



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

CONSUMERS POWER COMPANY

DOCKET NO. 50-255

PALISADES PLANT

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 49
License No. DPR-20

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Consumers Power Company (the licensee) dated December 18, 1978, as supplemented by letter dated January 12, 1979, 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.

298 232

790706021*

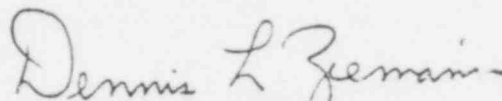
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 3.B of Provisional Operating License No. DPR-20 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 49, 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 the date of its issuance.

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: May 29, 1979

298 233

ATTACHMENT TO LICENSE AMENDMENT NO. 49
PROVISIONAL OPERATING LICENSE NO. DPR-20
DOCKET NO. 50-255

Revise Appendix A by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

REMOVE

5-3
5-4

INSERT

5-3
5-4

298 234

5.3 NUCLEAR STEAM SUPPLY SYSTEM (NSSS) (Contd)

5.3.2 Reactor Core and Control

- a. The reactor core shall approximate a right circular cylinder with an equivalent diameter of about 136 inches and an active height of about 132 inches.
- b. The reactor core shall consist of approximately 43,000 Zircaloy-4 clad fuel rods containing slightly enriched uranium in the form of sintered UO_2 pellets. The fuel rods shall be grouped into 204 assemblies.

A core plug or plugs may be used to replace one or more fuel assemblies subject to the analysis of the resulting power distribution.

- c. The fully loaded core shall contain approximately 211,000 pounds UO_2 and approximately 56,000 pounds of Zircaloy-4.

Poison may be placed in the fuel bundles for long-term reactivity control.

- d. The core excess reactivity shall be controlled by a combination of boric acid chemical shim, cruciform control rods, and mechanically fixed boron rods where required. Forty-five control rods shall be distributed throughout the core as shown in Figure 3-5 of the FSAR. Four of these control rods may consist of part-length absorbers.

5.3.3 Emergency Core Cooling System

An emergency core cooling system shall be installed consisting of various subsystems each with internal redundancy. These subsystems shall include four safety injection tanks, three high-pressure and two low-pressure safety injection pumps, a safety injection and refueling water storage tank, and interconnecting piping as shown in Section 6 of the FSAR.

298 235

POOR ORIGINAL

5.4 FUEL STORAGE

5.4.1 New Fuel Storage

- a. The pitch of the new fuel storage rack lattice is ≥ 9.375 inches, and every other position in the lattice shall be permanently occupied by an 8" x 8" structural steel box beam or core plugs such that the minimum center-to-center spacing of new fuel assemblies in the alternating storage array is 13.26". This distance in the alternating storage lattice is sufficient so that K_{eff} will not exceed 0.98 where fuel which contains not more than 41.24 grams of U-235 per axial centimeter of active fuel assembly is in place and optimum (i.e., aqueous foam) moderation is assumed, and the K_{eff} will not exceed 0.95 when the storage area is flooded with unborated water. The calculated K_{eff} includes a conservative allowance for uncertainties as described in CPC letters of 12/18/78 and 1/12/79.
- b. New fuel may also be stored in shipping containers.
- c. The new fuel storage racks are designed as a Class I structure.

5.4.2 Spent Fuel Storage

- a. Irradiated fuel bundles will be stored, prior to off-site shipment in the stainless steel-lined spent fuel pool.
- b. The low capacity spent fuel storage racks are designed and shall be maintained with a nominal 11.25" center-to-center distance between fuel assemblies having a maximum U-235 loading of < 38.3 grams of U-235 per axial centimeter of fuel assembly placed in the storage racks to ensure a K_{eff} equivalent to ≤ 0.95 when flooded with unborated water.
- c. The high capacity spent fuel storage racks are designed and shall be maintained with a nominal 10.25" center-to-center distance between fuel assemblies with the exception of the single Type E rack which has a nominal 11.25" center-to-center distance between fuel assemblies. The high capacity spent fuel storage racks are designed such that fuel having a maximum U-235 loading of 41.24 grams of U-235 per axial centimeter placed in the racks would result in a K_{eff} equivalent to ≤ 0.95 when flooded with unborated water. The K_{eff} of ≤ 0.95 includes a conservative allowance for uncertainties as described in CPC letter dated December 18, 1978.
- d. The spent fuel pool water boron concentration shall be verified at least once monthly to be equal to or greater than 1720 ppm.
- e. The spent fuel racks are designed as a Class I structure.
- f. Spent fuel shipping casks shall not be moved to the fuel storage building until such time as the NRC has reviewed and approved the spent fuel cask drop evaluation.
- g. Fuel stored in the high capacity storage racks as described in the SER supporting Amendment No. 28 shall have decayed for a minimum of 12 months if the storage racks are not supported by similarly designed, adjacent racks and the spent fuel pool wall or the cask anti-tipping device. (1)

298 236

References

- (1) Until needed for fuel storage, two A-type racks in the northeast corner of the spent fuel pool will be removed and replaced with the cask anti-tipping device to provide necessary seismic restraint.