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Jauary 9, 1978

Docket No. 50-255

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Consumers Power Company ATTN: Mr. Dave Bixel Nuclear Licensing Administrator 212 West Michigan Avenue Jackson, Michigan 49201

Gentlemen:

The Commission has issued the enclosed Amendment No. ³³ to Provisional Operating License No. DPR-20 for the Palisades Plant. This amendment consists of changes to the Technical Specifications in response to your request dated November 10, as supplemented December 7 and 12, 1977.

This amendment modifies the augmented inservice inspection program for the Palisades steam generators and allows the sleeving of degraded steam generator tubes as an alternative to plugging.

Copies of the Safety Evaluation and Notice of Issuance are also enclosed.

Sincerely,

/s/

A. Schwencer, Chief Operating Reactors Branch #1 Division of Operating Reactors

Enclosures: 1. Amendment No. ³³ to DPR-20 2. Safety Evaluation 3. Notice cc w/encl: See next page	DEisenhut DRoss CMiles BHarless JMcGough JSaltzman	
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UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

January 9, 1978

Docket No. 50-255

Consumers Power Company ATTN: Mr. Dave Bixel Nuclear Licensing Administrator 212 West Michigan Avenue Jackson, Michigan 49201

Gentlemen:

The Commission has issued the enclosed Amendment No. 33 to Provisional Operating License No. DPR-20 for the Palisades Plant. This amendment consists of changes to the Technical Specifications in response to your request dated November 10, as supplemented December 7 and 12, 1977.

This amendment modifies the augmented inservice inspection program for the Palisades steam generators and allows the sleeving of degraded steam generator tubes as an alternative to plugging.

Copies of the Safety Evaluation and Notice of Issuance are also enclosed.

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A. Schwencer, Chief Operating Reactors Branch #1 Division of Operating Reactors

Enclosures: 1. Amendment No. 33 to DPR-20 2. Safety Evaluation

3. Notice

cc w/encl: See next page

Consumers Power Company

cc: M. I. Miller, Esquire Isham, Lincoln & Beale Suite 4200 One First National Plaza Chicago, Illinois 60670

> J. L. Bacon, Esquire Consumers Power Company 212 West Michigan Avenue Jackson, Michigan 49201

> Paul A. Perry, Secretary Consumers Power Company 212 West Michigan Avenue Jackson, Michigan 49201

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Kalamazoo Public Library 315 South Rose Street Kalamazoo, Michigan 49006

Mr. Jerry Sarno Township Supervisor Covert Township Route 1, Box 10 Van Buren County, Michigan 49043

Mr. John D. Beck (2 cys) Division of Intergovernmental Relations Executive Office of the Governor Lewis Cass Building, 2nd Floor Lansing, Michigan 48913

Chief, Energy Systems Analyses Branch (AW-459) Office of Radiation Programs U.S. Environmental Protection AGency Room 645, East Tower 401 M Street, SW Washington, D.C. 20460 U.S. Environmental Protection Agency Federal Activities Branch Region V Office ATTN: EIS COORDINATOR 230 South Dearborn Street Chicago, Illinois 60604

January 9, 1978

- 2 -



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

CONSUMERS POWER COMPANY

DOCKET NO. 50-255

PALISADES PLANT

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 33 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 November 10, as supplemented December 7 and 12, 1977, 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 Facility License No. DPR-20 is hereby amended to read as follows:

"(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 33 , 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

R. Gally

Karl R. Goller, Assistant Director for Operating Reactors Division of Operating Reactors

Attachment: Changes to the Technical Specifications

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Date of Issuance: January 9, 1978

- 2 -

ATTACHMENT TO LICENSE AMENDMENT NO. 33

PROVISIONAL OPERATING LICENSE NO. DPR-20

DOCKET NO. 50-255

Revise Appendix A as follows:

Insert Revised Pages
4-68
4-68b
4-68c 4-69

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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 made at a frequency not less than 12 nor more than 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. The conventional, circumferentially wound ECT pull type probe shall be used to inspect all 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.

For the purposes of this Technical Specification, "tubes" refers to that portion of the steam generator U-tube 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 completely around the U-bend to the top support of the cold leg.

ECT= eddy current test

4.14.2 Inspection techniques, capable of detecting flaws in the presence of tube support plates, shall be used to inspect all tube/tube support plate intersections where an ECT indication was present during the last inspection which was greater than or equal to 45% but cannot be interpreted in the current inspection due to the presence of dents.

> If the number of intersections to be tested under the criteria above is less than a total (for both generators) of 600, additional intersections to make up a total (for both generators) of 600, shall be selected for testing. The additional examination sites shall be selected from previous ECT results for areas which could not be inspected due to dents in the last inspection in descending order with respect to the depth of the ECT indication.

