

March 31, 2004

Mr. Randall K. Edington
Vice President-Nuclear and CNO
Nebraska Public Power District
P. O. Box 98
Brownville, NE 68321

SUBJECT: COOPER NUCLEAR STATION - ISSUANCE OF AMENDMENT TO REVISE
TECHNICAL SPECIFICATION (TS) 3.5.1 TO INCORPORATE TS TASK FORCE
(TSTF) TRAVELER 318 (TAC NO. MC0693)

Dear Mr. Edington:

The Commission has issued the enclosed Amendment No. 203 to Facility Operating License No. DPR-46 for the Cooper Nuclear Station. The amendment consists of changes to the TS in response to your application dated August 25, 2003.

The amendment would revise TS 3.5.1 to incorporate TSTF-318 for one low pressure coolant injection pump inoperable in each of the two emergency core cooling systems divisions.

A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

Michelle C. Honcharik, Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-298

Enclosures: 1. Amendment No. 203 to DPR-46
2. Safety Evaluation

cc w/encls: See next page

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NEBRASKA PUBLIC POWER DISTRICT

DOCKET NO. 50-298

COOPER NUCLEAR STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 203
License No. DPR-46

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Nebraska Public Power District (the licensee) dated August 25, 2003, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. DPR-46 is hereby amended to read as follows:

- (2) Technical Specifications

- The Technical Specifications contained in Appendix A, as revised through Amendment No. 203, are hereby incorporated in the license. The Nebraska Public Power District shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of its date of issuance and shall be implemented within 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Robert A. Gramm, Chief, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: March 31, 2004

ATTACHMENT TO LICENSE AMENDMENT NO. 203

FACILITY OPERATING LICENSE NO. DPR-46

DOCKET NO. 50-298

Replace the following pages of the Appendix A Technical Specifications with the enclosed revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

3.5-1
3.5-2
3.5-3

INSERT

3.5-1
3.5-2
3.5-3

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 203 TO

FACILITY OPERATING LICENSE NO. DPR-46

NEBRASKA PUBLIC POWER DISTRICT

COOPER NUCLEAR STATION

DOCKET NO. 50-298

1.0 INTRODUCTION

By application dated August 25, 2003 (ML032450233), Nebraska Public Power District (the licensee), requested changes to the Technical Specifications (TS) for Cooper Nuclear Station. The proposed changes would revise TS 3.5.1 to incorporate TS Task Force (TSTF) Standard TS Change Traveler, TSTF-318, "Revise 3.5.1 for one LPCI [low pressure coolant injection] pump inoperable in each of two ECCS [emergency core cooling system] divisions."

The current TS 3.5.1 Condition A provides for a seven-day Limiting Condition for Operation (LCO) for one inoperable LPCI subsystem. The proposed amendment would modify TS LCO requirement 3.5.1 for Condition A to allow one LPCI pump inoperable in both LPCI subsystems for a period of seven days. The current TS actions require entry into shutdown LCO 3.0.3 for this condition. The proposed change will also revise Conditions D, F, and H to be consistent with and reflect the change to Condition A. The proposed addition to Condition A with one LPCI pump inoperable in both subsystems, reflects an enhanced reliability of at least one LPCI pump being available for post-loss of coolant accident (LOCA) injection. Additionally, during an event that does not impact LPCI availability and requires LPCI injection, one pump in each LPCI subsystem provides more injection flow than two pumps in a single subsystem.

2.0 REGULATORY EVALUATION

The staff finds that the licensee in Section 5.2 of its submittal identified the applicable regulatory requirements and guidance. The regulatory requirements and guidance on which the staff based its acceptance are TSTF-318 and NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR [Boiling Water Reactor]/4," Volume 1, Revision 2, June 2001 (ML011090341).

The proposed change is consistent with the NRC-approved TSTF-318. In addition, the proposed change is consistent with NUREG-1433. The TS Bases for TS 3.5.1 will be revised to provide supporting and clarifying information for the condition of one LPCI pump in both LPCI subsystems being inoperable at the same time for a period of seven days.

3.0 TECHNICAL EVALUATION

The staff has reviewed the licensee's regulatory and technical analyses in support of its proposed license amendment which are described in Sections 5 and 4, respectively, of the licensee's submittal.

