

FEB 3 1977

Docket No. 50-298

Nebraska Public Power District
ATTN: Mr. J. M. Pilant, Director
Licensing and Quality Assurance
Post Office Box 499
Columbus, Nebraska 68601

Gentlemen:

In response to your letter dated January 27, 1977, the Commission has issued the enclosed Amendment No. 34 to Facility Operating License No. DPR-46 for the Cooper Nuclear Station. The amendment extends the time period during which reactor operation is permissible with an inoperable High Pressure Coolant Injection System by an additional seven days until February 4, 1977. The Technical Specification (3.5.C.2) normally allows continued operation in this condition for seven days. Emergency authorization of this extension was granted by telephone and confirmed by our letter dated January 28, 1977.

Copies of the related Safety Evaluation and the Notice of Issuance also are enclosed.

Sincerely,

Original signed by
Dennis L. Ziemann
Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosures:

1. Amendment No. 34 to License No. DPR-46
2. Safety Evaluation
3. Notice

cc w/enclosures:
See next page

OT:RSB
A. Baer
2/2/77

OFFICE	DOR:ORB #2	DOR:ORB #2	OELD	DOR:AD/OT	DOR:ORB #2	DOR:AD/ORS
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DATE	2/1/77	2/2/77	2/1/77	2/1/77	2/3/77	2/3/77

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February 3, 1977

cc w/enclosures:

Mr. G. D. Watson, General Counsel
Nebraska Public Power District
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Mr. Arthur C. Gehr, Attorney
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400 Security Building
Phoenix, Arizona 85004

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U. S. Environmental Protection Agency
Region VII
ATTN: EIS COORDINATOR
1735 Baltimore Avenue
Kansas City, Missouri 64108

Chief, Energy Systems Analyses
Branch (AW-459)
Office of Radiation Programs
U. S. Environmental Protection Agency
Room 645, East Tower
401 M Street, S. W.
Washington, D. C. 20460

Mr. William Siebert, Commissioner
Nemaha County Board of Commissioners
Nebraska County Courtroom
Auburn, Nebraska 68305

cc w/enclosures and cy of NPPD's
filing dtd. 1/27/77:
Director, Department of Environmental
Control
Executive Building, Second Floor
Lincoln, Nebraska 68509



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. 34
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 January 27, 1977, 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.

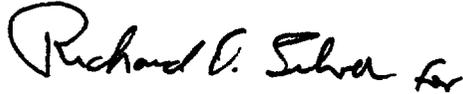
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C(2) of the Facility Operating License No. DPR-46 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 34, 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 January 28, 1977.

FOR THE NUCLEAR REGULATORY COMMISSION



Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 3, 1977

ATTACHMENT TO LICENSE AMENDMENT NO. 34

FACILITY OPERATING LICENSE NO. DPR-46

DOCKET NO. 50-298

Replace existing page 118 of the Appendix A portion of the Technical Specifications with the attached revised page bearing the same number. The changed area on the revised page is reflected by a marginal line.

LIMITING CONDITIONS FOR OPERATION

3.5.C HPCI Subsystem (cont'd.)

2. From and after the date that the HPCI Subsystem is made or found to be inoperable for any reason, continued reactor operation is permissible only during the succeeding seven days unless such subsystem is sooner made operable, providing that during such seven days all active components of the ADS subsystem, the RCIC system, the LPCI subsystem and both core spray subsystems are operable.

During the period from January 28, 1977, to February 4, 1977, the period for which reactor operation is permissible with the HPCI System inoperable is extended by seven days, to 14 days, provided that a procedure is available to the control room operator which describes when and how manual operation of the HPCI system is to be initiated and that during the seven day extension, all active components and logic circuits identified in 3.5.C.2 and 4.5.C.2 are again demonstrated operable and the RCIC and ADS logic circuits are demonstrated to be operable daily thereafter.

3. If the requirements of 3.5.C cannot be met, an orderly shutdown shall be initiated and the reactor pressure shall be reduced to 113 psig or less within 24 hours.

D. Reactor Core Isolation Cooling (RCIC) Subsystem

1. The RCIC Subsystem shall be operable whenever there is irradiated fuel in the reactor vessel, the reactor pressure is greater than 113 psig, and prior to reactor startup from a Cold Condition, except as specified in 3.5.D.2 below

SURVEILLANCE REQUIREMENT

4.5.C HPCI Subsystem (cont'd.)

<u>Item</u>	<u>Frequency</u>
d. Flow Rate at approximately 1000 psig Steam Press.	Once/3 months
e. Flow Rate at approximately 150 psig Steam Press.	Once/operating cycle

The HPCI pump shall be demonstrated to be capable of delivering at least 4250 gpm for a system head corresponding to a reactor pressure of 1000 to 150 psig.

2. When it is determined that the HPCI Subsystem is inoperable the RCIC, the LPCI subsystem, both core spray subsystems, and the ADS subsystem actuation logic shall be demonstrated to be operable immediately. The RCIC system and ADS subsystem logic shall be demonstrated to be operable daily thereafter.

D. Reactor Core Isolation Cooling (RCIC) Subsystem

1. RCIC Subsystem testing shall be performed as follows:

<u>Item</u>	<u>Frequency</u>
a. Simulated Automatic Actuation Test	Once/operating cycle



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 34 TO LICENSE NO. DPR-46

NEBRASKA PUBLIC POWER DISTRICT

COOPER NUCLEAR STATION

DOCKET NO. 50-298

INTRODUCTION

By letter dated January 27, 1977, Nebraska Public Power District (NPPD) requested that Specification 3.5.C.2 of the Cooper Nuclear Station (CNS) Technical Specifications be modified to extend the seven day period which reactor operation is permissible with the High Pressure Coolant Injection (HPCI) subsystem inoperable by an additional seven days until February 4, 1977.