4.14.3 When inspection reveals that the tube degradation plus an NRC approved appropriate operating allowance (for future degradation) is equal to or greater than the maximum allowable degradation specified in Table 4.14, the tube shall be declared to be defective and tube plugging or sleeving shall be performed.

In determining that a defect exists at a given tube location indications from several ECT's may be averaged during a given inspection, but such averaging shall be based on not less than three ECT's.

4.14.4 An operating allowance for future degradation shall be proposed using appropriate inspection results. This allowance shall be approved as a Technical Specification change by the NRC prior to criticality following the inspection.

4-68a Amendment No. 33

4.14.5 Sleeves will be installed such that, considering the axial location tolerances, swaging does not take place in an area of known degradation. A baseline ECT inspection of <u>all</u> newly installed sleeves shall be performed. In addition, all previously installed sleeves shall be inspected during subsequent steam generator tube inspections.

Basis

Consumers Power has concluded that the change from coordinated phosphate to volatile chemistry control for the secondary side of the steam generators has reduced the previous corrosion rate. The inspection program provides for verifying that the corrosion has been arrested for quickly identifying any additional corrosion or for identifying other problems.

The inspection program is also consistent with current industry practices and includes appropriate measures to identify additional degradation of the Palisades steam generators. The operating allowance will be and plugging criteria have been developed based on comparative results between steam generator inspections with consideration given to defect type, location, past corrosion rate observed, etc.

Calculations have been performed to demonstrate that a tube uniformly thinned to 36% of its original nominal wall thickness (64% degradation) can withstand a differential pressure of 1380 psi. Likewise, a sleeved tube can withstand the same differential pressure when the limits in Table 4.14 are observed. Combustion Engineering, Inc. Report No. CEN-59(P) "Palisades Steam Generator Tube Repair by Sleeving," dated August 26, 1977, contains the analytical and test results of tube sleeving.

4-68b Amendment No. 33

In dented regions when the presence of a tube support plate tends to cause interference in the eddy current signals, the standard ECT inspection technique will not be able to detect flaws inbedded in these regions. However, there are several advanced inspection probes under development which have been shown to be effective in detecting flaws by screening out the interference signals caused by the presence of the tube support plates or dents.

TABLE 4.14

Maximum Allowable Degradation

Location	Maximum Allowable Degradation (5)
Unsleeved Sections	Degradation = 64%
Sleeved Section	-
Region 1 ⁽¹⁾	Sleeve degradation = 34% and tube degradation exceeding the maximum allowable degradation for an unsleeved section. ⁽⁴⁾
Region 2 ⁽²⁾	Either (a) sleeve degradation = 25% when tube degradation in Region 1 exceeds the maximum allowable degradation for an unsleeved section; <u>or</u> (b) tube degradation to Region 2 equal to the maximum allowable degradation for an unsleeved tube. ⁽⁴⁾
Region 3 ⁽³⁾	Tube degradation equal to the maximum allowable degradation for an unsleeved section.

Footnotes:

- (1) The undeformed region of the tube/sleeve assembly containing the original imperfection requiring sleeving.
- (2) The region containing the expansion joint. Specifically, the region of the tube/sleeve assembly bounded by lines approximately 1/4 inch and 2 inches inboard from the sleeve ends.
- (3) The region of the tube/sleeve assembly containing approximately 1/4 inch of each end of the assembly.
- (4) Degradation occurring in the parent tube at any location in a Region and degradation occurring in the sleeve at any location in the same Region that exceeds the applicable maximum allowable degradation will require tube plugging.
- (5)Subtracted from these Maximum Allowable Degradation values shall be an appropriate allowance for future degradation as approved by the NRC as identified in 4.14.3.

4-69 Amendment No. 33

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 33 TO PROVISIONAL OPERATING LICENSE NO. DPR-20

CONSUMERS POWER COMPANY

PALISADES PLANT

DOCKET NO. 50-255

Introduction

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By letter dated November 10, 1977, as supplemented December 7 and 12, 1977, Consumers Power Company (the licensee) requested changes to the Technical Specifications appended to Provisional Operating License No. DPR-20, for operation of the Palisades Plant in Van Buren County, Michigan. The requested changes would modify the augmented inservice inspection program for the Palisades steam generators and would allow the sleeving of degraded steam generator tubes as an alternative to plugging.

