

June 8, 1995

Mr. Guy R. Horn
Vice-President, Nuclear
Nebraska Public Power District
P. O. Box 499
Columbus, NE 68602-0499

SUBJECT: COOPER NUCLEAR STATION - AMENDMENT NO. 169 TO FACILITY
OPERATING LICENSE NO. DPR-46 (TAC NO. M74932)

Dear Mr. Horn:

The Commission has issued the enclosed Amendment No. 169 to Facility Operating License No. DPR-46 for the Cooper Nuclear Station. The amendment consists of changes to the Technical Specifications in response to your application dated September 28, 1990.

The amendment revises the Technical Specifications to establish periodic operability testing of the reactor vessel overfill protection system. The changes were requested to satisfy a commitment in your response to Generic Letter (GL) 89-19, "Request for Action Related to Resolution of Unresolved Safety Issue (USI) A-47."

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

Sincerely,

ORIGINAL SIGNED BY:
James R. Hall, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-298

Enclosures: 1. Amendment No. 169 to
License No. DPR-46
2. Safety Evaluation

cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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Sincerely,

A handwritten signature in cursive script that reads "James R. Hall".

James R. Hall, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-298

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License No. DPR-46
2. Safety Evaluation

cc w/encls: See next page

Mr. Guy R. Horn
Nebraska Public Power Company

Cooper Nuclear Station

cc:

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

NEBRASKA PUBLIC POWER DISTRICT

DOCKET NO. 50-298

COOPER NUCLEAR STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 169
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 September 28, 1990, 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.

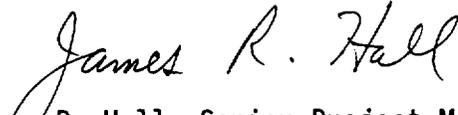
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. DPR-46 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 169, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



James R. Hall, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: June 8, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 169

FACILITY OPERATING LICENSE NO. DPR-46

DOCKET NO. 50-298

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

REMOVE PAGES

49
67e
82c
87a
87b

INSERT PAGES

49
67e
82c
87a
87b

LIMITING CONDITIONS FOR OPERATION

E. Drywell Leak Detection

The limiting conditions of operation for the instrumentation that monitors drywell leak detection are given in Table 3.2.E.

F. Primary Containment Surveillance Information

The limiting conditions of operation for the instrumentation that provides surveillance information readouts are given in Table 3.2.F.

G. Recirculation Pump Trip

The limiting conditions for operation for the instrumentation that trips the recirculation pumps as a means of limiting the consequences of a failure to scram during an anticipated transient are given in Table 3.2.G.

H. Post-Accident Monitoring

The limiting conditions for operation for the instrumentation that monitors post-accident conditions are given in Table 3.2.H.

I. Alternate Shutdown Capability

1. The alternate shutdown instruments listed in Table 3.2.I-1 and controls listed in Table 3.2.I-2 shall be operable during reactor power operations and when the reactor coolant temperature is above 212°F.
2. With less than the minimum equipment specified in Table 3.2.I-1 and 3.2.I-2 operable, restore the inoperable equipment to operable status within 30 days, or notify the NRC and provide plans to restore alternate shutdown capability.

J. Reactor Vessel Overfill Protection

1. The reactor vessel overfill protection instrumentation listed in Table 3.2.J shall be operable during reactor power operation.
2. With less than the minimum number of instrumentation channels operable, restore the inoperable equipment to operable status within 30 days. If this condition cannot be met, an orderly shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours.

SURVEILLANCE REQUIREMENTS

E. Drywell Leak Detection

Instrumentation shall be calibrated and checked as indicated in Table 4.2.E.

F. Primary Containment Surveillance Information

Instrumentation shall be calibrated and checked as indicated in Table 4.2.F.

G. Recirculation Pump Trip

Instrumentation shall be functionally tested and calibrated as indicated on Table 4.2.G.

H. Post-Accident Monitoring

Instrumentation shall be functionally tested and calibrated as indicated on Table 4.2.H.

I. Alternate Shutdown Capability

1. Each monitoring instrumentation channel of Table 3.2.I-1 shall be demonstrated operable by performing the Instrument Check and Channel Calibration at the frequencies shown on Table 4.2.I.
2. Each isolation switch, power supply, and control circuit for the components listed in Table 3.2.I-2 shall be demonstrated operable at least once per cycle by operating each actuated component from the Alternate Shutdown Panels.

J. Reactor Vessel Overfill Protection

Each instrumentation channel listed in Table 3.2.J shall be demonstrated operable by performing an Instrument Check, Instrument Calibration, and Instrument Functional Test at the frequencies given in Table 4.2.J.

Table 3.2.J

Reactor Vessel Overfill Protection

<u>Instrument</u>	<u>Instrument I. D. Number</u>	<u>Setting Limit</u>	<u>Minimum Number of Operable Instrument Channels</u>
Reactor High Water Level	NBI-LT-52A,B,C	≤58.5" indicated level	2

Table 4.2.J

Reactor Vessel Overfill Protection
Surveillance Frequencies

<u>Instrument</u>	<u>Instrument I.D. Number</u>	<u>Functional Test Frequency</u>	<u>Calibration Frequency</u>	<u>Instrument¹ Check</u>
Reactor High Water Level	NBI-LT-52A	Once/Oper. Cycle	Once/Oper. Cycle	Once/Shift
	NBI-LT-52B	Once/Oper. Cycle	Once/Oper. Cycle	Once/Shift
	NBI-LT-52C	Once/Oper. Cycle	Once/Oper. Cycle	Once/Shift

¹ The instrument check shall be accomplished by comparing reactor vessel level indicators RFC-LI-94A,B,C.

