

February 10, 1987

Docket No. 50-255

Mr. Kenneth W. Berry
Director, Nuclear Licensing
Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

Dear Mr. Berry:

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The Commission has issued the enclosed Amendment No. 101 to Provisional Operating License No. DPR-20 for the Palisades Plant. This amendment consists of changes to the Technical Specifications in response to your application dated December 19, 1985.

This amendment deletes out of date footnotes and incorrect references to a motor control center within the Technical Specifications.

A copy of our related Safety Evaluation is also enclosed. The notice of issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

/s/

Thomas V. Wambach, Project Manager
PWR Project Directorate #8
Division of PWR Licensing-B

Enclosures:

1. Amendment No. 101 to License No. DPR-20
2. Safety Evaluation

cc w/enclosures:
See next page

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Mr. Kenneth W. Berry
Consumers Power Company

Palisades Plant

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

CONSUMERS POWER COMPANY

PALISADES PLANT

DOCKET NO. 50-255

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 101
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 19, 1985 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.

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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 Appendices A and B, as revised through Amendment No.101, 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



Ashok C. Thadani, Director
PWR Project Directorate #8
Division of PWR Licensing-B

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 10, 1987

ATTACHMENT TO LICENSE AMENDMENT NO. 101
PROVISIONAL OPERATING LICENSE NO. DPR-20
DOCKET NO. 50-255

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE

3-29
3-30
3-33
4-8

INSERT

3-29
3-30
3-33
4-8

3.3 EMERGENCY CORE COOLING SYSTEM

Applicability

Applies to the operating status of the emergency core cooling system.

Objective

To assure operability of equipment required to remove decay heat from the core in either emergency or normal shutdown situations.

Specifications

Safety Injection and Shutdown Cooling Systems

- 3.3.1 The reactor shall not be made critical, except for low-temperature physics tests, unless all of the following conditions are met:
- a. The SIRW tank contains not less than 250,000 gallons of water with a boron concentration of at least 1720 ppm but not more than 2000 ppm at a temperature not less than 40°F.
 - b. All four Safety Injection tanks are operable and pressurized to at least 200 psig with a tank liquid level of at least 186 inches (55.5%) and a maximum level of 198 inches (59%) with a boron concentration of at least 1720 ppm but not more than 2000 ppm.
 - c. One low-pressure Safety Injection pump is operable on each bus.
 - d. One high-pressure Safety Injection pump is operable on each bus.
 - e. Both shutdown heat exchangers and both component cooling heat exchangers are operable.
 - f. Piping and valves shall be operable to provide two flow paths from the SIRW tank to the primary cooling system.
 - g. All valves, piping and interlocks associated with the above components and required to function during accident conditions are operable.
 - h. The Low-Pressure Safety Injection Flow Control Valve CV-3006 shall be opened and disabled (by isolating the air supply) to prevent spurious closure.
 - i. The Safety Injection bottle motor-operated isolation valves shall be opened with the electric power supply to the valve motor disconnected.
 - j. The Safety Injection miniflow valves CV-3027 and 3056 shall be opened with HS-3027 and 3056 positions to maintain them open.

3.3 EMERGENCY CORE COOLING SYSTEM (Cont'd)

g. A maximum of one high-pressure safety injection pump shall be OPERABLE whenever the temperature of one or more of the PCS cold legs is $\leq 250^{\circ}\text{F}$.

- 3.3.3 Prior to returning to the Power Operation Condition after every time the plant has been placed in the Refueling Shutdown Condition, or the Cold Shutdown Condition for more than 72 hours and testing of Specification 4.3.h has not been accomplished in the previous 9 months, or prior to returning the check valves in Table 4.3.1 to service after maintenance, repair or replacement, the following conditions shall be met:
- All pressure isolation valves listed in Table 4.3.1 shall be functional as a pressure isolation device, except as specified in b. Valve leakage shall not exceed the amounts indicated.
 - In the event that integrity of any pressure isolation valve specified in Table 4.3.1 cannot be demonstrated, at least two valves in each high pressure line having a non-functional valve must be in and remain in, the mode corresponding to the isolated condition. ⁽¹⁾
 - If Specifications a. and b. cannot be met, an orderly shutdown shall be initiated and the reactor shall be in hot shutdown condition within 12 hours, and cold shutdown within the next 24 hours.

Basis

The normal procedure for starting the reactor is, first, to heat the primary coolant to near operating temperature by running the primary coolant pumps. The reactor is then made critical by withdrawing control rods and diluting boron in the primary coolant. ⁽¹⁾ With this mode of start-up, the energy stored in the primary coolant during the approach to criticality is substantially equal to that during power operation and, therefore, all engineered safety features and auxiliary cooling systems are required to be fully operable. During low-temperature physics tests, there is a negligible amount of stored energy in the primary coolant; therefore, an accident comparable in

¹ Motor operated valves shall be placed in the closed position and power supplies deenergized.

