

50-298



Nebraska Public Power District

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

CNSS800638

November 3, 1980

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

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NPPD
CUSTOMER SERVICES
BRANCH

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 October 6, 1980. In accordance with the requirements of IE Bulletin 80-17, Mr. Bob Spangler was notified by telephone on October 6, 1980. A licensee event report form is also enclosed.

Report No.: 50-298-80-37
Report Date: November 3, 1980
Occurrence Date: October 6, 1980
Facility: Cooper Nuclear Station
Brownville, Nebraska 68321

Identification of Occurrence:
Conditions leading to operation in a degraded mode permitted by a limiting condition for operation as delineated in Section 3.5.D of the Technical Specifications.

Conditions Prior to Occurrence:
Steady state power operation at approximately 98% reactor power.

Description of Occurrence:
During routine surveillance testing of the RHR containment cooling system, the "B" loop RHR Service Water Booster pumps would not provide the required flow. The problem appeared to be associated with the system throttle valve SW-MO-89B.

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Designation of Apparent Cause of Occurrence:

The subject valve, SW-MO-89B, is a 18", 300# Globe valve manufactured by Anchor/Darling Valve Company. The valve was disassembled and the disc was found separated from the stem. A skirt on the disc that centers the disc in the valve body was missing. Further investigation revealed the missing pieces trapped in the restricting orifice downstream.

Analysis of Occurrence:

SW-MO-89B is the throttle valve on the discharge of the "B" Loop RHR heat exchanger for the service water side. It controls the service water flow and maintains a minimum 20 psi differential between the service water and the RHR sides of the heat exchanger. Failure of this valve to operate made the "B" loop of the RHR system inoperable. In the event of an emergency, the "A" loop was operable as well as both diesel generators. This event presented no adverse consequences from the standpoint of public health and safety.

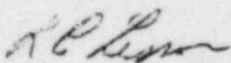
Corrective Action:

The disc and stem nut for SW-MO-89B were replaced. The skirt pieces were removed from the orifice downstream and the line checked visually. Upon successful completion of the repair and proving operability of the "B" loop, the "A" loop valve was disassembled and inspected. This was witnessed by a vendor representative.

SW-MO-89A was in the same condition as the "B" loop valve including a missing skirt. However, the valve was operable at the time of disassembly. The disc, stem nut, and stem were replaced on this valve. The orifice downstream was removed and inspected and no debris of the missing skirt was found in the line. It is not possible for these pieces to remain upstream of the orifice so they must have passed through the orifice. It should be noted at this point there is no other valves downstream of the orifice in either loop and these lines discharge to the river.

The vendor has concluded that the cause of the failure is cavitation across the disc and they recommend that the valve disc be redesigned. They also concur that the valve will continue to be operable until the new disc design can be installed, which is anticipated to be at our next refueling outage.

Sincerely,



L. C. Lessor
Station Superintendent
Cooper Nuclear Station

LCL:cg
Attach.