

June 28, 1990

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. 132 TO PROVISIONAL OPERATING LICENSE NO. DPR-20:
(TAC NO. 75815)

The Commission has issued the enclosed Amendment No. 132 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 March 6, 1990, as supplemented by letter dated June 21, 1990.

This amendment revises the requirement of Technical Specification (TS) 4.14.1 by providing a one-time exception for the periodic steam generator inspections which otherwise would be due by July 4, 1990. Specifically, the amendment adds a footnote to TS 4.14.1 to permit a one-time exception that is valid only up to the 1990 refueling outage when the steam generators are scheduled to be replaced.

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

Sincerely,

/s/

Brian E. Holian, Project Manager
Project Directorate III-1
Division of Reactor Projects - III,
IV, V & Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 132 to License No. DPR-20
2. Safety Evaluation

cc w/enclosures:
See next page

ELM
KMCB
6/22/90

LA/PD31:DRSP
MRShuttleworth
06/22/90 *MKA*

PM/PD31:DRSP
BHolian *BEH*
06/22/90

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06/22/90

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OGC *My Young*
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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Director, Nuclear Licensing
Consumers Power Company
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Sincerely,

A handwritten signature in black ink, appearing to read "Brian E. Holian", is written above the typed name.

Brian E. Holian, Project Manager
Project Directorate III-1
Division of Reactor Projects - III,
IV, V & Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 132 to
License No. DPR-20
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. Kenneth W. Berry
Consumers Power Company

Palisades Plant

cc:

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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. 132
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 March 6, 1990, and supplemented June 21, 1990, 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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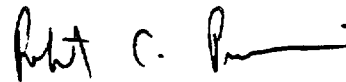
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 3.B. of Provisional Operating License No. DPR-20 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 132, 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 and shall be implemented not later than July 4, 1990.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert C. Pierson, Acting Director
Project Directorate III-1
Division of Reactor Projects - III,
IV, V & Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 28, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 132

PROVISIONAL OPERATING LICENSE NO. DPR-20

DOCKET NO. 50-255

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

REMOVE

4-68

4-68a

INSERT

4-68

4-68a

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 Inspection Interval

Inspections will be performed at an interval of up to 24 calendar months after the previous inspection.*⁽¹⁾ Additional tube inspections shall be performed when primary to secondary leakage (not including leaks originating from tube to tube sheet welds) exceeds the leakage limits delineated in Specification 3.1.5d.

4.14.2 Inspection Requirements

4.14.2.1 For the purposes of this specification, "tube" refers to that portion of the steam generator tubing from the point of entry on the cold leg side to the top support of the cold leg, or from the point of entry on the hot leg side to the top support of the cold leg.

4.14.2.2 Tubes requiring inspection will include all unplugged tubes with eddy current indications of tube wall degradation greater than or equal to 30% in either of the previous two inspections. Limited access tubes subject to this requirement, which result in significant added radiation exposure to inspect, shall be inspected during an interval not to exceed two consecutive inspections.

4.14.2.3 Tubes requiring inspection will also include a random sample of 2% of the hot leg tubes and 1% of the cold leg tubes in each steam generator. Random samples shall be drawn from those unplugged tubes that do not have tube wall degradation identified as greater than or equal to 30% during the previous two inspections.

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

(1) A one-time exception is allowed from the periodic eddy current inspection due by July 4, 1990. This exception is valid for a limited time up to the September 1990 refueling outage when the steam generators are scheduled to be replaced. If for any reason the steam generators are not replaced, the required inspections of Technical Specification 4.14 shall be completed prior to startup from the 1990 refueling outage.

- 4.14.2.4 A baseline inspection of all newly installed sleeves shall be performed prior to plant operation. Inspection of each installed sleeve shall be performed once per three steam generator tube inspection intervals, with approximately one-third of the sleeves inspected during each inspection interval.** In the event of sleeve degradation the sleeve inspection interval shall be evaluated.
- 4.14.2.5 In the case where a tube is sufficiently restricted to prevent passage of an 0.540-inch diameter probe (blocked), all unplugged tubes surrounding the blocked tube will be gauged to ensure acceptable denting levels.
- 4.14.2.6 In the event that tube inspections are required due to primary to secondary leakage, a 6% sample of unplugged tubes in the affected leg(s) in each steam generator with leakage in violation of the limits of Specification 3.1.5d shall be inspected.
- 4.14.3 Supplementary Sampling Requirements
- 4.14.3.1 If the inspection pursuant to 4.14.2.2 and 4.14.2.3 or 4.14.2.6 yields results that exceed one or more of the following criteria, then additional samples of unplugged tubes shall be inspected according to Figure 4.14.1.
- a) More than 10% of the inspected tubes in a leg have detectable wall degradation (greater than or equal to 30% through wall) where no previous degradation was detected.
 - b) More than 10% of the inspected tubes in a leg exhibit further wall degradation (greater than a 10% increase in through wall degradation).
 - c) More than 1% of the inspected tubes in a leg have indications of tube wall degradation in excess of the repair criteria of Specification 4.14.4 where no wall degradation greater than 30% was detected in the previous two inspections.
- 4.14.3.2 In the event that any of the above limits are exceeded, prompt notification to the Nuclear Regulatory Commission pursuant to 10 CFR 50.72 shall occur.

