



Nebraska Public Power District

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NLS2005035

July 21, 2005

U.S. Nuclear Regulatory Commission

Attention: Document Control Desk

Washington, D.C. 20555-0001

**SUBJECT: Application For Technical Specification Improvement To Revise Control Rod Scram Time Testing Frequency
Cooper Nuclear Station, Docket No. 50-298, DPR-46**

The purpose of this letter is for the Nebraska Public Power District (NPPD) to request an amendment to Facility Operating License DPR-46 in accordance with the provisions of 10 CFR 50.4 and 10 CFR 50.90 to revise the Cooper Nuclear Station (CNS) Technical Specifications (TS).

The proposed amendment would revise TS testing frequency for the surveillance requirement (SR) in TS 3.1.4, "Control Rod Scram Times." These changes are based on Technical Specification Task Force (TSTF) change traveler TSTF-460 (Revision 0) that has been approved generically for the boiling water reactor (BWR) Standard TS, NUREG-1433 (BWR/4) and NUREG-1434 (BWR/6) by revising the frequency of SR 3.1.4.2, control rod scram time testing, from "120 days cumulative operation in MODE 1" to "200 days cumulative operation in MODE 1." A notice announcing the availability of this proposed TS change using the consolidated line item improvement process was published in the Federal Register on August 23, 2004 (69 FR 51864).

Attachment 1 provides a description of the proposed change and confirmation of applicability. Attachment 2 provides the existing TS pages marked-up to show the proposed change. Attachment 3 provides the revised TS pages in final typed format. Attachment 4 provides the associated TS Bases changes for information.

NPPD requests U.S. Nuclear Regulatory Commission (NRC) approval of the proposed TS change and issuance of the requested license amendment by January 10, 2006, with the amendment being implemented within 30 days.

In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the State of Nebraska official. Copies are also being provided to the NRC Region IV office and the CNS Resident Inspector in accordance with 10 CFR 50.4(b)(1).

The proposed TS changes have been reviewed by the necessary safety review committees (Station Operations Review Committee and Safety Review and Audit Board). Amendments to

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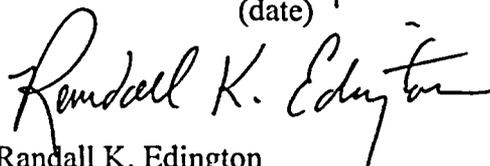
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the CNS Facility Operating License through Amendment 211, dated March 22, 2005, have been incorporated into this request. This request is submitted under oath pursuant to 10 CFR 50.30(b).

If you have any questions concerning this matter, please contact Paul Fleming, Licensing Manager, at (402) 825-2774.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 21 July 2005
(date)



Randall K. Edington
Vice President – Nuclear and
Chief Nuclear Officer

/rr

Attachments

- cc: Regional Administrator w/ attachments
USNRC - Region IV

- Senior Project Manager w/ attachments
USNRC - NRR Project Directorate IV-1

- Senior Resident Inspector w/ attachments
USNRC

- Nebraska Health and Human Services w/ attachments
Department of Regulation and Licensure

- NPG Distribution w/o attachments

- CNS Records w/ attachments

ATTACHMENT 1

DESCRIPTION AND ASSESSMENT

COOPER NUCLEAR STATION NRC DOCKET 50-298, LICENSE DPR-46

1.0 INTRODUCTION

The proposed license amendment revises the required testing frequency for the surveillance requirement (SR) in technical specification (TS) 3.1.4, "Control Rod Scram Times." A notice announcing the availability of this proposed TS change using the consolidated line item improvement process (CLIP) was published in the Federal Register on August 23, 2004 (69 FR 51864).

2.0 PROPOSED CHANGE

These changes are based on TS Task Force (TSTF) change traveler TSTF-460 (Revision 0) that has been approved generically for the boiling water reactor (BWR) Standard TS, NUREG-1433 (BWR/4) and NUREG-1434 (BWR/6). The required frequency of SR 3.1.4.2, control rod scram time testing, is changed from "120 days cumulative operation in MODE 1" to "200 days cumulative operation in MODE 1."

3.0 BACKGROUND

The background for this application is adequately addressed by the CLIP Notice of Availability published on August 23, 2004 (69 FR 51864) and TSTF-460.

