



Nebraska Public Power District

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

CNSS810276

May 26, 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 April 26, 1981. A licensee event report form is also enclosed.

Report No.: 50-298-81-08
Report Date: May 26, 1981
Occurrence Date: April 26, 1981
Facility: Cooper Nuclear Station
Brownville, Nebraska 68321

Identification of Occurrence:

A condition which could have resulted in operation in a degraded mode permitted by the limiting condition for operation established in Table 3.2.B of the Technical Specifications.

Conditions Prior to Occurrence:

The reactor was in the cold shutdown condition for refueling.
Reactor vessel level was approximately 140-150 inches.

Description of Occurrence:

Reactor vessel low level (-37") annunciator 9-3-1/8-2 at control room panel 9-3 alarmed and would not clear with the actual reactor vessel indicated level at control room panel 9-4 approximately 140-150 inches.

Designation of Apparent Cause of Occurrence:

Contacts on auxiliary switch #4 of NBI-LIS-72C were arcing causing alarm on control room panel 9-3 annunciator 9-3-1/8-2.

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Analysis of Occurrence:

NBI-LIS-72C is a Yarway Model 4418C level indicator. There are four Yarway level indicators installed designated 72A, B, C, & D, respectively. Each Yarway indicator has four sets of magnetically operated contacts designated as switch 1, 2, 3, & 4. Switch #1 on each of the four Yarway's is a part of the logic sequence for starting CS, DG, and RHR components. Switch #2 on each Yarway is associated with ADS initiation logic. Switch #3 is a part of HPCI initiation logic at -37" reactor vessel level. Switch #4 is a part of RCIC initiation logic and also actuates an annunciator in control room panel 9-3 at -37" reactor vessel level.

Examination of the #4 switch on Yarway 72C indicated what appeared to be an oily film between the contacts. The switch contacts had previously been cleaned with LPS-1, a common contact cleaner. A review of this occurrence with the personnel involved indicates that the use of LPS-1 as a Yarway contact cleaner is not standard practice.

The subject Yarway level indicator was indicating properly and switches 1, 2, & 3 would have actuated correctly to a low reactor vessel water level.

The remaining #4 switches on Yarway 72A, B, & D were operable. Subsequent to this occurrence, a calibration and functional test was performed on the subject Yarway level indicators 72A, B, C, & D. During this test, switch #2 on Yarway 72C did not function correctly. Visual inspection of switch #2 indicated a similar oily film on the contacts. These contacts had been previously cleaned with a freon solvent after the #4 switch failure. However, due to the physical location of these switches on the Yarway, thorough cleaning of the switch contacts is not achievable.

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

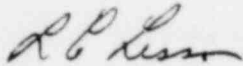
Corrective Action:

Switch #4 on Yarway 72C was replaced. The remaining switches on Yarway 72 A, B, & D were cleaned with MS-180, a freon TF solvent. As a result of the calibration and functional test, switch #2 on Yarway 72C was replaced and all the switches on Yarway 72 A, B, C, & D will be re-cleaned using a freon TF solvent and a close visual inspection of the switches will be performed.

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Instrument and Control personnel have been advised to use only MS-180 freon solvent, vice LPS-1, for contact cleaning. This corrective action will be completed prior to reactor startup.

Sincerely,



L. C. Lessor
Station Superintendent
Cooper Nuclear Station

LCL:cg