3.2 BASES (Cont'd)

F. Primary Containment Surveillance Information

For each parameter monitored, as listed in Table 3.2.F, there are two (2) channels of instrumentation. By comparing readings between the two (2) channels, a near continuous surveillance of instrument performance is available. Any deviation in readings will initiate an early recalibration, thereby maintaining the quality of the instrument readings.

The operability of the reactor water level instrumentation in Tables 3/4.2.F ensures that sufficient information is available to monitor and assess accident situations.

G. Recirculation Pump Trip

The recirculation pump trip has been added as a means of limiting the consequences of the unlikely occurrence of a failure to scram during an anticipated transient. The response of the plant to this postulated event falls within the envelope of study events given in General Electric Company Topical Report, NEDO-10349, dated March, 1971.

H. Post-Accident Monitoring

The post-accident monitoring instrumentation supplements existing instrumentation that was designed to monitor primarily the normal operational ranges of these parameters. Post-accident monitoring instrumentation provides information for the ranges that may exist during the extreme conditions postulated to occur during and after some accidents.

I. Alternate Shutdown Capability

The purpose of the Alternate Shutdown System is to provide the capability to shut down the plant in the unlikely event of a fire which disables the controls and instrumentation necessary to shut down the plant from the control room. As documented in the CNS Response to 10CFR50, Appendix R, "Fire Protection of Safe Shutdown Capability," Volume III, there are five areas of the plant that necessitate alternate shutdown capability in accordance with Section III.G.3 of Appendix R. Those areas are: the control room, the cable spreading room, the cable expansion room, the auxiliary relay room and the northeast corner of the Reactor Building 903' elevation.

The Alternate Shutdown (ASD) System provides a means of controlling the High Pressure Coolant Injection (HPCI), Automatic Depressurization (ADS), Residual Heat Removal (RHR) Torus Cooling, and Reactor Equipment Cooling Systems independent of the five plant areas requiring alternate shutdown. Using the alternate shutdown system, the plant can be cooled down and depressurized independent of a fire in any of the five plant areas necessitating ASD capability.

J. Reactor Vessel Overfill Protection

The feedwater/main turbine trip system activation instrumentation is provided to initiate action of the feedwater/main turbine trip system in the event of a high reactor vessel water level (Level 8) to mitigate potential damage to the turbine due to moisture carryover.

The Reactor Vessel Overfill Protection System is designed with three instrumentation channels. By comparing readings between the three channels, a near continuous surveillance of instrument performance is available.

REFERENCES

1. "Low-Low Set Relief Logic System and Lower MSIV Water Level Trip for Cooper Nuclear Station", NEDE 22197, December 1982, General Electric Company.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 169 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 28, 1990, the Nebraska Public Power District (NPPD, the licensee) submitted a request for changes to the Cooper Nuclear Station Technical Specifications (TSs). The requested changes would establish periodic operability testing of the reactor vessel overfill protection system. The changes were requested to satisfy a commitment in the licensee's response to Generic Letter (GL) 89-19, "Request for Action Related to Resolution of Unresolved Safety Issue (USI) A-47."

2.0 BACKGROUND

In a letter dated September 20, 1989, the NRC staff issued GL 89-19, "Request for Action Related to Resolution of Unresolved Safety Issue (USI) A-47." As part of the technical resolution of USI A-47, the NRC concluded all boiling water reactors (BWRs) should provide automatic reactor vessel (RV) overfill protection and that plant procedures and TSs should include provisions to periodically verify the operability of the overfill protection system during reactor power operation. By letter dated May 4, 1990, NPPD responded to GL 89-19 and committed to submit a license amendment request to add TSs to periodically verify the operability of the RV overfill protection system. By letter dated September 28, 1990, the licensee provided this TS amendment request.

3.0 EVALUATION

The Cooper Nuclear Station utilizes a commercial-grade overfill protection system to detect and mitigate a RV high-water-level condition based on two-out-of-three initiating logic. The overfill system terminates main feedwater flow by tripping the main feedwater pump turbines. This action is initiated when RV level exceeds 58 inches (RV water level is maintained at approximately 35 inches during power operation).

The proposed changes add limiting conditions for operation (LCOs) and surveillance requirements for the feedwater system isolation instrumentation to TS 3/4.2, "Protective Instrumentation." The proposed changes are:

1. Add TS 3.2.J and Table 3.2.J, "Reactor Vessel Overfill Protection," with specifications for identification of instruments, trip setpoint, minimum channels operable, applicable modes, and action requirements for inoperable channels.
2. Add TS 4.2.J and Table 4.2.J, "Reactor Vessel Overfill Protection Surveillance Requirements," to specify frequencies for channel checks, calibrations, and functional tests.

As part of their response to GL 89-19, NPPD committed to provide TSs to establish periodic operability testing of the reactor vessel overfill protection system. NPPD has added the feedwater isolation function to TS 3/4.2. These TSs will require periodic testing of the overfill protection system and provide associated LCOs consistent with other protective system instrumentation. Adding the feedwater isolation operability and surveillance requirements to the TSs is anticipated to enhance the reliability of the system.

Based on the above, the staff has determined that the proposed TSs changes will have no adverse impact on plant safety and will enhance the current TSs by adding operability requirements for the RV overfill protection system. Therefore, the staff concludes that the proposed TS change 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 comment.

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 and changes 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 (55 FR 45885). 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.

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: R. Schaaf

Date: June 8, 1995