Docket No. 50-298

OCT 06 1975

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

Gentlemen:

The Commission has issued the enclosed Amendment No. 12 to Facility License No. DPR-46 for the Cooper Nuclear Station. The amendment includes Change No. 15 to the Technical Specifications and is in response to your requests dated April 2 and August 28, 1975, which were submitted in reply to our letters dated February 14 and July 15, 1975, respectively.

The amendment defines new temperature limits for the suppression pool water to provide additional assurance of maintaining primary containment integrity.

Your letter of August 28 proposed a technical specification change regarding torus temperatures which was identical to the proposed specifications enclosed with our July 15 letter. In addition, your letter requested that we consider modifying specification 3.7.A.1.e to allow continued operation at over 110°F in the event that the source of heat into the suppression pool, i.e., relief valve blowdown, has been terminated prior to the time that the suppression pool temperature reaches 110°F. We have considered your suggestion and concluded that continued operation with a pool temperature in excess of 110°F is not justified. Therefore we have issued the technical specifications as proposed.

Your letter of August 28, 1975, also requested approval of a new specification (3.7.A.3) to provide the capability to drain the suppression chamber with the reactor in a fueled condition. This request will be addressed separately at a later date.

RR

CP-1

A copy of the related Federal Register Notice is also enclosed.

Sincerely,

Original Signed by:
Dennis L. Ziemann

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

Enclosures:
1. Amendment No. 12
   w/Change No. 15
2. Federal Register Notice

cc: see next page

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DATE	9/16/75	9/16/75	10/2/75	10/06/75	10/6/75	10/6/75

Form AEC-318 (Rev. 9-53) AECM 0240 ☆ U. S. GOVERNMENT PRINTING OFFICE: 1974-526-166

cc w/enclosures:
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P. O. Box 81686
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Mr. Arthur C. Gehr, Attorney
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Phoenix, Arizona 85004

Auburn Public Library
1118 - 15th Street
Auburn, Nebraska 68305

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

cc w/enclosures and cy of NPPD's
filings dtd. 2/14/75, 7/15/75
and 8/28/75:
Mr. James L. Higgins, Director
Department of Environmental Control
Executive Building, 2nd 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. 12
License No. DPR-46

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The applications for amendment by Nebraska Public Power District (the licensee) dated April 2 and August 28, 1975, comply 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; and

   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.

2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 3.B of Facility License No. DPR-46 is hereby amended to read as follows:

"B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. 15."

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

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by:
Karl R. Goller
for Roger S. Boyd, Acting Director
Division of Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Change No. 15 to the
Technical Specifications

Date of Issuance: OCT 06 1975

ATTACHMENT TO LICENSE AMENDMENT NO. 12

CHANGE NO. 15 TO THE TECHNICAL SPECIFICATIONS

FACILITY OPERATING LICENSE NO. DPR-46

DOCKET NO. 50-298

Delete existing pages 159 and 178 and insert the attached pages 159, 159a, 178 and 178a. The changed areas on the revised pages are shown by marginal lines.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7 Containment Systems	**4.7 Containment Systems**
Applicability:	Applicability:
Applies to the operating status of the primary and secondary containment systems.	Applies to the primary and secondary containment integrity.
Objective:	Objective:
To assure the integrity of the primary and secondary containment systems.	To verify the integrity of the primary and secondary containment.
Specification:	Specification:
A. Primary Containment	A. Primary Containment
1. At any time that the nuclear system is pressurized above atmospheric pressure or work is being done which has the potential to drain the vessel, the suppression pool water volume and temperature shall be maintained within the following limits except as specified in 3.7.A.2.	1.a. The suppression pool water level and temperature shall be checked once per day.
a. Minimum water volume - 87,650 ft^3	b. Whenever there is indication of relief valve operation or testing which adds heat to the suppression pool, the pool temperature shall be continually monitored and also observed and logged every 5 minutes until the heat addition is terminated.
b. Maximum water volume - 91,000 ft^3	c. Whenever there is indication of relief valve operation with the temperature of the suppression pool reaching 160°F or more and the primary coolant system pressure greater than 200 psig, an external visual examination of the suppression chamber shall be conducted before resuming power operation.
c. Maximum suppression pool temperature during normal power operation - 90°F.	d. A visual inspection of the suppression chamber interior, including water line regions, shall be made at each major refueling outage.
d. During testing which adds heat to the suppression pool, the water temperature shall not exceed 10°F above the normal power operation limit specified in c. above. In connection with such testing, the pool temperature must be reduced to below the normal power operation limit specified in c. above within 24 hours.	
e. The reactor shall be scrammed from any operating condition if the pool temperature reaches 110°F. Power operation shall not be resumed until the pool temperature is reduced below the normal power operation limit specified in c. above.	

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
f. During reactor isolation conditions, the reactor pressure vessel shall be depressurized to less than 200 psig at normal cooldown rates if the pool temperature reaches 120°F.	
15	
2. Primary containment integrity shall be maintained at all times when the reactor is critical or when the reactor water temperature is above	2. Integrated Leak Rate Testing a. Integrated leak rate tests (ILRT's)

be done when there is no requirement for core standby cooling systems operability as explained in bases 3.5.F.

