



UNITED STATES  
ATOMIC ENERGY COMMISSION  
WASHINGTON, D.C. 20545

CONSUMERS POWER COMPANY

DOCKET NO. 50-155

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 7  
License No. DPR-6

1. The Atomic Energy Commission (the Commission) has found that:
  - A. The application for amendment by Consumers Power Company (the licensee) dated June 28, 1974, and supplement dated July 15, 1974, 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;
  - 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. Prior public notice of this amendment is not required since the amendment does not involve a significant hazards consideration.
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-6 is hereby amended to read as follows:

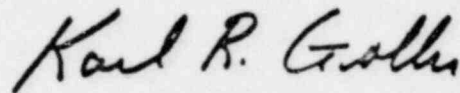
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"B. Technical Specifications

The Technical Specifications contained in Appendix A, 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. 44."

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

FOR THE ATOMIC ENERGY COMMISSION



Karl R. Goller, Assistant Director  
for Operating Reactors  
Directorate of Licensing

Attachment;  
Change No. 44 to Appendix A  
Technical Specifications

Date of Issuance: August 13, 1974

ATTACHMENT TO LICENSE AMENDMENT NO. 7

CHANGE NO. 44 TO TECHNICAL SPECIFICATIONS (APPENDIX A)

FACILITY OPERATING LICENSE NO. DPR-6

The Technical Specifications contained in Appendix A attached to Facility Operating License No. DPR-6 are revised as follows:

1. Replace the table contained in Section 5.2.1(b) with the attached table.
2. Replace Table 8.2 with the attached Table.
3. Change Section 4.1.2(b) to read as follows:

"4.1.2(b) Operating Requirements

A minimum of one reactor recirculating loop or its equivalent shall be used during all reactor power operations when reactor power level is above 1.0 MWt. The maximum operating pressure and temperature shall be the same as the reactor vessel. The controlled rate of change of temperature in the reactor vessel shall be limited to 100°F per hour. All other components in the system shall be capable of following this temperature change rate. The safety relief valves shall be set appropriately for all planned reactor operating pressures so that the allowable pressure of 1870 psia (1700 plus 10%) in the nuclear steam supply system is not exceeded. The emergency condenser, core spray and backup core spray systems shall be operable and ready for service at all times during power operation. However, should one emergency condenser tube bundle develop a leak during power operation, it will be permissible to isolate the leaking tube bundle until the next outage. Both bundles of the emergency condenser shall be available for service during cold to hot plant heat up for power production. The core spray system, shutdown cooling system and the firewater make up system to the condenser hot well shall be operable and ready for service at all times during power operation. The primary coolant shall be sampled and analyzed daily during periods of power operation. The following are absolute limits which if exceeded shall necessitate reactor shutdown. Corrective action will necessarily be taken at more stringent limits to minimize the possibility of these absolute limits ever being reached."

Conductivity	(Micromho/cm)
Maximum	5
Maximum transient*	10
pH (Lower and Upper limits)	4.0 and 10.0
Chloride Ion (Ppm)	140
Equilibrium Halogen Radioactivity (uc/ml)	35
Boron (Ppm)	100

Changed areas are shown by marginal lines.

\*Conductivity is expected to increase temporarily after startups from cold shutdown. The maximum transient value here stated is the maximum permissible and applies only to the period subsequent to a cold shutdown between criticality and 24 hours after reaching 20% rated power.

TABLE 8.2

	EEI UO <sub>2</sub> -PuO <sub>2</sub>	Centermelt		NFS-DA
		Intermediate	Advanced	
Minimum Core Burnout Ratio at Overpower	1.5*	1.5*	1.5*	1.5
Transient Minimum Burnout Ratio in Event of Loss of Recirculation From Rated Power	1.5	1.5	1.5	1.5
Maximum Heat Flux at Overpower, Btu/h-Ft <sup>2</sup>	500,000	-	-	402,000
Maximum Steady State Heat Flux, Btu/h-Ft <sup>2</sup>	410,000	500,000	500,000	329,000
Maximum Average Planer Linear Heat Generation Rate, Steady State, kW/Ft	**	**	**	7.56
Stability Criterion: Maximum Measured Zero-to-Peak Flux Amplitude, Percent of Average Operating Flux	20	-	-	20
Maximum Steady State Power Level, MW <sub>t</sub>	240	-	-	240
Maximum Value of Average Core Power Operation, Psig	1,485	-	-	1,485
Minimum Recirculation Flow Rate, Lb/h (Except During Pump Trip Tests or Natural Circulation Tests as Outlined in Section 8)	6 x 10 <sup>6</sup>	-	-	6 x 10 <sup>6</sup>
Maximum MWD/T of Contained Uranium for an Individual Bundle	23,500	-	-	23,500
Number of Bundles:				
Pellet UO <sub>2</sub>	-	1	3	-
Powder UO <sub>2</sub>	-	1	2	-

Rate-of-Change-of-Reactor Power During Power Operation:

Control rod withdrawal during power operation shall be such that the average rate-of-change-of-reactor power is less than 50 MW<sub>t</sub> per minute when power is less than 120 MW<sub>t</sub>, less than 20 MW<sub>t</sub> per minute when power is between 120 and 200 MW<sub>t</sub> per minute when power is between 200 and 240 MW<sub>t</sub>.

\*Based upon critical heat flux correlation, AFED-5286.

\*\*No longer used in reactor.

(Table to Section 5.2.1(b))

	Reload E-G and F, J-1 & J-2	Reload G
Minimum Core Burnout Ratio at Overpower	1.5*	1.5**
Transient Minimum Burnout Ratio in Event of Loss of Recirculation Pumps From Rated Power	1.5	1.5
Maximum Heat Flux at Overpower, Btu/h-ft <sup>2</sup>	500,000	395,000
Maximum Steady-State Heat Flux, Btu/h-ft <sup>2</sup>	410,000	324,000
Maximum Average Planar Linear Heat Generation Rate, Steady State kw/ft	10.8	7.32
Stability Criterion: Maximum Measured Zero-to-Peak Flux Amplitude, Percent of Average Operating Flux	20	20
Maximum Steady-State Power Level, MW <sub>t</sub>	240	240
Maximum Value of Average Core Power Density @ 240 MW <sub>t</sub> , kW/L	46	46
Maximum Reactor Pressure During Power Operation, Psig	1,485	1,485
Minimum Recirculation Flow Rate, Lb/h (Except During Pump Trip Tests or Natural Circulation Tests as Outlined in Section 8)	6 x 10 <sup>6</sup>	6 x 10 <sup>6</sup>
Maximum MWd/T of Contained Uranium for an Individual Bundle	23,500	23,500
Rate-of-Change-of-Reactor Power During Power Operation:		

Control rod withdrawal during power operation shall be such that the average rate-of-change-of-reactor power is less than 50 MW<sub>t</sub> per minute when power is less than 120 MW<sub>t</sub>, less than 20 MW<sub>t</sub> per minute when power is between 120 and 200 MW<sub>t</sub>, and 10 MW<sub>t</sub> per minute when power is between 200 and 240 MW<sub>t</sub>.

\*Based on correlation given in "Design Basis for Critical Heat Flux Condition in Boiling Water Reactors," by J. M. Healzer, J. E. Hench, E. Janssen and S. Levy, September 1966 (APED 5286 and APED 5286, Part 2).

\*\*Based on Exxon Nuclear Corporation Synthesized Hench Levy.