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 3

TITLE (4)

Failure of RHR Inboard Injection Valves to Close During Surveillance Testing

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 4	0 6	8 8	8 8	— 0 0 8	— 0 0	0 5	0 6	8 8		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)	50.73(a)(2)(v)	73.71(c)
0 0 0		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)	X 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
Donald L. Reeves	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	

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X YES (If yes, complete EXPECTED SUBMISSION DATE)	NO		0 6	0 3	8 8

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

On April 6, 1988, while conducting surveillance testing, the Residual Heat Removal (RHR) System PCIS Isolation Functional Test was not successfully completed. Logic relays 10A-K63A and B which initiate closure of RHR Injection valves RHR-MOV-M025A and B did not actuate at the appropriate steps in the surveillance test procedure. When this apparent deficiency was identified, the 1988 Refueling Outage was in progress with the Reactor Vessel head removed, the Refueling Cavity flooded, RHR in operation in the Shutdown Cooling mode, and Primary Containment Integrity not required.

As provided for in paragraph 3.2.A of the CNS Technical Specifications, when Primary Containment Integrity is not required, instrumentation designed to initiate Primary Containment Isolation System functions is not required to meet the specified Limiting Conditions for Operation (LCO). Due to plant conditions, investigation of this test deviation has not yet been completed. This action, however, will be completed prior to establishing plant conditions where the requirements of paragraph 3.2.A. of the CNS Technical Specifcations must be met, and appropriate corrective action taken to correct the cause.

The cause of the event and corrective action taken will be provided in a supplementary report.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

A. Event Description

On April 6, 1988, while conducting surveillance testing, the Residual Heat Removal (RHR) System PCIS Isolation Functional Test was not successfully completed. During the test, logic relays 10A-K63A and B which initiate closure of RHR Injection valves RHR-MOV-M025A and B did not actuate at the appropriate steps in the surveillance test procedure (Surveillance Procedure 6.2.2.5.16A, RHR Loops A and B Shutdown Cooling PCIS Isolation Functional Test).

B. Plant Conditions

Shutdown for the 1988 Refueling Outage which commenced March 5, 1988.

C. Basis for Report

Investigation of this apparent discrepancy has not yet been completed due to plant conditions. Since a test failure occurred, this situation is being reported in accordance with 10CFR50.73(a)(2)(i).

D. Cause

The cause of this event will be provided in a supplementary report.

E. Safety Significance

When this apparent deficiency was identified, the 1988 Refueling Outage was in progress with the Reactor Vessel Head removed, the Refueling Cavity flooded, RHR in operation in the Shutdown Cooling mode, and Primary Containment integrity not required. As provided for in paragraph 3.2.A of the CNS Technical Specifications, when primary containment integrity is not required, instrumentation designed to initiate Primary Containment Isolation System functions is not required to meet the specified Limiting Conditions for Operation (LCO).

The PCIS function associated with RHR-MOV-M025A and B is actuated either by high Drywell pressure or low Reactor Vessel water level, Group 2 Isolation signals. With Primary Containment Integrity not required and with Reactor Coolant System temperature well below 212°F, a high Drywell pressure condition could not occur. Additionally, with the Refueling Cavity flooded, long before low water level conditions would be reached in the Reactor Vessel, Operator action would be taken to isolate the leak and restore Cavity water level. As a result, this event posed no safety significance to the plant.

Under other shutdown conditions where Primary Containment integrity was required and where normal Reactor Vessel water level would be maintained, if a Group 2 Isolation signal were actuated, the RHR System Shutdown Cooling Suction Valves, RHR-MOV-M017 and 18, would close, as designed. However, apparently, RHR-MOV-M025A & B would have remained open. If the Group Isolation was due to Low Reactor Vessel Water Level and the leakage path were due to a break in the RHR System, under all but the most unusual of circumstances, closure of the RHR System Shutdown Cooling Suction valves would be sufficient to isolate the break since check valves downstream of RHR Injection Valves RHR-MOV-M025A & B would seat, preventing reverse flow in the discharge line.

During normal operation, the trip logic is not required (nor is it capable of being actuated) since reactor pressure is greater than 75 psig and the Shutdown Cooling Suction Valves are closed. Under these conditions, the logic circuit is, essentially, disarmed.

F. Corrective Action

Prior to installation of the Reactor Vessel Head and subsequent establishment of Primary Containment Integrity, the investigation of this surveillance test failure and necessary corrective action will be completed. Information regarding corrective action taken will be specified in a supplementary report.

G. Past Similar Events

A similar surveillance test failure occurred in December 1986, while shutdown for the 1986 Refueling Outage but, during subsequent troubleshooting, could not be repeated. This failure was not reported at that time, since it was believed that maintenance activities completed during the outage associated with RHR-MOV-M017 prior to performance of surveillance testing were most likely the cause of the problem. Since that time two (2) successful surveillance tests have been performed (May and October, 1987).