

#### 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. 161 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 February 1, 1993, 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.

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- 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. 161, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective 30 days after its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

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George T. Hubbard, Acting Director Project Directorate IV-1 Division of Reactor Projects III/IV/V Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: April 14, 1993

# ATTACHMENT TO LICENSE AMENDMENT NO. 161

# 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	INSERT PAGES
135	135
137	137
149	149

#### LIMITING CONDITIONS FOR OPERATION

#### SURVEILLANCE REQUIREMENTS

## 3.6.C. Coolant Leakage

- Any time irradiated fuel is in the the reactor vessel and reactor coolant temperature is above 212°F, reactor coolant leakage into the primary containment shall not exceed a 5 gpm unidentified leak rate, 25 gpm identified leak rate, or a 2 gpm increase in unidentified leak rate within the previous 24 hour period. If these limits cannot be met, an orderly SHUTDOWN shall be initiated and the reactor shall be in a COLD SHUTDOWN CONDITION within 24 hours.
- Each of the sump flow measuring systems shall be operable during 2. REACTOR POWER OPERATION. From and after the date that one of these systems is made or found to be inoperable for any reason and the sump flow leak rate cannot be quantified, REACTOR POWER OPERATION is permissible only during the succeeding 24 hours unless the system is sooner made OPERABLE. If leakage can be quantitatively measured by manually pumping the sump or measuring the difference in sump level, then REAC-TOR POWER OPERATION is permissible during the succeeding 30 days, unless the sump flow measuring system is sooner made OPERABLE.
- 3. The drywell air sampling system shall be OPERABLE during REACTOR POWER OPERATION. From and after the date that this system is made or found to be inoperable for any reason, REACTOR POWER OPERATION is permissible only during the succeedirg 30 days unless the system is sooner made OPERABLE.
- 4. If the requirements of specification 3.6.C.2 or 3 cannot be met, an orderly SHUTDOWN shall be initiated and the reactor shall be in a COLD SHUTDOWN CONDITION within 24 hours.

### 4.6.C. <u>Coolant Leakage</u>

 Reactor coolant system leakage shall be checked by the sump flow measuring systems and drywell air sampling system and recorded at least once per shift, not to exceed 12 hours.

### LIMITING CONDITIONS FOR OPERATION

### 3.6.E. Jet Pumps

 Whenever the reactor is in the STARTUP or RUN MODES, all jet pumps shall be OPERABLE. If it is determined that a jet pump is inoperable, or if two or more jet pump flow INSTRUMENT failures occur and cannot be corrected within 24 hours, an orderly SHUTDOWN shall be initiated and the reactor shall be in a COLD SHUTDOWN CONDITION within 24 hours.

## F. <u>Recirculation Pump Flow Mismatch</u>

 Following one recirculation pump operation, the discharge valve of the low speed recirculation pump may not be opened unless the speed of the faster pump is equal to or less than 50% of its rated speed.

### G. Inservice Inspection

To be considered OPERABLE, components shall satisfy the requirements contained in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for continued service of ASME Code Class 1, 2, and 3 components except where relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).

#### SURVEILLANCE REQUIREMENTS

# 4.6.E. Jet Pumps

- Whenever there is recirculation flow with the reactor in the STARTUP or RUN modes, jet pump OPERABILITY still be checked daily by verifying that the following conditions do not occur simultaneously:
- a. The recirculation pump flow differs by more than 15% from the established speed flow characteristics.
- b. The indicated value of core flow rate varies from the value derived from loop flow measurements by more than 10%.
- c. The diffuser to lower plenum differential pressure reading on an individual jet pump varies from the mean of all jet pump differential pressures by more than 10%.
- F. Recirculation Pump Flow Mismatch
- 1. Deleted.

### G. Inservice Inspection

- Inservice inspection shall be performed in accordance with the requirements for ASME Code Class 1, 2, and 3 components contained in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).
- The inservice inspection program for piping identified in NRC Generic Letter 88-01 shall be performed in accordance with the staff positions on schedule, methods, personnel, and sample expansion included in this generic letter.

#### 3.6.C & 4.6.C BASES (cont'd.)

indicates that leakage from a crack can be detected before the crack grows to a dangerous or critical size by mechanically or thermally induced cyclic loading, or stress corrosion cracking or some other mechanism characterized by gradual crack growth. This evidence suggests that for leakage somewhat greater than the limit specified for unidentified leakage, the probability is small that imperfections or cracks, associated with such leakage would grow rapidly. However, the establishment of allowable unidentified leakage greater than that given in 3.6.C on the basis of the data presently available would be premature because of uncertainties associated with the data. Leakage limits of 2 gpm increase within any 24 hour period and a maximum of 5 gpm are specified in 3.6.C and are also supported Generic Letter 88-01. The experimental and analytical data suggest a reasonable margin of safety that such leakage magnitude would not result from a crack approaching the critical size for rapid propagation. Leakage less than the magnitude specified can be detected reasonably in a matter of a few hours utilizing the available leakage detection schemes, and if the origin cannot be determined in a reasonably short time the plant should be SHUTDOWN to allow further investigation and corrective action.

The total leakage rate consists of all leakage, identified and unidentified, which flows to the drywell floor drain and equipment drain sumps.

The capacity of the drywell floor sump pumps is 50 gpm and the capacity of the drywell equipment sump pumps is also 50 gpm. Removal of 25 gpm from either of these sumps can be accomplished with margin.

Reactor coolant leakage is also sensed by the drywell air sampling system which detects gaseous, particulate, and icdine radioactivity. Leakage can also be detected by area temperature detectors, humidity detectors and pressure instrumentation. Due to the many and varied ways of detecting primary leakage, a 30 day allowable repair time is justified.

#### D. Safety and Relief Valves

The safety and relief values are required to be OPERABLE above the pressure (113 psig) at which the core spray system is not designed to deliver full flow. The pressure relief system for Cooper Nuclear Station has been sized to meet two design bases. First, the total safety/relief value capacity has been established to meet the overpressure protective criteria of the ASME code. Second, the distribution of this required capacity between safety values and relief values has been set to meet design basis IV.4.2.1 of the USAR which states that the nuclear system relief values shall prevent opening of the safety values during normal plant isolations and load rejections.

The details of the analysis which shows compliance with the ASME code requirements is presented in subsection IV.4 of the FSAR and the Reactor Vessel Overpressure Protection Summary Technical Report presented in question 4.20 of Amendment 11 to the FSAR. Results of the overpressure protection analysis are provided in the current reload license document.

Experience in relief and safety value operation shows that a testing of 50 percent of the values per year is adequate to detect failures or deteriorations.