



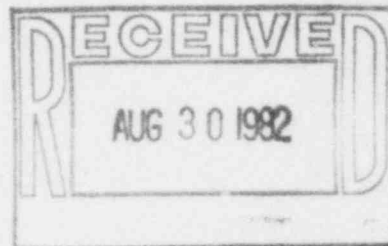
# Nebraska Public Power District

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

CNSS820480

August 26, 1982

Mr. John T. Collins, Regional Administrator  
U.S. Nuclear Regulatory Commission  
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.1 of the Technical Specifications for Cooper Nuclear Station and discusses a reportable occurrence that was detected on July 27, 1982. A licensee event report form is also enclosed.

Report No.: 50-298-82-18  
Report Date: August 26, 1982  
Occurrence Date: July 27, 1982  
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 3.7.A.1.C & D of the Technical Specifications.

Conditions Prior to Occurrence:

The reactor was at a steady state power of 100% of rated thermal power.

Description of Occurrence:

During the scheduled performance of Surveillance Procedure 6.3.3.1 (HPCI Test Mode Surveillance), torus (suppression pool) water temperature exceeded the limit of 100°F.

Designation of Apparent Cause of Occurrence:

The high torus water temperature was caused by the HPCI turbine exhausting into the torus.

FE22

Mr. John T. Collins  
August 26, 1982  
Page 2.

Analysis of Occurrence:

The HPCI System consists of a turbine driven pump which provides high pressure emergency core cooling for small line breaks. The steam turbine which drives the HPCI pump extracts steam from Main Steam Line "C" and exhausts steam into the torus for condensation. Torus cooling is achieved by pumping torus water through the RHR (Residual Heat Removal) heat exchangers, where the heat is transferred to the RHR service water system (river water). The water is returned below the torus water surface. Torus cooling had been initiated eight hours before the test and the torus water temperature had stabilized at 87°F.

The HPCI test mode surveillance was terminated after 15 minutes of operation when the torus water temperature reached 102°F. Torus temperature was reduced to 100°F within fifteen minutes, and to 90°F within 145 minutes, by torus cooling. To satisfy testing requirements, the HPCI pump must be operated for a minimum of five minutes before recording required test data. Typically, the surveillance requires a minimum of ten minutes, and even longer when a complete set of vibration data is needed.

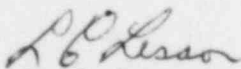
Despite torus water temperature indication of 102°F, conservative calculations show that the bulk torus water temperature could not have exceeded 97°F. The existing torus water thermocouples are located downstream of the HPCI sparger near the surface of the water where highest water temperatures exist.

All safety systems were operable at the time of this occurrence. This occurrence presented no adverse consequences to the public health and safety.

Corrective Action:

Upon detection of the temperature violation, the surveillance test was terminated. A Technical Specification change had been previously submitted to raise maximum allowable temperature an additional 5°F which will lower the probability of recurrence. A more sophisticated torus temperature monitoring system is scheduled to be installed by July 1983.

Sincerely,



L. C. Lessor  
Station Superintendent  
Cooper Nuclear Station

LCL:cg  
Attach.