

Nebraska Public Power District

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

CNSS810164

March 25, 1981

Mr. K. V. Seyfrit, Director
U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region IV
611 Ryan Plaza Drive
Suite 1000
Arlington, Texas 76011



Dear Sir:

This report is submitted in accordance with Section 6.7.2.B.2 of the Technical Specifications for Cooper Nuclear Station and discusses a reportable occurrence that was discovered on February 23, 1981. A licensee event report form is also enclosed.

Report No.: 50-298-81-03
Report Date: March 25, 1981
Occurrence Date: February 23, 1981
Facility: Cooper Nuclear Station
Brownville, Nebraska 68321

Identification of Occurrence:

A condition which lead to operation in a degraded mode permitted by a limiting condition for operation established in Section 3.5.B.3 of the Technical Specifications.

Conditions Prior to Occurrence:

The reactor was at a steady state power level of approximately 98% of rated thermal power.

Description of Occurrence:

During performance of Surveillance Procedure 6.3.5.2, valve RHR-MO-26R motor current increased and remained high when the valve reached the closed position. The valve motor breaker was manually tripped and the valve was declared inoperable.

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Designation of Apparent Cause of Occurrence:

It is believed that the limit switch inside the valve motor operator did not open when the valve reached its closed position. Therefore, the closing torque switch could not open and the starter could not deenergize. Had it not been tripped manually, the motor would have overheated and failed in the closed position.

Analysis of Occurrence:

RHR-MO-26B is the outboard isolation valve in the drywell spray line. This is a normally closed valve that receives a closure signal on ECCS initiation. The inboard isolation valve was operational as well as both isolation valves in the redundant RHR loop. The core spray system and both diesels were operable. This valve is required to be open only for drywell spray. Drywell spray can be performed during an ECCS initiation with reactor water level above 2/3 core height and 2 psig in the drywell. In the event this valve needed to open, it would have opened without receiving the overcurrent on the motor as demonstrated during previous steps of the subject surveillance procedure. This valve was inoperative for about 8 hours. It did not make RHR pumps inoperable, nor would it have prevented the system from performing its function of low pressure coolant injection.

A similar problem occurred on November 3, 1980, however, the symptoms of this problem did not directly relate to an improperly adjusted limit switch. Based on the analysis of this occurrence, it is apparent that the November 3, 1980 occurrence was initiated by the subject limit switch.

At this point in time, the facts indicate that the subject limit switch is somewhat non-repetitive with respect to indicating a closed valve position. The valve position indicated by the limit switch is the actual valve stem position. An internal mechanical interference could prevent the valve from positioning itself in the exact location each time the valve is closed. This mechanical interference would not make the valve inoperable. However, it would cause the limit switch to become non-repetitive.

This occurrence presented no adverse consequences from the standpoint of public health and safety.

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Corrective Action:

The valve operator was carefully inspected and the closed limit switch adjusted. The valve was cycled several times and correct operation verified. Subsequent operation of this valve was satisfactory. RHR-MO-26B is scheduled for disassembly and inspection during the April 1981 refueling outage. A copy of this LER is being routed to the involved personnel stressing the importance of insuring limit and torque switches are adjusted properly and respective logic systems checked accordingly during any maintenance activity on motor operated valves.

Sincerely,



L. C. Lessor
Station Superintendent
Cooper Nuclear Station

LCL:cg
Attach.