

Docket No. 50-298

MAR 17 1986

Mr. J. M. Pilant, Technical
Staff Manager
Nuclear Power Group
Nebraska Public Power District
Post Office Box 499
Columbus, Nebraska 68601

Dear Mr. Pilant:

The Commission has issued the enclosed Amendment No. 96 to Facility Operating License No. DPR-46 for the Cooper Nuclear Station. This amendment is in response to your application dated March 11, 1986.

The amendment changes the Technical Specifications to revise the setpoint for main steam line high flow isolation.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance and Opportunity for Hearing will be included in the Commission's Biweekly Federal Register Notice.

Sincerely,

William O. Long Original signed by

William O. Long, Project Manager
BWR Project Directorate #2
Division of BWR Licensing

Enclosures:

1. Amendment No. 96 to License No. DPR-46
2. Safety Evaluation

cc w/enclosures:
See next page

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Mr. J. M. Pilant
Nebraska Public Power District

Cooper Nuclear Station

CC:

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

NEBRASKA PUBLIC POWER DISTRICT

DOCKET NO. 50-298

COOPER NUCLEAR STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 96
License No. DPR-46

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Nebraska Public Power District dated March 11, 1986 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 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 licensee 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:

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(2) Technical Specification

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 96, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION



Daniel R. Muller, Director
BWR Project Directorate #2
Division of BWR Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 17, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 96

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 areas are indicated by marginal lines.

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COOPER NUCLEAR STATION
TABLE A (Page 1)
PRIMARY CONTAINMENT AND REACTOR VESSEL ISOLATION INSTRUMENTATION

Instrument	Instrument I.D. No.	Setting Limit	Minimum Number of Operable Components Per Trip System (1)	Action Required When Component Operability is Not Assured (2)
Main Steam Line High Rad.	RMP-RM-251, A,B,C,&D	\leq 3 Times Full Power	2	A or B
Reactor Low Water Level	NBI-LIS-101, A,B,C,&D	\geq +12.5" Indicated Level	2(4)	A or B
Reactor Low Low Water Level	NBI-LIS-57 A & B #2 NBI-LIS-58 A & B #2	\geq -37" Indicated Level	2	A or B
Reactor Low Low Low Water Level	NBI-LIS-57 A & B #1 NBI-LIS-58 A & B #1	\geq -145.5" Indicated Level	2	A or B
Main Steam Line Leak Detection	MS-TS-121, A,B,C,&D 122, 123, 124, 143, 144, 145, 146, 147, 148, 149, 150	\leq 200°F	2(6)	B
Main Steam Line High Flow	MS-dPIS-116 A,B,C,&D 117, 118, 119	\leq 150% of Rated Steam Flow	2(3)	B
Main Steam Line Low Pressure	MS-PS-134, A,B,C,&D	\geq 825 psig	2(5)	B
High Drywell Pressure	PC-PS-12, A,B,C,&D	\leq 2 psig	2(4)	A or B
High Reactor Pressure	RR-PS-128 A & B	\leq 75 psig	1	D
Main Condenser Low Vacuum	MS-PS-103, A,B,C,&D	\geq 7" Hg (7)	2	A or B
Reactor Water Cleanup System High Flow	RWCU-dPIS-170 A & B	\leq 200% of System Flow	1	C

3.2 BASES: (Cont'd)

and the guidelines of 10CFR100 will not be exceeded. For large breaks up to the complete circumferential break of a 28-inch recirculation line and with the trip setting given above, CSCS initiation and primary system isolation are initiated in time to meet the above criteria. Reference Paragraph VI.5.3.1 USAR.

The high drywell pressure instrumentation is a diverse signal for malfunctions to the water level instrumentation and in addition to initiating CSCS, it causes isolation of Group 2 and 6 isolation valves. For the breaks discussed above, this instrumentation will generally initiate CSCS operation before the low-low-low water level instrumentation; thus the results given above are applicable here also. The water level instrumentation initiates protection for the full spectrum of loss-of-coolant accidents and causes isolation of all isolation valves except Groups 4 and 5.

Venturis are provided in the main steam lines as a means of measuring steam flow and also limiting the loss of mass inventory from the vessel during a steam line break accident. The primary function of the instrumentation is to detect a break in the main steam line. For the worst case of accident, main steam line break outside the drywell, a trip setting of 150% of rated steam flow in conjunction with the flow limiters and main steam line valve closure, limits the mass inventory loss such that fuel is not uncovered, fuel clad temperatures peak at approximately 1000°F and release of radioactivity to the environs is below 10CFR100 guidelines. Reference Section XIV.6.5 USAR.

Temperature monitoring instrumentation is provided in the main steam tunnel and along the steam line in the turbine building to detect leaks in these areas. Trips are provided on this instrumentation and when exceeded, cause closure of isolation valves. See Spec. 3.7 for Valve Group. The setting is 200°F for the main steam leak detection system. For large breaks, the high steam flow instrumentation is a backup to the temp. instrumentation.

