

February 28, 1984

Docket No. 50-255
LS05-84-02-055

Mr. David J. Vandewalle
Nuclear Licensing Administrator
Consumers Power Company
1945 W. Parnall Road
Jackson, Michigan 49201

Dear Mr. Vandewalle:

SUBJECT: REACTOR VESSEL SURVEILLANCE CAPSULE PROGRAM

Re: Palisades Plant

DISTRIBUTION

<u>Docket File</u>	ACRS (10)
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The Commission has issued the enclosed Amendment No. 79 to Provisional Operating License No. DPR-20 for the Palisades Plant. This amendment is in response to your application dated August 3, 1983.

This amendment (1) deletes Capsule A-60 from the Reactor Vessel Surveillance Capsule Program, and (2) modifies the Reactor Vessel Surveillance Coupon Removal Schedule (Table 4.3.3) to provide the option of removing an equivalent capsule instead of the primary capsule.

A Notice of Consideration of Issuance of Amendment to License and Proposed No Significant Hazards Consideration Determination and Opportunity for Hearing related to the requested action was published in the Federal Register on October 26, 1983 (48 FR 49583). No request for hearing was received and no comments were received.

A copy of our related Safety Evaluation is also enclosed. This action will appear in the Commission's Monthly Notice publication in the Federal Register.

Sincerely,
Original signed by
Walter A. Paulson, Project Manager
Operating Reactors Branch #5
Division of Licensing

Enclosures:

- Amendment No. 79 to License No. DPR-20
- Safety Evaluation

cc w/enclosures:
See next page

DL:ORB #5
HSmith:jc
2/15/84

DL:ORB #5
WPaulson
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DL:ORB #5
DCrutchfield
2/28/84

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CBarth
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2/27/84

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Mr. David J. Vandewalle

cc

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Jackson, Michigan 49201

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Jackson, Michigan 49201

James G. Keppler, Regional Administrator
Nuclear Regulatory Commission, Region III
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Township Supervisor
Covert Townshi
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Office of the Governor (2)
Room 1 - Capitol Building
Lansing, Michigan 48913

Palisades Plant
ATTN: Mr. Robert Montross
Plant Manager
Covert, Michigan 49043

U. S. Environmental Protection Agency
Federal Activities Branch
Region V Office
ATTN: Regional Radiation Representative
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Chicago, Illinois 60604

Resident Inspector
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Lee E. Jager, P.E., Chief
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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.79
License No. DPR-20

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application by Consumers Power Company (the licensee) dated August 3, 1983, 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 (Environmental Protection Plan), as revised through Amendment No. 79 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


Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 28, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 79
PROVISIONAL OPERATING LICENSE NO. DPR-20
DOCKET NO. 50-255

Revise Appendix A Technical Specifications by removing page 4-23 and inserting the enclosed page 4-23. The revised page contains the captioned amendment number and marginal lines indicating the area of change.

Table 4.3.2

Miscellaneous Surveillance Items

Equipment	Method	Frequency
1. Regenerative Heat Exchanger		
a. Primary Side Shell to Tube Sheet Welds	Volumetric	5-Year Maximum Interval (100%)
b. Primary Head	Volumetric	5-Year Maximum Interval (100%)
2. Primary Coolant Pump Flywheels	Volumetric	100% Upper Flywheel Each Refueling

TABLE 4.3.3

Reactor Vessel Surveillance Coupon Removal Schedule

Capsule Number	Refueling Number Primary - Optional	Capsule ¹ Location	Target Removal Time ² EFPY @ Refuel No.
A-240	2 -	Outside Core Barrel	2.26 @ 2 ³
W-290	5 - 11	Vessel Wall	4.33 @ 5
T-330	5 - 20	Above Core	4.33 @ 5
W-110	11 - 5	Vessel Wall	9.21 @ 11
W-100	20 - 25	Vessel Wall	16.5 @ 20
T-150	20 - 5	Above Core	16.5 @ 20
W-280	25 - 20	Vessel Wall	20.6 @ 25
W-260	35 - 39	Vessel Wall	28.7 @ 35
W-80	39 - 35	Vessel Wall	32.0 @ 39

¹Refer to Palisades FSAR, Volume 2, Section 4.5.3, Figure 11 for illustration of capsule locations.