Discussion

The Palisades Technical Specifications presently require steam generator inservice inspections in accordance with the provisions of Regulatory Guide 1.83, "Inservice Inspection of Pressurized Water Reactor Steam Generator Tubes." (R.G. 1.83) Due to the provisions of R.G. 1.83, previous inspections at Palisades have included 100% of the hot leg tubes and 6% of the cold leg tubes. For tube degradations of greater than 64%, tube plugging is required. In addition, operating allowances for future degradation are specified as a function of defect location and type. The proposed Technical Specification change would modify the inservice inspection requirements with regard to sampling requirements, operating allowances and would also allow the use of tube sleeving as an alternative to plugging of degraded tubes. The Palisades Plant has operated for approximately 1 year with 14 sleeves installed in 10 steam generator tubes as part of the licensee's program to obtain operating experience information for this new technique.

The NRC staff and the licensee have met on several occasions (March 19, 1976, January 25 and September 1, 1977) to discuss the sleeving concept, and the Combustion Engineering, Inc. Report No. CEN-59(P), dated August 26, 1977, entitled, "Palisades Steam Generator Tube Repair by Sleeving" has been submitted as a technical basis for the proposed sleeving program.

As described in the above referenced report, the proposed program would involve the installation of Inconel sleeves (approximately 12" in length) inside degraded steam generator tubes to span the degraded area and to structurally reinforce such tubes that, by the current criteria, would otherwise require plugging. Both ends of the inserted sleeve are hydraulically expanded into an interference fit with the parent tube.

The proposed changes to the inservice inspection program would retain a steam generator inspection frequency of not less than 12 nor more than 24 calendar months after the previous inspection. Rather than inspecting 100% of the steam generator tubes, during each such inspection, all unplugged tubes with an Eddy Current Test (ECT) indication of greater than or equal to 30% in either of the previous two inspections would be inspected. A random sample of 2% of the hot leg tubes and 1% of the cold leg tubes of each steam generator would also be inspected. In addition, the licensee is proposing to inspect at least 600 tubes at the tube/tube support plate intersections where an ECT indication of 45% or greater was present during the last inspection. These inspections would be made using an advanced inspection probe.

Evaluation

Sampling Requirements and Operating Allowances

As indicated above, previous steam generator inspections at Palisades have involved 100% of the hot leg tubes and 6% of the cold leg tubes. This was due to the supplementary sampling requirements and acceptance limits of R.G. 1.83 which called for additional tubes to be inspected based on the results of the first sample during the inservice inspection. Since changing to the all-volatile type (AVT) of chemistry control in September of 1974, decreased rates of wastage have been observed and are projected for the future. In addition, secondary water chemistry contamination has been reduced because of condenser retubing and modifications to the feedwater system are being completed which include a full flow condensate polishing system. These modifications should reduce the rate and occurrence of tube degradation. In view of the above, the licensee is therefore proposing to concentrate its inspection samples in those areas of known degradation (ECT indication of greater than or equal to 30% in either of the two previous inspection periods) and to conduct random samples of 2% of the remaining hot leg tubes and 1% of the cold leg tubes in each steam generator to monitor for additional corrosion and to detect previously unobserved phenomena. In addition, the licensee proposes to use an advanced inspection probe at tube/tube support plate intersections where an ECT indication of 45% or greater was present during the last inspection. The requirement is proposed to better assess the magnitude of tube wastage at dented locations. A total of at least 600 tubes (for both steam generators) would be inspected by this technique.

As discussed above, the Palisades Technical Specifications presently state that tube wastage of greater than 64% is considered unacceptable for continued operation. The plugging limits were determined by subtracting from the 64% maximum allowable degradation the appropriate operating allowances specified as a function of defect location and type in Table 4.14 of the current Technical Specifications. The licensee will propose new operating allowances to be applied to degraded tubes and sleeves based, in part, upon the inspection results obtained at the upcoming refueling outage. These allowances will be reviewed by us and, if acceptable, we will issue a Technical Specification change prior to the return to criticality following the inspection.

We agree with the licensee that a full 100% tube inspection of the steam generators is not necessary if the inspection sample is concentrated in known areas of degradation and if provisions exist to randomly sample other lesser-degraded tubes. By selecting those tubes with an ECT indication of 30% or greater in either of the two previous inspections, the licensee will be inspecting tubes that are more likely to be approaching the maximum allowable degradation (64%). In addition, a 3% random sample of other tubes is considered appropriate for monitoring other areas of the steam generators.

The advanced inspection probe that the licensee proposes to use to inspect tube/tube support plate intersections with ECT indications of 45% or greater would allow the licensee to inspect wastage indications that could not otherwise be interpreted using the conventional type probe due to the presence of dents. The inspection of those tubes with an ECT indication of 45% or greater (or of 600 tubes, whichever is greater) is acceptable because sufficient information would be provided to determine whether the degree of degradation is worsening and the random 3% sample to be performed with a conventional type probe would provide adequate assurance that degradation has not developed and rapidly progressed in other areas of the steam generators.

