

August 26, 1987

Docket No. 50-255

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

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Dear Mr. Berry:

SUBJECT: AMENDMENT NO. 106- TO PROVISIONAL OPERATING LICENSE NO. DPR-20,  
STEAM GENERATOR INSPECTION INTERVAL (TAC NO. 56365)

The Commission has issued the enclosed Amendment No. 106 to Provisional Operating License No. DPR-20 for the Palisades Plant. This amendment consists of changes to the Technical Specifications in partial response to your application dated September 28, 1984, as modified by submittal dated June 5, 1987.

This amendment changes the Technical Specification requirement for steam generator inspection interval by allowing an extension from the limit of 24 months to 30 months provided that the mean degradation increase for the previous steam generator inspection interval was less than one percent.

The remaining changes requested in your September 28, 1984, application remain under consideration and will be the subject of a future licensing action.

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.

Original signed by

Thomas V. Wambach, Project Manager  
Project Directorate III-1  
Division of Reactor Projects - III, IV, V  
& Special Projects

Enclosures:

1. Amendment No. 106 to License No. DPR-20
2. Safety Evaluation

cc w/enclosures:  
See next page

PD III-1  
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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. 106  
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 September 28, 1984, as modified by submittal dated June 5, 1987, 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.
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:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 106, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION

*Martin J. Virgilio for*

Martin J. Virgilio, Director  
Project Directorate III-1  
Division of Reactor Projects - III, IV, V  
& Special Projects

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: August 26, 1987

ATTACHMENT TO LICENSE AMENDMENT NO. 106  
PROVISIONAL OPERATING LICENSE NO. DPR-20  
DOCKET NO. 50-255

Revise Appendix A Technical Specifications by removing the page identified below and inserting the enclosed page. The revised page is identified by the captioned amendment number and contains a marginal line indicating the area of change.

REMOVE

4-68

INSERT

4-68

#### 4.14 Augmented Inservice Inspection Program for Steam Generators

##### Applicability

Applies to the tubes within both steam generators.

##### Objective

To provide assurance of continued integrity of the steam generator tubes over their service lifetime.

##### Specification

4.14.1 Inspections will be performed at an interval of up to 24 calendar months after the previous inspection.\* Tube inspection requirements will include inspection of all unplugged tubes with an ECT indication of greater than or equal to 30% in either of the previous two inspection periods. If inspection of unplugged tubes with an ECT indication of greater than or equal to 30% (which are obstructed by ECT and repair equipment) leads to significant added personnel radiation exposure, alternate tubes may be selected for inspection. In any event, unplugged tubes with ECT indications of greater than or equal to 30% will be inspected at a frequency not to exceed two intervals specified in 4.14.1 above. The conventional, circumferentially wound ECT pull type probe shall be used to inspect unplugged tubes for which an ECT indication greater than or equal to 30% was noted in either of the two previous ECT inspections.

In addition, a random sample of 2% of the tubes in the hot leg and 1% of the tubes in the cold leg of each steam generator will be inspected using the conventional, circumferentially wound ECT probe.

ECT = Eddy Current Test

\* The interval may be extended to 30 months if the mean degradation increase for the previous steam generator inspection interval was less than +1%.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 106 TO PROVISIONAL OPERATING LICENSE NO. DPR-20

CONSUMERS POWER COMPANY

PALISADES PLANT

DOCKET NO. 50-255

INTRODUCTION

By letter dated September 28, 1984, Consumers Power Company (the licensee) submitted proposed changes to the Palisades Technical Specifications concerning steam generator inservice inspections. The proposed changes included, in part, a proposal that the maximum time interval allowed between inspections be changed from the current value of 24 calendar months to 30 calendar months. At the staff's request, the licensee amended its proposal concerning the maximum inspection interval by letter dated June 5, 1987. Under the revised proposal, the maximum interval can be extended from 24 to 30 calendar months if the results of the previous inservice inspection indicate that the mean degradation increase between inspections is less than 1%.

This Safety Evaluation addresses the proposed steam generator inspection interval extension as amended by the licensee's June 5, 1987, letter. The other changes proposed by the licensee's September 28, 1984, application are being handled separately.

DISCUSSION

In the basis for the proposed inspection interval (letter dated September 28, 1984), the licensee stated that its intent is to conduct an inspection at each scheduled refueling outage. Because of long outage durations which have been experienced at Palisades, the licensee concludes that a 30-month rather than a 24-month maximum inspection interval is appropriate in order to avoid unscheduled outages for inspection.

The results of the most recent inspections of the Palisades steam generator, performed in 1985, were reported to the NRC staff by letter dated January 27, 1986. The results of the 1985 inspections revealed essentially no further degradation of the A or B steam generator (i.e., less than 1% mean increase in the indicated depth of ECT indications) relative to what was observed during the previous inspections performed in 1983. The licensee attributes this good performance to strict adherence to secondary water purity limits and maintaining the secondary side of the steam generators in wet lay-up as much as possible during non-operating conditions.

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## EVALUATION

Ideally, steam generator inspection intervals should be of sufficiently short duration such that additional degradation during the interval does not excessively degrade tube integrity prior to the next inspection. Palisades experienced no observable progression of degradation between inspections performed in 1983 and 1985, respectively. Furthermore, since 1985, Palisades has operated without evidence of primary to secondary leakage. Based on the above, and extension of the current interval from a maximum of 24 to 30 calendar months is not expected to result in significant further degradation of the steam generator tubing prior to the next inservice inspection. However, even should degradation unexpectedly accelerate over previously observed rates, the likely consequence would be a small primary to secondary leak as evidenced by operating experience. Allowable leak rate limits in the Technical Specifications ensure that the plant will be shutdown in a timely manner before excessive leakage of radioactive primary coolant is released.

Similarly, the NRC staff concludes that an extension of future inspection intervals from a maximum of 24 to 30 months is acceptable provided that the previous inspection revealed essentially no progression (i.e.,  $\leq 1\%$ ) in degradation during the previous operating interval. Should the degradation rate equal or exceed 1%, then the subsequent inspection interval would be limited to the current limit of 24 months. In addition, the licensee would be required under its existing Technical Specifications to obtain NRC approval of operating allowances to be incorporated into the plugging limits to account for the expected additional degradation prior to the next scheduled inspection, thus providing additional assurance that the operating interval is consistent with observed degradation rate and plugging limit.

Based on the above, the staff concludes the 30-month inspection interval proposed in the licensee's letter dated September 28, 1984, and subsequently amended in the licensee's letter dated June 5, 1987, is acceptable.

## ENVIRONMENTAL CONSIDERATION

This amendment involves a change in an inspection or surveillance requirement. We have 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: August 26, 1987

Principal Contributor:  
E. Murphy