3.3 EMERGENCY CORE COOLING SYSTEM (Cont'd)

that 25% of their combined discharge rate is lost from the primary coolant system out the break. The transient hot spot fuel clad temperatures for the break sizes considered are shown on FSAR Figures 14.17.9 to 14.17.13. These demonstrate that the maximum fuel clad temperatures that could occur over the break size spectrum are well below the melting temperature of zirconium (3300°F). Malfunction of the Low Pressure Safety Injection Flow control valve could defeat the Low Pressure Injection feature of the ECCS; therefore, it is disabled in the 'open' mode (by isolating the air supply) during plant operation. This action assures that it will not block flow during Safety Injection.

The inadvertent closing of any one of the Safety Injection bottle isolation valves in conjunction with a LOCA has not been analyzed. To provide assurance that this will not occur, these valves are electrically locked open by a key switch in the control room. In addition, prior to critical the valves are checked open, and then the 480 volt breakers are opened. Thus, a failure of a breaker and a switch are required for any of the valves to close.

The limitation for a maximum of one high pressure safety injection pump to be operable, and the Surveillance Requirement to verify all high pressure safety injection pumps except the required operable pump to be inoperable below 250°F, provides assurance that a mass addition pressure transient can be relieved by the operation of a single PORV.

References

- (1) FSAR, Section 9.10.3.
- (2) FSAR, Section 6.1.

TABLE 4.1.2

Minimum Frequencies for Checks, Calibrations and Testing of Engineered Safety Feature Instrumentation Controls (Contd)

<u>Channel Description</u>	<u>Surveillance Function</u>	<u>Frequency</u>	<u>Surveillance Method</u>
13. Safety Injection Tank Level and Pressure Instruments	a. Check	S	a. Verify that level and pressure indication is between independent high high/low alarms for level and pressure.
	b. Calibrate	R	b. Known pressure and differential pressure applied to pressure and level sensors.
14. Boric Acid Tank Level Switches	a. Test	R	a. Pump tank below low-level alarm point to verify switch operation.
15. Boric Acid Heat Tracing System	a. Check	D	a. Observe temperature recorders for proper readings.
16. Main Steam Isolation Valve Circuits	a. Check	S	a. Compare four independent pressure indications.
	b. Test(3)	R	b. Signal to meter relay adjusted with test device to verify MSIV circuit logic.
17. SIRW Tank Temperature Indication and Alarms	a. Check	M	a. Compare independent temperature readouts.
	b. Calibrate	R	b. Known resistance applied to indicating loop.
18. Low-Pressure Safety Injection Flow Control Valve CV-3006	a. Check	P	a. Observe valve is open with air supply isolated.
19. Safety Injection Bottle Isolation Valves	a. Check	P	a. Ensure each valve open by observing valve position indication and valve itself. Then lock open breakers and control power key switches.
20. Safety Injection Miniflow Valves CV-3027, 3056	a. Check	P	a. Verify valves open and HS-3027 and 3056 positioned to maintain them open.

- NOTES: (1) Calibration of the sensors is performed during calibration of Item 5(b), Table 4.1.1.
(2) All monthly tests will be done on only one channel at a time to prevent protection system actuation.
(3) Calibration of the sensors is performed during calibration of Item 7(b), Table 4.1.1.
(4) The 1981 surveillance function may be deferred until the end of the 1981 refueling outage.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 101 TO PROVISIONAL OPERATING LICENSE NO. DPR-20
CONSUMERS POWER COMPANY
PALISADES PLANT
DOCKET NO. 50-255

INTRODUCTION

By letter dated December 19, 1985, the Consumers Power Company requested changes to the Palisades Technical Specifications. The changes are administrative, deleting out of date footnotes and references to an incorrect motor control center. The four requested changes are evaluated below.

EVALUATION

- A. Technical Specification 3.3.1(b) would be revised by deleting the asterisk within the specification and by also deleting the corresponding footnote at the bottom of the page.

This change is acceptable as the asterisk and footnote were only applicable to Cycle 5 operation and the plant is presently in Cycle 7.

- B. Technical Specification 3.3.3 would be revised by deleting the asterisk within the specification and by also deleting the corresponding footnote at the bottom of the page.

This change is acceptable as the asterisk and the footnote refer to the effective date for initial implementation (after the 1981 refueling) which has already passed.

- C. The Basis of Technical Specification 3.3 would be revised by deleting the words "at MCC9" located within the next to last paragraph.

The reference to the motor control center is incorrect due to modifications to the 480V breakers for the safety injection motor operated valves. The correct breakers are now in MCC-21, 22, 23, and 24. Furthermore, it is recognized that the inclusion of the correct motor control center (merely a location descriptor), is unnecessary. Therefore, the change is acceptable.

- D. Technical Specification Table 4.1.2, Item 19, under Surveillance Method, would be revised to read, "... Then lock open breakers and control power key switches."

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The change in wording is acceptable as it clarifies the existing wording and deletes an incorrect informational reference (MCC-9).

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or in a surveillance requirement. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

CONCLUSION

We have concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: February 10, 1987

Principal Contributors:
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