



Nebraska Public Power District

COOPER NUCLEAR STATION
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CNSS923575

March 11, 1992

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

Dear Sir:

Cooper Nuclear Station Licensee Event Report 92-004, Revision 0, is being forwarded as an attachment to this letter.

Sincerely,

J. M. Meacham
Division Manager of
Nuclear Operations
Cooper Nuclear Station

JMM/bjs

Attachment

cc: R. D. Martin
G. R. Horn
R. E. Wilbur
V. L. Wolstenholm
D. A. Whitman
INPO Records Center
NRC Resident Inspector
R. J. Singer
CNS Training
CNS Quality Assurance

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Cooper Nuclear Station										DOCKET NUMBER (2) 0 5 0 0 0 2 9 5 1 OF 0 3										PAGE (3) 1 OF 0 3																																
TITLE (4) Group 3 Isolation On High Reactor Water Cleanup Temperature Due To Failure To Recognize The Need To Maintain Interim Corrective Actions In Place																																																				
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)												
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ABSTRACT (Limit to 1800 spaces, i.e., approximately fifteen single space typewritten lines) (16)

On February 10, 1992, at 7:30 pm, the Reactor was manually scrammed from 30 percent power to comply with Technical Specification requirements regarding inoperability of the Division A and B 250 VDC Batteries. As expected, Group 2, 3, and 6 isolations were received. The Group 3 isolation (Reactor Water Cleanup) could not subsequently be reset due to a high temperature condition downstream of the Nonregenerative Heat Exchanger. After allowing the piping to cool for approximately one hour, the isolation was reset. Before the system could be returned to service, a second isolation actuation signal was received. Following this, the subcooling line isolation valve was closed, the isolation was reset, and the Reactor Water Cleanup (RWCU) system was returned to service.

The actuation of the Group 3 isolation resulted from backflow of hot water through the RWCU subcooling line, as described in LER 91-002, Revision 1. As noted for the previous events, the check valve in the subcooling line is not leak tight at low differential pressures. As corrective action for this condition, the RWCU pump controls had been caution tagged to maintain the subcooling line isolation valve closed except during plant cooldown. The caution tags were removed during the 1991 Refueling outage, based on the belief that the replacement of the check valve during the outage had resolved the backflow condition. Procedural controls should have been implemented to assure that the corrective actions remained in place until a permanent solution for the backflow is implemented. Operating procedures will be revised to maintain the subcooling isolation valve closed except during plant cooldown. The caution tags were replaced, and will remain in place until the procedure change is approved.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Cooper Nuclear Station	DOCKET NUMBER (2) 0 5 0 0 0 2 9 8 9 2	LER NUMBER (4)			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 February 10, 1992, at 7:30 pm, the plant was manually scrammed from 30 percent power to achieve Hot Shutdown in accordance with Technical Specification requirements (the conditions requiring plant shutdown are described in LER 92-003). As expected from a scram at this power level, Group 2, 3, and 6 isolations were received. Approximately 5 minutes later the Control Room operator attempted to reset the Group 3 (Reactor Water Cleanup) isolation. Due to a high temperature signal the isolation could not be reset. A Station Operator, dispatched to determine if a high temperature condition existed, found the temperature indicating switch downstream of the Nonregenerative Heat Exchanger above the high temperature isolation setpoint. The piping was allowed to cool for approximately one hour, after which the isolation was reset. However, before the system could be returned to operation, a second high temperature isolation signal was received. The Station Operator was directed to close the isolation valve on the subcooling line. After allowing the piping to cool, the isolation was reset and the RWCU system returned to operation.

B. Plant Status

The plant was in Hot Shutdown following a manual Reactor scram from 30 percent power, in preparation for a plant cooldown.

C. Basis for Report

Unplanned actuation of the Primary Containment Group 3 Isolation logic due to high Nonregenerative Heat Exchanger temperature, a non-ESF trip function. This event is being reported in accordance with the criteria prescribed by 10CFR50.73(a)(2)(iv).

D. Cause

As corrective action for a previous event (described in LER 91-002, Revision 1), a caution tag had been placed on the control switches for the RWCU pumps, requiring that the subcooling isolation valve be closed except during plant cooldown when subcooling flow to the RWCU pump is required to prevent flashing of the hot fluid at the pump suction. This action was necessary because the check valve in the subcooling line is not leak tight at the low differential pressures which exist with the pumps not in operation. The caution tag was removed based on the replacement of the check valve during the 1991 Refueling outage. The personnel who authorized the removal of the tags believed that the replacement of the check valve resolved the problem. In retrospect, procedural controls on the position of the subcooling isolation valve should have been provided until a permanent solution for the check valve backleakage is implemented.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 600 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-830), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Cooper Nuclear Station	DOCKET NUMBER (2) 0 5 9 0 0 2 9 8 9 2	LER NUMBER (6)			PAGE (3)		
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TEXT (if more space is required, use additional NRC Form 366A's) (17)

E. Safety Significance

The RWCU high temperature isolation is a non-safety signal which serves to protect the demineralizer resin from the effects of high temperature. This is accomplished by automatic closure of the RWCU inlet isolation valves which subsequently trips the RWCU pumps. In this event, although a high temperature condition existed, the pumps were stopped such that no flow existed and, thus, there was no requirement for the high temperature isolation.

F. Safety Implications

The effect of a high temperature isolation at other plant conditions would not be significantly different. In the event of an isolation with the RWCU Pumps operating, the pumps automatically trip. Removal of the RWCU System from operation has minimal safety implications.

G. Corrective Action

The Group 3 isolation was reset and the system was returned to operation. Operating procedures will be revised to direct the closure of the RWCU subcooling line isolation valve except during plant cooldown when subcooling is required to prevent flashing at the RWCU pump suction. The caution tags requiring the closure of the subcooling isolation valve were replaced on the RWCU pump controls, and will remain in place until the procedure change is approved.

H. Similar Events

Previous Group 3 isolations from high temperature due to backflow in the subcooling line are described in LER 91-002, Revision 1.