With regard to the operating allowance that will be applied to determine the projected percent of degradation of both sleeved and unsleeved tubes, until the next inservice inspection, we agree that the results of the most recent inspection should be factored into the previous inspection results and that NRC approval of that allowance prior to return to criticality provides adequate assurance that an appropriately conservative allowance will be used.

Tube Sleeving Program

The Combustion Engineering (CE) Report CEN-59(P) submitted by the licensee contains the results of an extensive test program undertaken to qualify sleeving as a viable alternative to plugging and also includes computer analyses and other analytical data for comparison with the test results.

A tube/sleeve assembly corrosion resistance test program has been carried out. Results of this program reveal no evidence of sleeve-aggravated tube corrosion nor tube/sleeve crevice corrosion other than minor self-stifling pitting on the sleeve outside diameter and tube inside diameter. Based on the testing performed on the tube/sleeve assemblies, the licensee has concluded and the staff concurs that no mechanism exists or is anticipated to occur that would lead to increased sleeve or tube degradation.

Structural analyses of the tube/sleeve assembly have been performed in conjunction with a mechanical test program. Results of the analyses and tests indicate that tube/sleeve assemblies will maintain their structural integrity under the safe shutdown earthquake (SSE), main steam line break, loss of coolant accident (LOCA), combinations of these, and both reactor coolant and secondary coolant flow induced vibrations. Additionally, testing indicates that no thermal ratcheting occurs in a sleeved tube during any anticipated thermal transients. Results of tensile pull tests and analyses of rapid internal pressurization under main steam or feedwater line break conditions show that no substantial separation of the tube/sleeve assemblies will occur. The minor separation had no effect on the structural integrity of the tubes tested and no interference with adjacent tubes was predicted.

The tube/sleeve assemblies have been shown to withstand post-LOCA pressures without collapse and testing shows a factor of safety greater than 3.0 against burst under normal operating conditions.

For all degraded tubes that are sleeved rather than plugged, the licensee would perform a baseline ECT inspection of all newly installed sleeves. In addition, all previously installed sleeves would be inspected during subsequent steam generator tube inspections.

The limiting condition analysis for the sleeve between expanded regions, which was verified by testing, was the LOCA + SSE loading condition which shows that with 100% tube degradation, a sleeve with 34% wall degradation can meet the required structural criteria. For the expanded region of a tube/ sleeve assembly, testing showed that the tube can sustain 64% wall degradation concurrent with 25% sleeve degradation. These limits for allowable tube and/or sleeve degradation are summarized in Table 4.14 of the proposed Technical Specifications. Based on our review of the information provided, we concur that these limits of degradation are acceptable. If these limits are exceeded, tube plugging will be required. Testing was performed to characterize the leakage that might be expected from a tube/sleeve assembly after 100% tube through wall degradation occurred. An average leak rate of 5.3 cc/min was measured from sleeved assemblies with a fully penetrated steam generator tube. This average leak rate was measured under 1550 psig differential pressure conditions which conservatively simulates the normal operating pressure differential. Other conditions were also simulated for both main steam line break (MSLB) and loss of coolant accident (LOCA).

The Technical Specifications currently allow up to 0.3 gpm (1136 ^{CC}/min) reactor coolant to secondary leakage in each steam generator. This limit was originally set assuming all 0.3 gpm leakage was from one crack in one tube, and under this condition, the crack would remain stable under accident conditions. This limit would theoritically allow 214 installed tubes, concurrent with 100% tube through wall degradation, to leak at an average rate of 5.3 cc/min before 0.3 gpm or 1136 ^{CC}/min would be reached.

Under LOCA conditions for a sleeve installed in a tube with 100% tube through wall degradation, the average calculated leakage rate was determined to be 19.9 cc/min. This leakage would be from the secondary side to the reactor coolant side of a steam generator because of the external pressure on the tubes under LOCA conditions. The licensee performed scoping studies that showed that a 1% reduction in core reflood rate would occur if 4757 sleeves were installed at locations with 100% tube through wall degradation, each leaking at an average rate of 19.9 cc/min. This 1% reduction in the reflood rate would result in approximately a 1% reduction in the heat transfer coefficient which would cause an increase in peak clad temperature of less than 20°F. Under these conditions, the peak clad temperature would remain under the maximum allowed 2200°F.