BACKGROUND

CNS Technical Specification 3.5.C.2 states that after the date that the HPCI subsystem is made or found inoperable for any reason, continued reactor operation is permissible only during the succeeding seven days. Specification 3.5.C.3 requires the initiation of a reactor shutdown and a reduction of reactor pressure to 113 psig or less within 24 hours if Specification 3.5.C.2 cannot be met.

During HPCI surveillance testing on Friday, January 21, 1977, the HPCI testable check valve (A0-18) failed to seal and allowed backflow of feedwater through the HPCI injection line. At that time, NPPD declared the HPCI subsystem inoperable. Repair of A0-18 requires the plant to be shutdown, cooled down and depressurized.

NPPD originally estimated that the required repairs to A0-18 could be completed within a 48-hour period during the weekend of January 28 - 29, 1977. However, a new repair time estimate, based on the potential need to completely replace the check valve, indicates that approximately 4 days

may be needed to complete repairs. This new estimate of repair time, coupled with (1) the unusually high demands placed on electrical generating capacity in the Midwest because of the extremely cold weather experienced, and forecast, for that region, and (2) the loss of a 400 megawatt coal-fired station and the high probability of the loss of a 600 megawatt station which, together with the loss of CNS, has resulted in NPPD's request to extend the permissible reactor operating time of Specification 3.5.C.2 an additional seven days.

Additionally, NPPD's Safety Review and Audit Board has concluded that continued operation of CNS, during the period of the extension request, would not be significantly detrimental to the operational safety of the station and would, in fact, be in the best interest of the public in its regional service area. The Board conclusions were essentially based on the following:

1. A significant number (~33%) of primary system pressure boundary welds were inspected, as part of the ongoing In-Service Inspection program, during the recent refueling outage. Although one extremely small (seepage) leak was detected and repaired in a 2" reactor drain line, a 100% inspection of the welds associated with the recirculation system 4" bypass lines and the core spray system revealed no indication of cracks. Since both of these systems have previously been identified, at operating plants, as having a high potential for cracking, the Board believed that a high probability exists that the integrity of the primary system pressure boundary will be maintained.
2. Also, should a small leak develop, its existence would be readily identified, through the Unidentified Leak Detection System, at which time a plant shutdown would be initiated and the HPCI system operated in a manual mode. It was the opinion of the Board that HPCI system operation in the manual mode would result in flow to the reactor; however, since the testable check valve failure mechanism is not known, the quantity of injected water could not be readily estimated.

EVALUATION

The HPCI subsystem is designed to provide adequate reactor core cooling in the event of a small break in the reactor coolant system. The system operates automatically to inject high pressure coolant into the reactor vessel through a series of motor operated valves and two check valves, one in the HPCI subsystem, the other in the feedwater system. Check valve, AO-18, which prevents back flow from the feedwater system to the HPCI subsystem, has been found leaking. One of the HPCI subsystem motor operated valves has been closed and the subsystem is not now operable in its automatic mode. However, the Automatic Depressurization System (ADS) and the Low Pressure Coolant Injection (LPCI) system are fully automatic and fully functional as a backup to the HPCI subsystem. To assure that this system is fully reliable when the HPCI is inoperable, the Technical Specifications require that all active components of the ADS, the LPCI, the Reactor Core Isolation Cooling System (RCIC), and both Core Spray (CS) systems be operable. The technical specifications also require that when the HPCI subsystem is inoperable, the RCIC, LPCI, CS and ADS actuation logic shall be demonstrated operable immediately, and the RCIC and ADS logic shall be demonstrated operable daily thereafter. The RCIC and the CS systems also provide some backup protection coupled with the ADS for small reactor coolant system breaks. Demonstration of the ADS, RCIC, LPCI and CS active component operability and LPCI and CS actuation logic operability was performed when the HPCI system was declared inoperable on January 21, 1977. The extension provided to the licensee required that such operability be demonstrated again on January 28, 1977.

Furthermore, the Coolant Leak Detection system, which is required to be operable by Technical Specifications, would identify a small reactor coolant system break. This would enable the operator to manually activate the HPCI from the control room to provide some additional cooling capacity. Special procedures on when and how to accomplish this are to be provided in the control room for the entire period of the extension.

These actions, which assure the enhanced reliability of the ADS and LPCI systems to perform all required emergency core cooling functions, coupled with the satisfactory results of the recent Inservice Inspection at CNS, assure that the protection against small breaks will not be diminished by continued operation of the facility under the conditions discussed above for the limited period of time until valve AO-18 can be repaired without disrupting needed energy supplies.

ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5)d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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.

Date: February 3, 1977

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-298

NEBRASKA PUBLIC POWER DISTRICT

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 34 to Facility Operating License No. DPR-46, issued to the Nebraska Public Power District (the licensee), which revised Technical Specifications for operation of the Cooper Nuclear Station (the facility) located in Nemaha County, Nebraska. The amendment was effective as of January 28, 1977.

The amendment extended the time period during which reactor operation is permissible with the High Pressure Coolant Injection System inoperable by an additional seven days beyond the original seven days allowed by the Cooper Nuclear Station Technical Specification (3.5.C.2).

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated January 27, 1977, (2) Amendment No. 34 to License No. DPR-46, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Auburn Public Library, 118 - 15th Street, Auburn, Nebraska 68305. A single copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this third day of February, 1977.

FOR THE NUCLEAR REGULATORY COMMISSION



Richard D. Silver, Acting Chief
Operating Reactors Branch #2
Division of Operating Reactors