

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)

Cooper Nuclear Station

DOCKET NUMBER (2)

0 5 0 0 0 2 9 8 1 OF 0 2

PAGE (3)

TITLE (4)

Primary Coolant Pipe Weld 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	4	0	9	8	4	8	4	0	0	5	0
0	4	0	9	8	4	0	0	5	0	7	8
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)			20.406(c)			50.73(a)(2)(iv)		
POWER LEVEL (10)			20.406(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v)		
0			20.406(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vii)		
0			20.406(a)(1)(iii)			50.73(a)(2)(i)			50.73(a)(2)(viii)(A)		
			20.406(a)(1)(iv)			X 50.73(a)(2)(ii)			50.73(a)(2)(viii)(B)		
			20.406(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(ix)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
E. M. Mace, Plant Engineering Supervisor	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 NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC
B	A	D P S P	5 0 2 9	N					

SUPPLEMENTAL REPORT EXPECTED (14)

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

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

Leakage of primary coolant water was visually discovered in the "B" Reactor Recirculation pump discharge isolation valve drain line, located in Primary Containment. Further investigation of this 3/4", stainless steel line revealed circumferential cracking in the weld metal and pipe base metal of an elbow-to-socket type weld joint. The reactor was in cold shutdown at the time that this condition was detected. Corrective action was taken to replace the cracked weld metal and pipe. Additional liquid penetrant testing was performed on other stainless steel welds in both "A" and "B" Reactor Recirculation loop drain lines. No further rejectable indications were found as a result of this testing.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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 4	- 0 0 5	- 0 0 0	2	OF	0 2

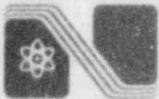
TEXT (If more space is required, use additional NRC Form 366A's) (17)

On April 9, 1984, while scheduled shutdown activities in the drywell were in progress, leakage of primary coolant water was visually discovered in the "B" Reactor Recirculation pump discharge isolation valve drain line. This 3/4" drain line is routed back into the recirculation system suction through the piping drain root valve to vent the volume inside the Reactor Recirculation pump discharge valve discs. Approximately 50 gpm of fluid recirculation flows through the 3/4" line. After the line was isolated and drained, further investigation revealed circumferential cracking in the weld and base metal of an elbow-to-pipe socket type weld joint. Also, the pipe clamp on an existing non-seismic pipe support upstream of the weld joint was observed to be broken.

The specific cause of weld failure cannot be identified. However, the probable failure mechanism suspected in this case is the initiation of a small, undetected flaw during weld construction with subsequent flaw propagation due to flow induced vibration. Flow induced vibration would be possible due to the condition of the aforementioned broken pipe support clamp.

Corrective action was taken to replace the cracked weld metal and pipe. Additional liquid penetrant testing was performed on other stainless steel welds in both "A" and "B" Reactor Recirculation loop drain lines. No further rejectable indications were found as a result of this testing. The support was repaired by placing a one inch shim between the support and the pipe to provide proper support alignment.

The weld was not leaking significantly during reactor operation prior to visual detection of the leak. Evaluation of unidentified drywell leakage for a three month operating period prior to the April 7, 1984 plant shutdown indicates an increasing trend of unidentified drywell leakage from .2 gpm to approximately .3 gpm. This increase had been detected and was being monitored by Operations personnel several weeks prior to the April 7, 1984 plant shutdown. Had the unidentified drywell leak rate continued to increase, corrective action would have been taken as necessary per station operating procedures and Technical Specifications. This event presented no adverse consequences from the standpoint of public health and safety. No further action is planned.



Nebraska Public Power District

COOPER NUCLEAR STATION
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TELEPHONE (402) 825-3811

CNSS840181

May 7, 1984

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

Dear Sir:

Cooper Nuclear Station Licensee Event Report 84-005 is forwarded as an attachment to this letter.

Sincerely,

P. V. Thomason
Division Manager of
Nuclear Operations

PVT:lb

cc: J. T. Collins
L. G. Kunc1
L. R. Berry
INPO Records Center

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