

Nebraska Public Power District

COOPER NUCLEAR STATION
P.O. BOX 98, BROWNVILLE, NEBRASKA 68321
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CNSS810592

October 12, 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 September 12, 1981. A licensee event report form is also enclosed.

Report No.: 50-298-81-22
Report Date: October 12, 1981

Occurrence Date: September 12, 1981 Facility: Cooper Nuclear Station

Brownville, Nebraska 68321

Identification of Occurrence:

A condition occurred which resulted in operation in a degraded mode permitted by a limiting condition for operation established in Section 3.5.D.2 of the Technical Specifications.

Conditions Prior to Occurrence:

The reactor was in a hot shutdown condition following a scram from less than 1% of rated thermal power during the controlled shutdown to initiate the Fall 1981 Maintonance Outage. Reactor pressure prior to the scram was approximately 480 psia.

Description of Occurrence:

At approximately 1300 hours on September 12, 1981, the control room operators noticed that the indicating lights for valve RCIC-MO-131 were out (this was approximately 2 minutes after the reactor scram). Immediate investigation revealed that a fuse in the circuit for RCIC-MO-131 was blown which made the RCIC System inoperable.

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Designation of Apparent Cause of Occurrence:

The valve DC motor was electrically grounded. Apparently, grease from the valve operator had migrated through a faulty mechanical seal into the motor and partially gounded its armature.

Analysis of Occurrence:

The RCIC System is designed to supply water to the reactor vessel when the Feedwater System is unavailable and provides a backup for the HPCI System. RCIC-MO-131 is the steam supply valve to the RCIC turbine. The blown fuse left both the valve and the RCIC System inoperable. The Feedwater System, however, remained available as a water supply to the reactor vessel. The HPCI, ADS, and LPCI Systems were also operable. The RCIC System remained inoperable until the reactor was brought to the cold shutdown state.

Subsequent troubleshooting revealed that grease had caused the armature of the DC motor on the valve operator to become partially grounded which in turn caused the fuse to blow. The grease was determined to have migrated from the valve operator through the mechanical seal to the DC motor. A review of equipment history indicated that this valve had operated without any problems since plant startup. Based upon plant equipment data available at this time, the failure of the mechanical seal appears to be an isolated event.

This occurrence had no adverse effect on the public health and safety.

Corrective Action:

The DC motor and seal were removed and replaced with identical spares. Plant equipment data will continue to be reviewed and if it appears that the failure of this type of mechanical seal is not an isolated event, a surveillance and/or repair program will be initiated.

Sincerely,

L. C. Lessor

Station Superintendent Cooper Nuclear Station

LCL:cg Attach.