



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 152 TO FACILITY OPERATING LICENSE NO. DPR-46
NEBRASKA PUBLIC POWER DISTRICT
COOPER NUCLEAR STATION
DOCKET NO. 50-298

1.0 INTRODUCTION

By letter dated September 30, 1991, Nebraska Public Power District (the licensee) submitted a request for changes to the Cooper Nuclear Station (CNS) Technical Specifications (TS). The requested changes would clarify usage of the terms "system" and "subsystem" to ensure terminological consistency throughout the CNS TS. In addition, the proposed changes clarify the operability requirements for the Core Spray System and Low Pressure Coolant Injection (LPCI) System of the Residual Heat Removal (RHR) System during refueling operations.

The TS pages have been revised in accordance with the following conventions:

The Standby Liquid Control System is considered a system consisting of two distinct subsystems.

The Core Standby Cooling System (CSCS) consists of four distinct systems. These are: 1) the High Pressure Coolant Injection (HPCI) System (a single system), 2) the Core Spray System (which consists of two distinct subsystems), 3) the Automatic Depressurization System (ADS) (a single system), and 4) the Low Pressure Coolant Injection (LPCI) System, which consists of two distinct subsystems and which is also an operating mode of the RHR System.

Containment Cooling is a function accomplished by the RHR Service Water System serving one side of the RHR heat exchangers and by the RHR LPCI pumps serving the other side of the RHR heat exchangers. The containment cooling function is accomplished by cooling the Torus water via the RHR heat exchangers and either returning the flow to the Torus or injecting the water into the Torus and/or drywell spray headers.

The Standby Gas Treatment System is considered a system consisting of two distinct subsystems.

The Reactor Equipment Cooling (REC) System is considered a system consisting of two distinct subsystems, each capable of serving both critical and non-critical cooling water loops.

The Service Water System is considered a system consisting of two distinct subsystems, which are normally aligned to discharge into a common water supply header, but which are capable of discharging cooling water into independent cooling water paths.

Shutdown Cooling is considered a mode of operation of the RHR System. During this mode of operation, the RHR System takes suction from Reactor Recirculation Loop "A", directs the flow to the RHR heat exchangers, where it is cooled by the RHR Service Water System and returned to the Reactor Recirculation System via the LPCI path. This mode of RHR operation is used during normal reactor shutdown and cooldown conditions to remove decay heat from the core.

A January 20, 1992, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

The CNS TS contain many areas where the terms "system" and "subsystem" are used interchangeably. Inconsistent use of these terms resulted in difficulties in interpreting TS Section 3.10.F (the basis for core standby cooling systems) during an NRC inspection (documented by NRC Inspection Report 86-27, dated December 30, 1986). As a result of these difficulties, the licensee committed to review the TS to provide assurance of proper and correct interpretation of the CNS TS.

The proposed changes clarifying the usage of the terms "system" and "subsystem" and the additional miscellaneous editorial changes do not involve a significant increase in the probability or consequences of an accident previously evaluated. These changes are administrative in nature, do not reflect any changes to the plant configuration or the plant safety analysis, and are proposed to provide clarification to station operators. The staff finds the proposed changes acceptable.

The CNS low pressure cooling systems include two Core Spray Subsystems and two LPCI Subsystems. During refueling outages, these subsystems may be taken out of service for maintenance and/or upgrades. The proposed change to Section 3.10.F will allow refueling operations to continue, provided at least two of the four low pressure cooling subsystems are operable and at least one of the two operable subsystems is a LPCI subsystem. The requirement for a LPCI Subsystem ensures that the Shutdown Cooling mode of the RHR System is available. The required combinations of operable subsystems ensure that means exist to mitigate a loss of coolant inventory event with consideration of a single failure, as well as provide Shutdown Cooling. On this basis, the proposed change to Section 3.10.F of the CNS TS does not involve a significant increase in the probability or consequences of an accident previously evaluated and provides no less redundancy in backup low pressure injection systems than that currently specified in the TS. The staff finds the proposed change acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Nebraska State official was notified of the proposed issuance of the amendment. The State official had no comment.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (56 FR 57699). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: R. Twigg

Date: March 11, 1992