** Inspection of the installed sleeves during the inspection beginning in December 1987 is not required.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 132 TO PROVISIONAL OPERATING LICENSE NO. DPR-20
CONSUMERS POWER COMPANY
PALISADES PLANT
DOCKET NO. 50-255

1.0 INTRODUCTION

By letter dated March 6, 1990, Consumers Power Company (the licensee) requested an amendment to the Technical Specifications appended to Provisional Operating License No. DPR-20 for the Palisades Plant. The proposed amendment would provide a one-time exception to the periodic in-service steam generator tube inspections required by the Palisades Technical Specification (TS) 4.14. This exception would permit the Palisades steam generators (SG) to be operated without further inspections until the 1990 refueling outage, when the steam generators are due to be replaced. The 1990 refueling outage is currently scheduled for early September 1990. If for any reason the steam generators are not replaced during the outage, the required inspections of TS Section 4.14 would be performed prior to startup of the unit.

Following comments from the staff, the licensee supplemented its original submittal with a letter dated June 21, 1990. This letter made minor editorial changes in the proposed Technical Specification wording, and does not change the proposed action or the initial determination of "No Significant Hazards" previously notice in the Federal Register (55 FR 14147), dated April 16, 1990.

2.0 EVALUATION

The Palisades steam generators were last inspected in accordance with the TS requirements between December 4, 1987, and January 4, 1988. The TS specifies a maximum inspection interval of 24 calendar months. The TS allows this inspection interval to be extended to 30 months if the mean degradation increase observed during the previous inspection interval was less than $\pm 1\%$. This condition was met for the previous operating cycle; thus, the licensee states that the next TS required inspections must begin prior to July 4, 1990.

Until December 1987, tube degradation mechanisms at Palisades involved mainly intergranular attack (IGA) and wastage corrosion. This corrosion activity was highly active in the 1970s, but since at least 1983 the corrosion has been relatively inactive as indicated by the minimal increase in mean corrosion growth observed during the December 1987 inspection. Since December 1987, Palisades has experienced a new problem involving highly active circumferential cracks at the support plates which the licensee believes not to be directly related to the previous IGA and wastage activity. This new cracking activity was the subject of special inspections performed in August 1988, February 1989, and October 1989. In August 1988, approximately 48% of the tubes were

inspected and in October 1989, approximately 18% were inspected. These special inspections focused on areas subject to the new circumferential cracking phenomenon. However, the scope of these special inspections was too limited to constitute a TS inspection.

Besides performing special steam generator tube inspections in areas of concern, the licensee has committed, by letter dated December 12, 1989, to operate the plant with an administrative limit of 0.05 gpm on allowed primary-to-secondary leakage. This limit provides considerable margin to the 0.3 gpm limit permitted by the Palisades Technical Specifications. In addition, the licensee committed to operate the plant at 80% power (or less) prior to the SG replacement in order to minimize the rate of further circumferential cracking activity.

Finally, the licensee has estimated that a steam generator tube inspection will involve an occupational exposure of approximately 53 man-rems (based on past experience), with an additional 20 man-rems should tube plugging be necessary. Based on the above discussion and the relatively short time (approximately 2 months) that the plant would be operated beyond July 4, 1990, the licensee believes that a TS steam generator tube inspection prior to July 4, 1990, is neither prudent nor necessary.

Accordingly, the licensee has proposed to add a footnote to TS 4.14, "Augmented Inservice Inspection Program for Steam Generators," to allow a one-time exception to be allowed from the periodic eddy current inspection due by July 4, 1990. The licensee has requested that this exception be valid for a limited time, up to the September 1990 refueling outage when the steam generators are scheduled to be replaced. Additionally, the licensee has committed to perform the required inspections of TS 4.14 prior to startup from the 1990 refueling outage if, for any reason, the steam generators are not replaced.

The licensee currently plans to shutdown and commence the refueling outage no later than September 15, 1990. If it appears that the refueling outage will not commence prior to September 30, 1990, the licensee has verbally committed to inform the staff, in writing, no later than September 1, 1990, detailing the reasons for delaying the refueling outage and providing justification to operate the steam generators at power past September 30, 1990.

In summary, the short extension of the TS inspection interval being requested (i.e., approximately 2 months), the low likelihood of transients or accidents occurring on the SG tubes, and the licensee's commitment to very tight limits on allowable primary-to-secondary leakage and reduced power operation provide reasonable assurance that the requested one-time exception to the TS steam generator tube inspection will not constitute an undue risk to public health or safety. Therefore, this proposed TS change is acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

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

4.0 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) 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: June 28, 1990

Principal Contributor: E. Murphy
B. Holian