing was performed and at 1751 the HPCI system was declared operable. The duration of this event was 134 minutes.

The function of the subject control valve is to regulate the duration of a turbine overspeed trip condition; i.e., the time period from an overspeed trip to an overspeed trip reset. Failure of the control valve diaphragm causes the control valve to close. This condition would preclude proper operation of the overspeed trip in the event of an overspeed condition. Additionally, this particular failure would not have prevented HPCI from automatically initiating; however, the resulting oil leak may not have allowed long-term HPCI operation.

The control valve diaphragm failure is being evaluated by the Terry Turbine Corporation. A supplemental report will be submitted pending the completion of this diaphragm failure evaluation. A similar failure of this control valve diaphragm was attributed to end of component design life and was reported in Cooper Nuclear Station Licensee Event Report 84-011 and 84-011, Revision 1. This event presented no adverse consequences from the standpoint of public health and safety. The generic significance of this event will be discussed in the supplemental report (after Terry Turbine Corporation has evaluated the failed diaphragm).

Nebraska Public Power District

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

CNSS860156

February 28, 1986

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

Dear Sir:

Cooper Nuclear Station Licensee Event Report 86-002 is forwarded as an attachment to this letter.

Sincerely,

G. R. Horn
Division Manager of
Nuclear Operations

GRH:lb
Attach.
cc: R. D. Martin
L. G. Kuncl
J. D. Weaver
L. R. Berry
INPO Records Center
ANI Library

IE22
1/1