

January 30, 1986

Docket No. 50-255

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

Dear Mr. Berry:

SUBJECT: TECHNICAL SPECIFICATION CHANGE - PRIMARY COOLANT SYSTEM LEAKAGE

The Commission has issued the enclosed Amendment No. 95 to Provisional Operating License No. DPR-20 for the Palisades Plant. This amendment is in response to your application dated April 30, 1985.

The amendment clarifies the action required by the Technical Specification for primary coolant system leakage when the leakage exceeds the specified limits, and deletes a specification that was only applicable to Cycle 2.

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

Sincerely,

/S/

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

Enclosures:

1. Amendment No. 95 to License No. DPR-20
2. Safety Evaluation

cc w/enclosures:
See next page

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PKreutzer
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PBD#8 *JVM*
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PBD#8 *AT*
ATHadani
1/17/86

OELD *OB*
1/21/86

WWR 1/21/86

Mr. Kenneth W. Berry
Consumers Power Company

Palisades Plant

cc:

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Palisades Plant
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Covert, Michigan 49043



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.95
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 April 30, 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. 95, 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: January 30, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 95

PROVISIONAL OPERATING LICENSE NO. DPR-20

DOCKET NO. 50-255

Revise Appendix A Technical Specifications by removing the page identified below and insert the enclosed page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

REMOVE

3-20
3-21

INSERT

3-20
3-21

3.1 PRIMARY COOLANT SYSTEM (Cont)

3.1.5 Primary Coolant System Leakage Limits

Specification

- a. If the primary coolant system leakage exceeds 1 gpm and the source of the leakage is not identified, reduce unidentified primary coolant system leakage to less than 1 gpm within 6 hours, or place the reactor in hot shutdown condition within the following 6 hours and in cold shutdown condition within the following 24 hours.
- b. If leakage from the primary coolant system exceeds 10 gpm, reduce primary coolant system leakage to less than 10 gpm within 6 hours, or place the reactor in hot shutdown condition within the following 6 hours and in cold shutdown condition within the following 24 hours.
- c. If the specific activity of the secondary coolant in a steam generator exceeds 0.1 $\mu\text{Ci}/\text{gram}$ dose equivalent I-131, the reactor shall be placed in hot shutdown within 6 hours and in cold shutdown within the following 30 hours.
- d. The primary to secondary leakage in a steam generator shall not exceed 0.3 gpm for any period of steady state operation greater than 24 consecutive hours.

During periods of start-up and major load changes, when the leakage measurement sensitivity is reduced, the calculated leakage shall not exceed 0.6 gpm for any period of greater than 24 consecutive hours.

Basis

Industry experience has shown that while a limited amount of leakage is expected from the primary coolant system, the unidentified portion of this leakage can be reduced to a threshold value of less than 1 gpm. This threshold value is sufficiently low to ensure early detection of additional leakage. When the source of the leakage can be identified, the condition shall be evaluated to determine if operation can safely continue. Justification for continued operation with identified leakage in excess of 1 gpm shall be documented in writing and approved by the Plant General Manager or his representative.

A maximum allowable primary coolant system leak rate of 10 gpm has been established. This limitation does not include the primary coolant pump seal leak-off which is directed to the volume control tank. The 10 gpm limitation provides allowances for a limited amount of leakage from known sources whose presence will not interfere with the detection of unidentified leakage. A primary coolant system leak rate in excess of 10 gpm is indicative of a failure of sufficient magnitude to warrant shutdown for repair.

3.1 PRIMARY COOLANT SYSTEM (Contd)

The 10 gpm limitation is well within the 40 gpm capacity of one charging pump which would be available even under a loss of off-site power condition.

The initial 6 hour period following indication of unidentified primary coolant system leakage in excess of 1 gpm, or total primary coolant system leakage in excess of 10 gpm, provides sufficient time to facilitate identification and confirmation of the leakage source with the Plant being maintained in a stable condition. When the source of the leakage cannot be identified or reduced, the following 6 hour period is sufficient to bring the Plant to hot shutdown condition in an orderly manner. The 24 hour period which follows provides adequate time to bring the Plant to cold shutdown condition in an orderly manner and to correct minor deficiencies. If major repairs are necessary, a cold shutdown condition would be in order.

The limitations on secondary system specific activity ensure that the resultant off-site radiation dose will be limited to a small fraction of 10 CFR Part 100 limits in the event of a steam line rupture. This dose also includes the effects of a coincident 1.0 gpm primary to secondary tube leak in the steam generator of the affected steam line and a concurrent loss of offsite electrical power.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 95 TO PROVISIONAL OPERATING LICENSE NO. DPR-20

CONSUMERS POWER COMPANY

PALISADES PLANT

DOCKET NO. 50-255

1.0 INTRODUCTION

By letter dated April 30, 1985, the Consumers Power Company (CPC) submitted a request for a change to the Palisades Plant Technical Specifications for primary coolant system leakage.

The amendment clarifies the existing specifications for both unidentified leakage and identified leakage by defining more clearly the action to be taken when the limit for each is exceeded. The amendment also deletes a specification concerning primary to secondary leakage in the steam generators that was only applicable to cycle 2 operation which was completed several years ago.

2.0 EVALUATION

The existing specifications for unidentified leakage and identified leakage from the primary coolant system state that when the limits (1 gpm and 10 gpm respectively) are exceeded the plant shall be placed in the hot shutdown condition within 12 hours and cold shutdown within 24 hours. No time was allowed for identifying or eliminating the source of the leakage. In some cases, the leakage measurements are erroneous because of changing plant conditions. The revised specification allows 6 hours to identify or eliminate the source of leakage or place the plant in hot shutdown in the next 6 hours and cold shutdown within the following 24 hours. This three phase approach is consistent with the Standard Technical Specifications that are applicable to plants currently being licensed. The time allowances for each phase are comparable (4 hrs. for identification and correcting, following 6 hours to hot standby, following 30 hours to cold shutdown in the Standard Technical Specifications). Comparing the revised Technical Specifications to the previous ones, it is noted that the total time allowed prior to hot shutdown remains the same. The basis for the previous Technical Specifications also discussed identifying an unidentified leak and evaluating its effect on safe operation. Additional leakage measurements may be required to do this which are more accurately performed with the plant in a stable condition and not in the process of an immediate shutdown. The basis section has been modified to reflect the specification changes. The staff finds these changes acceptable.

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3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change to a requirement with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. 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 that 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.

4.0 CONCLUSION

The staff has 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: January 30, 1986

Principal Contributor:
Thomas V. Wambach