4.0 REGULATORY REQUIREMENTS AND GUIDANCE

The applicable regulatory requirements and guidance associated with this application are adequately addressed by the CLIP Notice of Availability published on August 23, 2004 (69 FR 51864) and TSTF-460.

5.0 TECHNICAL ANALYSIS

Nebraska Public Power District (NPPD) has reviewed the safety evaluation (SE) published on August 23, 2004 (69 FR 51864) as part of the CLIP Notice of Availability. This verification included a review of the NRC staff's SE and the supporting information provided to support TSTF-460. NPPD has concluded that the justifications presented in the TSTF proposal and the SE prepared by the NRC staff are applicable to Cooper Nuclear Station (CNS) and justify this amendment for the incorporation of the changes to the CNS TS.

By Amendment No. 178, dated July 31, 1998, CNS converted to Improved Technical Specification (ITS), based on NUREG-1433, "Standard Technical Specifications,

General Electric Plants, BWR/4," Revision 1. The current TS, with TS Bases, requires that 10 percent of the 137 control rods (or at least 14 rods) be tested via sampling every 120 cumulative days of operation in Mode 1.

As described in the CLIIP model SE, part of the justification for the change in surveillance frequency is the high reliability of the CNS control rod drive system. As requested in the notice of availability published on August 23, 2004 (69 FR 51864), the historical performance of the control rod drive system at CNS is as follows:

The control rod insertion time test results at CNS have shown the control rod scram rates to be highly reliable. From June 13, 1999, to May 20, 2005, (approximately six years), CNS conducted a total of 2188 individual control rod scram time tests. Out of those tests only four (4) control rods were identified as 'slow.'

CNS replaced the ASCO scram solenoid pilot valves (SSPVs) with AVCO SSPVs on the 137 Hydraulic Control Units in 2003. The AVCO valve was selected because of its enhanced design, in which the elastomer diaphragms that are used in the ASCO valve are eliminated. By replacing the ASCO SSPVs with the AVCO SSPVs, the potential for elastomer diaphragm degradation is eliminated. This is considered to be an improvement to the Control Rod Drive System in that it has reduced the scram times to notch position 46. Since replacement of the SSPVs in 2003 a total of 827 individual control rod scram time tests have been performed with no 'slow' rods identified.

NPPD is confident that future scram time testing results at CNS will continue to satisfy the TS scram time requirements.

6.0 COMMITMENTS

As discussed in the CLIIP model SE published in the Federal Register on August 23, 2004 (69 FR 51864) for this TS improvement, NPPD is making the following regulatory commitment with the understanding that the NRC will include it as a condition for the issuance of the requested amendment:

NPPD will incorporate the revised acceptance criterion value of 7.5 percent into the TS Bases for CNS in accordance with the TS Bases Control Program in TS 5.5.10.

7.0 NO SIGNIFICANT HAZARDS CONSIDERATION

Nebraska Public Power District (NPPD) has reviewed the proposed no significant hazards consideration determination published on August 23, 2004 (69 FR 51864) as part of the CLIIP. NPPD has concluded that the proposed determination presented in the notice is applicable to Cooper Nuclear Station and the determination is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

8.0 ENVIRONMENTAL EVALUATION

NPPD has reviewed the environmental evaluation included in the model SE published on August 23, 2004 (69 FR 51864) as part of the CLIIP. NPPD has concluded that the staff's findings presented in that evaluation are applicable to CNS and the evaluation is hereby incorporated by reference for this application.

9.0 PRECEDENT

This application is being made in accordance with the CLIIP. NPPD is not proposing variations or deviations from the TS changes described in TSTF-460 or the NRC staff's model SE published on August 23, 2004 (69 FR 51864).

10.0 REFERENCES

Federal Register Notice: Notice of Availability of Model Application Concerning Technical Specifications Improvement Regarding Revision to the Control Rod Scram Time Testing Frequency in STS 3.1.4, "Control Rod Scram Times" for General Electric Boiling Water Reactors Using the Consolidated Line Item Improvement Process, published August 23, 2004 (69 FR 51864).