High radiation monitors in the main steam tunnel have been provided to detect gross fuel failure as in the control rod drop accident. With the established setting of 3 times normal background, and main steam line isolation valve closure, fission product release is limited so that 10CFR100 guidelines are not exceeded for this accident. Reference Section XIV.6.2 USAR.

Pressure instrumentation is provided to close the main steam isolation valves in RUN Mode when the main steam line pressure drops below Specification 2.1.A.6. The Reactor Pressure Vessel thermal transient due to an inadvertent opening of the turbine bypass valves when not in the RUN Mode is less severe than the loss of feedwater analyzed in Section XIV.5 of the USAR, therefore, closure of the Main Steam Isolation valves for thermal transient protection when not in RUN mode is not required.

The Reactor Water Cleanup System high flow and temperature instrumentation are arranged similar to that for the HPCI. The trip settings are such that core uncovering is prevented and fission product release is within limits.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 96 TO FACILITY OPERATING LICENSE NO. DPR-46
NEBRASKA PUBLIC POWER DISTRICT
COOPER NUCLEAR STATION
DOCKET NO. 50-298

1.0 INTRODUCTION

By letter dated March 11, 1986, the Nebraska Public Power District (the licensee) requested an amendment to Facility Operating License No. DPR-46 for the Cooper Nuclear Station. The proposed amendment would change the Technical Specifications to revise the maximum setpoint for main steam line high flow isolation instrumentation. This request was initiated following receipt by the licensee of a letter from the reactor vendor indicating that the existing setpoint is in apparent violation of the plant Technical Specifications.

2.0 EVALUATION

The proposed amendment would change the main steam line (MSL) high flow isolation setpoint limit from 140% of rated steam flow to 150% of rated steam flow to reflect the current actual setpoints of the instruments. The MSL high flow instrumentation is provided for detection of MSL breaks outside containment. It is one of several diverse means of initiating automatic MSL isolation in the event of MSL breaks of various sizes.

The basis for selection of the 140% setpoint is to provide a setting that is: (1) sufficiently high so as to preclude an inadvertent isolation of main steam isolation valve (MSIV) during surveillance testing (During MSIV testing, MSIVs are cycled one-at-a-time. This results in higher than normal steam flows in the lines not under test.), and (2) low enough to permit the high flow instrumentation to respond to small MSL breaks thereby serving as a backup to the other isolation instrumentation.

The proposed change would not affect the response of the high flow instrumentation to MSL breaks which result in a flow greater than 150% since such breaks would be detected with either setpoint. Furthermore, the response to breaks which result in an MSL flow less than 140% rated flow would not be affected since the high flow instrumentation is not relied upon to detect breaks of that size. The change would thus only affect the capability of the instrumentation to initiate isolation in event of an MSL break of a size which results in a steam flow of between 140% and 150% rated flow. This corresponds to break sizes of from 0.3 to 0.38 square feet, an increase of only 0.08 square feet. Within this range the other diverse MSL isolation functions relied upon for small breaks remain available.

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Based on the above, the proposed amendment would not affect the ability of the plant to detect and isolate an MSL break outside containment, nor would it result in significant increase in consequences of an MSL break. The proposed change is therefore acceptable.

3.0 EMERGENCY CIRCUMSTANCES

On March 10, 1986, promptly after reviewing a new General Electric report dated March 6, 1986, the licensee recognized the need to revise the maximum set point for main steam high flow isolation instrumentation. The licensee informed the NRC staff on the same day and on the next day requested the subject amendment to avoid the necessity of plant shutdown. The licensee's actions were very prompt and the licensee could not have otherwise avoided these emergency circumstances.

4.0 NO SIGNIFICANT HAZARDS CONSIDERATION

The Commission's regulations in 10 CFR 50.92 state that the Commission may make a final determination that a license amendment involves no significant hazards consideration if the operation of the facility in accordance with the amendment would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
- (3) Involve a significant reduction in a margin of safety.

The evaluation in Section 2.0 shows that the revised setpoint for main steam line high flow isolation would have no effect on the probability and no significant effect on the consequences of those accidents which the MSL flow instrumentation is intended to mitigate. The proposed change does not create a possibility of a new or different accident, and does not affect any margins of safety. Based on the above evaluation staff concludes that operation of the facility in the proposed manner would not involve a significant increase in the probability or consequences of an accident previously evaluated, would not create the possibility of a new or different kind of accident from any accident previously evaluated, and would not involve a significant reduction in a margin of safety.

Accordingly, we conclude the amendment involves no significant hazards consideration.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, consultation was held with the state of Nebraska by telephone. The State expressed no concern either from the standpoint of safety or no significant hazards consideration determination.

5.0 ENVIRONMENTAL CONSIDERATIONS

This 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 staff has determined that the amendment involves 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 made a final no significant hazards consideration finding with respect to this amendment. Accordingly, this 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 this amendment.

6.0 CONCLUSION

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: W. Long, W. Hodges

Dated: March 17, 1986