



Nebraska Public Power District

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

CNSS923702

July 21, 1992

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

Dear Sir:

Cooper Nuclear Station Licensee Event Report 92-010, Revision 0, is being forwarded as an attachment to this letter.

Sincerely,

R. L. Gardner
Plant Manager

RLG/bjs

Attachment

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

270063

9207280091 920721
PDR ADOCK 05000298
S PDR

JEH

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Cooper Nuclear Station	DOCKET NUMBER (2) 0 5 0 0 0 2 9 8 1	PAGE (3) 1 OF 0 4
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TITLE (4) **Inoperability Of The Control Room HVAC Emergency Bypass System Due To Failure Of The Inlet Valve**

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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LICENSEE CONTACT FOR THIS LER (12)

NAME John R. Myers	TELEPHONE NUMBER 4 1 0 1 2 8 1 2 1 5 1 - 1 3 1 8 1 1 1
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN YOUR REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRCDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRCDS
X	V	I	R	L	Y	H	2	6	0 N

SUPPLEMENTAL REPORT EXPECTED (14)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15) MONTH: DAY: YEAR:
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On June 21, 1992, at approximately 1:10 a.m., during the performance of Surveillance Procedure 6.3.17.1, Control Room Ventilation, HV-AOV-271AV, the Control Room HVAC Emergency Bypass System Inlet Valve, failed to actuate correctly. Operations personnel manually assisted the valve, and it correctly positioned. The valve operator was repaired on June 22, and, following post maintenance testing, the system was declared operable at 6:00 p.m. Subsequently, a review of the effect of the failure was performed, resulting in the determination that this event was reportable per 10CFR50.73 (a)(2)(v).

On July 14, at 2:10 a.m., during the performance of S.P. 6.4.6.3, Control Room Air Sampling System Functional and Logic test, the valve did not actuate during a radiation source check of the Control Room Ventilation Radiation Monitor. An attempt was made to open the valve with mechanical assistance, but it was unsuccessful. The source check was performed a second time several minutes later, and the valve opened correctly. The source check was performed several additional times, and the valve opened correctly each time. Based on the initial failure, the system was declared inoperable at 2:20 a.m. Investigation indicated the most likely cause of this failure, and the probable cause of the first event, was the failure of a pneumatic relay. Due to the age of this component, a qualified replacement is not available. Therefore, a temporary modification was approved to maintain the valve in the open position. The system was subsequently declared operable at 6:35 p.m. on July 17. A permanent design change is being processed to replace the control system.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-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) 0500029892	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 June 21, 1992, at approximately 1:10 a.m., during the performance of Surveillance Procedure 6.3.17.1, Control Room Ventilation, HV-AOV-271AV, the Control Room HVAC Emergency Bypass System Inlet Valve, failed to open. Operations personnel manually assisted the operator for the valve, and it correctly positioned. At 1:39 a.m., the Control Room Emergency Ventilation System was placed in service in the emergency mode of operation as a precautionary measure, since the reliability of HV-AOV-271AV was questionable. A caution tag was issued to ensure the system remained in operation until repairs were effected. Based on the failure of the valve to open without assistance when actuated, the system was subsequently declared inoperable as of the time of the surveillance test failure.

Troubleshooting of the valve operator was conducted on June 22. Maintenance personnel found the valve air operator shaft inadequately lubricated, apparently preventing the valve from operating. The shaft was cleaned and lubricated, and, following post maintenance testing, the system was declared operable at 6:00 p.m. on June 22. Subsequently, a review of the functions of this system and effect of the failure was performed. The conclusion of this review was that system operation was required to maintain the radiation exposure to Control Room personnel within limits in the event of a Design Basis Accident, and, therefore, this event was reportable per 10CFR50.73 (a)(2)(v).

On July 14, at 2:10 a.m., during the performance of S.P. 6.4.6.3, Control Room Air Sampling System Functional and Logic test, the valve failed to actuate upon initiating a radiation source check of the Control Room Ventilation Radiation Monitor. On this occasion, an attempt to manually assist the operator was not successful. Several minutes later, the source check was performed a second time, and the valve opened correctly. The source check was performed several additional times, and the valve opened correctly each time. Based on the initial failure, the system was declared inoperable at 2:20 a.m. Investigation indicated a pneumatic relay in the control circuit had apparently failed. Due to the age of this component, a qualified replacement was not available. A Temporary Modification was approved to maintain the valve in the open position. The system was subsequently declared operable at 6:35 p.m. on July 17.

B. Plant Status

The plant was in normal power operation at approximately 100 percent power at the time of these events.

C. Basis for Report

These events are reportable per 10CFR50.73 (a)(2)(v), a condition which alone could have prevented the fulfillment of a safety function required to mitigate the consequences of an accident. 10CFR50.72 notifications were made at 1:52 p.m. on June 24, 1992, and at 3:28 a.m. on July 14, 1992.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 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	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)

D. Cause

The cause of the first failure was initially believed to be the result of a lack of lubrication of the air operator shaft, resulting in the valve not opening. Following the application of lubricant, the valve operated properly during post maintenance testing. Both failures are presently considered to be associated with a pneumatic relay in the control circuitry.

E. Safety Significance

The Control Room HVAC Emergency Bypass System, a single train safety system, is designed to protect personnel in the Control Room from excessive radiation exposure in the event of a Design Basis Accident. In the event airborne radiation is detected in the Control Room air intake, the Emergency Bypass Fan automatically starts and the system valves automatically position. An alarm is generated by the start of the fan. With the valve not open, pressurization of the Control Room would not occur and infiltration would be a concern. An Area Radiation Monitor is also located in the Control Room area. This monitor has a setpoint of 0.1 mrem, and would actuate if radiation levels in the Control Room became a concern. The response to this alarm would include surveying the Control Room, thus leading to detection of problems with the ventilation system.

F. Safety Implications

The effect of the loss of Control Room pressurization is most significant should a Design Basis Accident occur during power operation. As such, there are no safety implications beyond those discussed in Section E above.

G. Corrective Action

Following discovery of the initial problem, troubleshooting of the air operator was performed. The air cylinder was found to operate without leakage or blowby. However, the shaft was found without adequate lubrication, which appeared to prevent the valve from operating. The shaft was cleaned and lubricated, and post maintenance testing verified that the valve was opening.

Investigation of the second incident indicated the pneumatic control circuit was not functioning correctly. Due to the unavailability of replacement parts, a temporary modification was installed to maintain the valve in the open position, thus ensuring the availability of the air treatment system. A design change will be processed to replace the control system with equipment for which replacement parts are available. Further investigation into the failure of the control system is being conducted.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 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)

DOCKET NUMBER (2)

LER NUMBER (6)

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Cooper Nuclear Station

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

H. Similar Events

None.

Supplemental Information

The relay is a Honeywell Model RP49A