Under MSLB conditions, an average leak rate of 15 cc/min was conservatively determined for tubes with 100% tube through wall degradation. A constant leak rate was assumed neglecting the expected reduction in pressure differential and the hypothetical site boundary dose for this accident was based on the total releases from both steam generators. Conservative calculations showed that leakage past 4400 sleeves per steam generator would not exceed 10 CFR 100 guidelines.

If view of the above, it is concluded that the limiting factor for the number of sleeves that could be installed, is the 0.3 gpm reactor coolant to secondary leakage limit set by current Technical Specifications. This limit would control the number of sleeves installed concurrent with 100% tube through wall degradation, since the 0.3 gpm would be exceeded, and plant shutdown required, significantly before a condition could exist in which the limiting leakage rate for a hypothetical MSLB or LOCA was approached. We therefore conclude that the leakage tests conducted by the licensee are acceptable and that the consequences of hypothetical accidents remain unchanged.

We have also reviewed the licensee's description of the sleeve installation equipment and the methods by which they will assure that the tube/sleeve expansion joints are properly formed. Based on this review and other discussions with the licensee and its consultant, Combustion Engineering, we have concluded that adequate assurance exists that the sleeve installation will be performed in an acceptable manner and that this aspect of the proposed sleeving program is acceptable.

Finally, the report presents the results of testing performed to qualify a technique for remote, non-destructive examination of tube/sleeve assemblies. Results indicate that an axially wound ECT probe, developed by CE, is capable of inspecting the complete tube/sleeve assembly and detecting structurally unacceptable levels of degradation.

Summary

We have reviewed the information submitted by the licensee to substantiate its proposed Technical Specification changes and have concluded the following:

- 1. Since the CE sleeving report meets all current NRC criteria relative to steam generator tube degradation and, specifically, satisfies the requirements of Regulatory Guide 1.121, "Bases for Plugging Degraded PWR Steam Generator Tubes" we find the proposed sleeving concept acceptable.
- The proposed maximum allowable degradation table is in accordance with previuosly accepted unsleeved tube degradation limits or is justified by the CE report on sleeving.
- 3. The proposed inspection frequency conforms to Regulatory Guide 1.83 requirements.

- 4. Since data from previous 100% tube inspections are available, the inspection sample size consisting of all unplugged tubes with an ECT indication of greater than or equal to 30% and the use of a special inspection technique for tube/tube support plate intersections with ECT indications of 45% or greater are acceptable.
- 5. The random 2% hot leg tube sampling and 1% cold leg tube sampling is adequate for identifying any additional corrosion or other problems.

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- 6. The proposed inspection program is based on Palisades operating experience and since the initiation of AVT secondary water chemistry control, the rate of tube corrosion has reduced.
- 7. Secondary water chemistry contamination has been reduced because of condenser retubing. Also, modifications to the feedwater system are being completed which include a full flow condensate polishing system. These modifications should reduce the rate and occurrence of denting.
- 8. The reliance on sleeving where justified to maintain the reactor coolant pressure boundary will maintain reactor coolant flow for core cooling and have a minimal affect on ECCS thermal hydraulics whereas plugging will have an adverse affect on both.

We have concluded, based on the considerations discussed above, that (1) sleeving may be used in lieu of plugging for degraded tubes, and (2) the proposed Technical Specification changes are acceptable.

Environmental Considerations

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR 51.5(d)(4) that an environmental impact statement or negative declaration and environmental impact appraisal need not 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: January 9, 1978'

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UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-255

CONSUMERS POWER COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO PROVISIONAL OPERATING LICENSE

The U.S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. ³³ to Facility Operating License No. DPR-20, issued to Consumers Power Company (the licensee), which revised Technical Specifications for operation of the Palisades Plant, (the facility) located in Covert Township, Van Buren County, Michigan. The amendment is effective as of its date of issuance.

This amendment modifies the augmented inservice inspection program for the Palisades steam generators and allows the sleeving of degraded steam generator tubes as an alternative to plugging.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Atc), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Notice of Proposed Issuance of Amendment to Provisional Operating License in connection with this action was published in the FEDERAL REGISTER on November 30, 1977 (42 FR 60989). No request for a hearing or petition for leave to intervene was filed following notice of the proposed action.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated November 10, as supplemented December 7 and 12, 1977, (2) Amendment No. 33 to License No. DPR-20, and (3) the Commission's related Safety Evaluaiton. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, NW., Washington, D.C. and at the Kalamazoo Public Library, 315 South Rose Street, Kalamazoo, Michigan 49006. A copy of items (2) and (3) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 9th day of January 1978.

FOR THE NUCLEAR REGULATORY COMMISSION

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A. Schwencer, Chief Operating Reactors Branch #1 Division of Operating Reactors