ATTACHMENT 2

**PROPOSED TECHNICAL SPECIFICATION REVISIONS
(MARK-UP)**

**COOPER NUCLEAR STATION
NRC DOCKET 50-298, LICENSE DPR-46**

Technical Specification Pages
3.1-13

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.1.4.1 (continued)	Prior to exceeding 40% RTP after each reactor shutdown \geq 120 days
SR 3.1.4.2 Verify, for a representative sample, each tested control rod scram time is within the limits of Table 3.1.4-1 with reactor steam dome pressure \geq 800 psig.	120 ²⁰⁰ days cumulative operation in MODE 1
SR 3.1.4.3 Verify each affected control rod scram time is within the limits of Table 3.1.4-1 with any reactor steam dome pressure.	Prior to declaring control rod OPERABLE after work on control rod or CRD System that could affect scram time
SR 3.1.4.4 Verify each affected control rod scram time is within the limits of Table 3.1.4-1 with reactor steam dome pressure \geq 800 psig.	Prior to exceeding 40% RTP after work on control rod or CRD System that could affect scram time <u>AND</u> Prior to exceeding 40% RTP after fuel movement within the reactor pressure vessel

ATTACHMENT 3

**PROPOSED TECHNICAL SPECIFICATION REVISIONS
(FINAL TYPED)**

**COOPER NUCLEAR STATION
NRC DOCKET 50-298, LICENSE DPR-46**

Technical Specification Pages
3.1-13

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.4.1 (continued)		Prior to exceeding 40% RTP after each reactor shutdown ≥ 120 days
SR 3.1.4.2	Verify, for a representative sample, each tested control rod scram time is within the limits of Table 3.1.4-1 with reactor steam dome pressure ≥ 800 psig.	200 days cumulative operation in MODE 1
SR 3.1.4.3	Verify each affected control rod scram time is within the limits of Table 3.1.4-1 with any reactor steam dome pressure.	Prior to declaring control rod OPERABLE after work on control rod or CRD System that could affect scram time
SR 3.1.4.4	Verify each affected control rod scram time is within the limits of Table 3.1.4-1 with reactor steam dome pressure ≥ 800 psig.	Prior to exceeding 40% RTP after work on control rod or CRD System that could affect scram time <u>AND</u> Prior to exceeding 40% RTP after fuel movement within the reactor pressure vessel

ATTACHMENT 4

**PROPOSED TECHNICAL SPECIFICATIONS BASES REVISIONS
MARKUP FORMAT**

**COOPER NUCLEAR STATION
NRC DOCKET 50-298, LICENSE DPR-46**

Technical Specification Bases Pages

B3.1-26

Note: TS Bases pages are provided for information. Following approval of the proposed TS change, Bases changes will be implemented in accordance with TS 5.5.10, "Technical Specification (TS) Bases Control Program."

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.1.4.2

Additional testing of a sample of control rods is required to verify the continued performance of the scram function during the cycle. A representative sample contains at least 10% of the control rods. The sample remains representative if no more than 20% of the control rods in the sample tested are determined to be "slow." With more than 20% of the sample declared to be "slow" per the criteria in Table 3.1.4-1, additional control rods are tested until this 20% criterion (i.e., 20% of the entire sample size) is satisfied, or until the total number of "slow" control rods (throughout the core, from all surveillances) exceeds the LCO limit. For planned testing, the control rods selected for the sample should be different for each test. Data from inadvertent scrams should be used whenever possible to avoid unnecessary testing at power, even if the control rods with data may have been previously tested in a sample. The 200 day Frequency is based on operating experience that has shown control rod scram times do not significantly change over an operating cycle. This Frequency is also reasonable based on the additional Surveillances done on the CRDs at more frequent intervals in accordance with LCO 3.1.3 and LCO 3.1.5, "Control Rod Scram Accumulators."

7.5%

200

SR 3.1.4.3

When work that could affect the scram insertion time is performed on a control rod or the CRD System, testing must be done to demonstrate that each affected control rod retains adequate scram performance over the range of applicable reactor pressures from zero to the maximum permissible pressure. The scram testing must be performed once before declaring the control rod OPERABLE. The required scram time testing must demonstrate the affected control rod is still within acceptable limits. The limits for reactor pressures < 800 psig are found in the Technical Requirements Manual (Ref. 8) and are established based on a high probability of meeting the acceptance criteria at reactor pressures \geq 800 psig. Limits for \geq 800 psig are found in Table 3.1.4-1. If testing demonstrates the affected control rod does not meet these limits, but is within the 7-second limit of Table 3.1.4-1, Note 2, the control rod can be declared OPERABLE and "slow."

(continued)