The pre-TSTF-318, TS 3.5.1 LCO Actions required actions to be taken when two LPCI pumps in a given LPCI subsystem were not operable, and required entry into shutdown LCO 3.0.3 for a condition of one LPCI pump in each subsystem inoperable. NRC-approved TSTF-318 revised TS 3.5.1 by adding to TS 3.5.1 LCO Actions, Condition A, a provision for the inoperability of one LPCI pump in both LPCI subsystems during MODES 1, 2, and 3 for seven days. Therefore, the proposed change will allow two inoperable LPCI pumps (i.e., one in each subsystem or two from one subsystem) for seven days in MODES 1, 2, and 3.

The standard BWR/4 residual heat removal (RHR) configuration consists of two LPCI pumps in each of the two LPCI (ECCS injection mode) subsystems, for a total of four LPCI pumps. Typically, one subsystem consists of pumps A and B and the second subsystem consists of pumps C and D. Pumps A and C are powered from Electrical Division I and pumps B and D are powered from Electrical Division II. The pre-TSTF-318 TS 3.5.1 Condition A allowed one low pressure ECCS injection/spray subsystem (i.e., one or both LPCI pumps in one subsystem) to be inoperable for seven days during MODES 1, 2, and 3. The allowed two inoperable LPCI pumps from one subsystem were from two different electrical divisions. However, despite the power supply diversities, the currently acceptable configuration is not single failure proof. A single failure of the remaining subsystem's injection valve (i.e., electrical or mechanical failure) would result in unavailability of all four LPCI pumps.

TSTF-318 added a new entry into TS 3.5.1 Condition A which would also allow two inoperable LPCI pumps (one in each subsystem) for seven days. The staff considered it acceptable to have two LPCI pumps from the two subsystems out-of-service because this configuration represents a level of risk equal to or less than that of the currently approved configurations by:

1. Providing adequate injection to either loop (pumps not injecting into the same header will actually provide more flow), and
2. Not being vulnerable to single failure of the injection valve, and if pumps are from different emergency power divisions (not required but desirable), not being vulnerable to a single emergency diesel generator failure.

The ECCS is designed to limit fuel clad temperatures over the complete spectrum of possible break sizes in the reactor coolant pressure boundary including the design basis break. The LPCI subsystems provide protection to the core in the case of a large break in the reactor coolant pressure boundary when reactor water level cannot be maintained and the reactor vessel rapidly depressurizes. Protection extends to a small break in which High Pressure Coolant Injection is unable to maintain the reactor water level and the Automatic Depressurization System has operated to lower reactor vessel pressure.

The proposed addition to Condition A reflects a more reliable configuration of at least one LPCI pump being available for post-LOCA injection. With one subsystem inoperable, the LOCA can eliminate the availability of the remaining subsystem for injection, while a LOCA during operations with only one LPCI pump in each ECCS division will only remove the availability of one of the two remaining LPCI pumps. Additionally, during an event that does not impact LPCI availability and requires LPCI injection, one pump in each LPCI subsystem provides 400 gallons per minute more injection flow than two pumps in a single subsystem.

Thus, allowing one LPCI pump to be inoperable in both subsystems for a period of seven days will not affect the ability of the LPCI subsystem components to perform their designed function. This TS change represents a more reliable LPCI configuration than allowed by the current TS, and therefore, the same seven-day Completion Time is justified.

License amendments to revise TS 3.5.1, for one LPCI pump inoperable in each of the two ECCS divisions, have been approved by the NRC staff for Browns Ferry, Susquehanna, and Peach Bottom.

The staff has reviewed the licensee's regulatory and technical analyses in support of its proposed license amendment. The proposed change: (1) provides adequate injection to either loop, with pumps not injecting into the same header providing more flow, and (2) does not cause vulnerability to single failure of the injection valve, and if pumps are from different emergency power divisions (not required but desirable), does not cause vulnerability to a single emergency diesel generator failure. The proposed revision to Conditions D, F, and H are consistent with and reflect the change to Condition A, and are consistent with TSTF-318. Based on the above, the staff finds that the licensee's proposed amendment is acceptable.

4.0 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 comments.

5.0 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. 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 published October 14, 2003, (68 FR 59218). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 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.

6.0 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: T. Ford

Date: March 31, 2004

Cooper Nuclear Station

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