²EFPY based on 2530 MW_t power rating.

³2.26 EFPY from BCL 585-12 Report, March 13, 1979.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 79 TO PROVISIONAL OPERATING LICENSE NO. DPR-20

CONSUMERS POWER COMPANY

DOCKET NO. 50-255

1.0 INTRODUCTION

By letter dated August 3, 1983, Consumers Power Company (the licensee) proposed changes to the Technical Specifications for the Palisades Plant. These changes would (1) delete Capsule A-60 from the Reactor Vessel Surveillance Capsule Program, and (2) modify the Reactor Vessel Surveillance Coupon Removal Schedule (Table 4.3.3) to provide the option of removing either a primary capsule or its equivalent counterpart located on the opposite side of the reactor core.

A Notice of Consideration of Issuance of Amendment and Proposed No Significant Hazards Consideration Determination and Opportunity for Hearing related to the requested action was published in the Federal Register on October 26, 1983 (48 FR 49583). A request for hearing and public comments were not received.

2.0 DISCUSSION AND EVALUATION

The Palisades reactor vessel surveillance program must provide material test data that can be used to determine the effect of neutron radiation on Palisades reactor vessel beltline materials throughout the plants operating life of 32 effective full power years (EFPY). The Palisades end-of-life (EOL) peak neutron fluence at the inside surface of the reactor vessel is predicted by the licensee to be 3.55×10^{19} n/cm² (E>1MeV).

The Palisades reactor vessel material surveillance program contains 2 capsules that are located outside the core barrel, 6 capsules that are located at the midplane of the core and 2 capsules that are located in a low flux region above the core. The capsules are located in positions within the reactor vessel that are diametrically opposite each other. The licensee indicates that each pair of diametrically opposite capsules have similar, if not identical neutron fluences and temperatures. The modified withdrawal schedule would permit the removal of either capsule. The two capsules that are located outside the core barrel are identified as Capsules A-60 and A-240. Capsule A-240 has been withdrawn and its material tested. The test data is reported in Battelle Report

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BCL-585-12. The materials in Capsule A-240 were similar to the limiting materials in the Palisades reactor vessel beltline and were exposed to a neutron fluence of approximately 4.42×10^{19} n/cm² (E>1MeV), which is greater than the predicted peak EOL neutron fluence for the Palisades reactor vessel beltline. Hence, the material test results from Capsule A-240 may be utilized to predict the EOL material properties of the Palisades reactor vessel.

As of October 31, 1982, the licensee indicates that Capsule A-60 had accumulated approximately 8.7×10^{18} n/cm² (E>1MeV) neutron fluence. Since the neutron fluence accumulated by the Capsule is significantly greater than the predicted EOL fluence for the Palisades reactor vessel and Capsule A-240 has provided material properties that can be utilized to predict the EOL material properties of the Palisades reactor vessel, Capsule A-60 will provide no useful fracture toughness data and may be deleted from the surveillance program.

The licensee indicates that the withdrawal schedule for the six capsules that are located at the midplane of the core will provide fracture toughness data from neutron fluences of 3.7×10^{18} n/cm² to 3.3×10^{19} n/cm² (E>1MeV). These capsules, along with Capsule A-240, will provide material test data that can be used to determine the effect of neutron radiation on the Palisades reactor vessel beltline materials throughout life of the vessel. Therefore, the staff finds the proposed reactor vessel material surveillance withdrawal schedule acceptable.

Based on the above discussion, the staff concludes (1) the deletion of Capsule A-60 from the Reactor Vessel Surveillance Program, and (2) the modification of the Reactor Vessel Surveillance Coupon Removal Schedule to provide the option of removing either a primary capsule or an equivalent capsule, are acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

The staff has 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, the staff has 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.

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.

5.0 ACKNOWLEDGEMENT

B. J. Elliot prepared this evaluation.

Dated: February 28, 1984