Experimental data indicates that excessive steam condensing loads can be avoided if the peak temperature of the suppression pool is maintained below 160°F during any period of relief valve operation with sonic conditions at the discharge exit. Specifications have been placed on the envelope of reactor operating conditions so that the reactor can be depressurized in a timely manner to avoid the regime of potentially high suppression chamber loadings.

In addition to the limits on temperature of the suppression chamber pool water, operating procedures define the action to be taken in the event a relief valve inadvertently opens or sticks open. This action would include: (1) use of all available means to close the valve, (3) initiate suppression pool water cooling heat exchangers, (3) initiate reactor shutdown, and (4) if other relief valves are used to depressurize the reactor, their discharge shall be separated from that of the stuck-open relief valve to assure mixing and uniformity of energy insertion to the pool. 15

Because of the large volume and thermal capacity of the suppression pool, the volume and temperature normally changes very slowly and monitoring these parameters daily is sufficient to establish any temperature trends. By requiring the suppression pool temperature to be continually monitored and frequently logged during periods of significant heat addition, the temperature trends will be closely followed so that appropriate action can be taken. The requirement for an external visual examination following any event where potentially high loadings could occur provides assurance that no significant damage was encountered. Particular attention should be focused on structural discontinuities in the vicinity of the relief valve discharge since these are expected to be the points of highest stress.

Inerting

Safety Guide 7 assumptions for Metal-Water reaction result in hydrogen concentration in excess of the Safety Guide 7 flammability limit. By keeping the oxygen concentration less than 4% by volume the requirements of Safety Guide 7 are satisfied.

The occurrence of primary system leakage following a major refueling outage or other scheduled shutdown is much more probable than the occurrence of the loss-of-coolant accident upon which the specified oxygen concentration limit is based. Permitting access to the drywell for leak inspections during a startup is judged prudent in terms of the added plant safety offered without significantly reducing the margin of safety. Thus, to preclude the possibility of starting the reactor and operating for extended periods of time with significant leaks in the primary system, leak inspections are scheduled during periods when the primary system is at or near rated operating temperature and pressure. The 24-hour period to provide inerting is judged to be sufficient to perform the leak inspection and establish the required oxygen concentration.

The primary containment is normally slightly pressurized during periods of reactor operation. Nitrogen used for inerting could leak out of the containment but air could not leak in to increase oxygen concentration. Once the containment is filled with nitrogen to the required concentration, no monitoring of oxygen concentration is necessary. However, at least twice a week the oxygen concentration will be determined as added assurance.

The 500 gallon conservative limit on the nitrogen storage tank assures that adequate time is available to get the tank refilled assuming normal plant operation. The estimated maximum makeup rate is 1500 SCFD which would require about 160 gallons for a 10 day makeup requirement. The normal leak rate should be about 200 SCFD.

The inerting requirements as now stated will be in effect until the installation of the CAD system is completed.

Vacuum Relief

The purpose of the vacuum relief valves is to equalize the pressure between the

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-298

NEBRASKA PUBLIC POWER DISTRICT

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

Notice is hereby given that the U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 12 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 is effective as of its date of issuance.

The amendment incorporates additional suppression pool water temperature limits: (1) during any testing which adds heat to the pool, (2) at which reactor scram is to be initiated and (3) requiring reactor pressure vessel depressurization. It also adds surveillance requirements for visual examination of the suppression chamber during each refueling and following operations in which the pool temperatures exceed 160°F and adds monitoring requirements of water temperatures during operations which add heat to the pool.

The applications for the amendment comply 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.

Notice of Proposed Issuance of Amendment to Facility Operating License

in connection with this action was published in the FEDERAL REGISTER on July 23, 1975 (40 F.R. 30883). No request for a hearing or petition for leave to intervene was filed following notice of the proposed action.

For further details with respect to this action, see (1) the applications for amendment dated April 2, 1975 and August 28, 1975, (2) Amendment No. 12 to License No. DPR-46, with Change No. 15, and (3) the Commission's related Safety Evaluation issued on July 15, 1975. 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, 1118 - 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 Reactor Licensing.

Dated at Bethesda, Maryland, this 6th day of October, 1975.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by:
Dennis L. Ziemann
Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Reactor Licensing

~~Enclosure 9~~

CHECKLIST FOR ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

APPLICANT Nebraska Public Power DOCKET NO. 50-298

FACILITY Cooper Unit 1 Amend 12/Cl. 15

PROJECT MANAGER R. Silver

LICENSING ASSISTANT R. Diggs

	DATE
Notice of Proposed Issuance Published In FEDERAL REGISTER Action Date	~~7/23~~/75 (40 FR 30883) ~~8/26/75~~
Issuance Package: ELD Concurrence	
1. License Amendment	~~10~~/2/75
2. FEDERAL REGISTER Notice	~~10~~/2/75
3. Staff Evaluation	~~7~~/15/75 - Already Issued
4. Letter to applicant	~~10~~/2/75
NEPA Determination: Required/Not Required	N/A
For Amendments Affecting Power Level:	
IE Notification and/or Concurrence	N/A
OAI Notification and/or Concurrence 1/	N/A
ADM Ofc. Notification and/or Concurrence	N/A
PA Notification	Not interested

1/ or name change, transfer of facility ownership

~~FEB 7~~ 1975