



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001  
May 22, 1995

Mr. Kurt M. Haas  
Plant Safety and Licensing Director  
Palisades Plant  
27780 Blue Star Memorial Highway  
Covert, MI 49043

SUBJECT: PALISADES PLANT - ISSUANCE OF AMENDMENT RE: PROPOSED CHANGES TO  
FINAL SAFETY ANALYSIS REPORT (FSAR) SECTION 4.2 (TAC NO. M84794)

Dear Mr. Haas:

The Commission has issued the enclosed Amendment No. 166 to Facility Operating License No. DPR-20 for the Palisades Plant. The amendment consists of changes to the Technical Specifications (TS) in response to your application dated October 20, 1992.

The amendment revises TS 5.3.1a to account for changes being made to the Palisades FSAR Section 4.2. TS 5.3.1a states that the primary coolant system is designed and shall be maintained in accordance with the Code requirements specified in Section 4.2 of the FSAR. As a result, any change to FSAR Section 4.2 is considered a change to TS 5.3.1a. The NRC is reissuing page 5-2 of the TS, even though no editorial changes were made, to clarify that the Code requirements in affect at the time of this TS amendment, as specified in Section 4.2 of the FSAR, are the Code requirements of record.

In addition to the proposed FSAR changes, your letter requested NRC staff concurrence on two other issues. The first is that you want to remove, at your convenience, a sentence that the staff requested be input into FSAR Section 4.2 in Amendment 135 regarding replacement parts and components. In order to remove this sentence, a request for amendment to the TS would be required because FSAR Section 4.2 is referenced in TS 5.3.1a. Therefore, the staff does not concur with your request to remove that sentence at your convenience. The second request relates to your interpretation that editorial changes to FSAR Section 4.2 do not require a formal amendment to TS 5.3.1a. The staff agrees that changes to FSAR Section 4.2 that are administrative or editorial in nature which do not change design parameters may still be processed without explicit NRC approval.

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Mr. Kurt M. Haas

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May 22, 1995

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

Sincerely,

Original signed by

Janet L. Kennedy, Project Manager  
Project Directorate III-1  
Division of Reactor Projects - III/IV  
Office of Nuclear Reactor Regulation

Docket No. 50-255

Enclosures: 1. Amendment No. 166 to DPR-20  
2. Safety Evaluation

cc w/encls: See next page

FILENAME: G:\WPDOCS\PALISADE\PAL84794.AMD

OFFICE	LA:PD31	PM:PD31	BC:SBXB	OGC	(A)D:PD31
NAME	CJamerson	JKennedy JK	RJones	Hollen	CCarpenter
DATE	4/20/95	4/24/95	4/25/95	5/2/95	5/21/95

OFFICIAL RECORD COPY

DATED: May 22, 1995

AMENDMENT NO. 166 TO FACILITY OPERATING LICENSE NO. DPR-20-PALISADES

**Docket File**

PUBLIC

PDIII-1 Reading

E. Adensam (e-mail)

J. Hannon

C. Carpenter

C. Jamerson

J. Kennedy

OGC-WF

G. Hill (2)

C. Grimes, O-11F23

R. Jones, O-8E23

ACRS (4)

OPA

OC/LFDCB

W. Kropp, RIII

SEDB

cc: Plant Service list

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ATTACHMENT TO LICENSE AMENDMENT NO. 166

FACILITY OPERATING LICENSE NO. DPR-20

DOCKET NO. 50-255

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

REMOVE

5-2

INSERT

5-2

Mr. Kurt M. Haas  
Consumers Power Company

Palisades Plant

cc:

Mr. Thomas J. Palmisano  
Plant General Manager  
Palisades Plant  
27780 Blue Star Memorial Highway  
Covert, Michigan 49043

Mr. Robert A. Fenech  
Vice President, Nuclear Operations  
Palisades Plant  
27780 Blue Star Memorial Highway  
Covert, Michigan 49043

M. I. Miller, Esquire  
Sidley & Austin  
54th Floor  
One First National Plaza  
Chicago, Illinois 60603

Mr. Thomas A. McNish, Secretary  
Consumers Power Company  
212 West Michigan Avenue  
Jackson, Michigan 49201

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

Regional Administrator, Region III  
U.S. Nuclear Regulatory Commission  
801 Warrenville Road  
Lisle, Illinois 60532-4351

Jerry Sarno  
Township Supervisor  
Covert Township  
36197 M-140 Highway  
Covert, Michigan 49043

Office of the Governor  
Room 1 - Capitol Building  
Lansing, Michigan 48913

U.S. Nuclear Regulatory Commission  
Resident Inspector's Office  
Palisades Plant  
27782 Blue Star Memorial Highway  
Covert, Michigan 49043

Nuclear Facilities and Environmental  
Monitoring Section Office  
Division of Radiological Health  
Department of Public Health  
3423 N. Logan Street  
P. O. Box 30195  
Lansing, Michigan 48909

Gerald Charnoff, Esquire  
Shaw, Pittman, Potts and Trowbridge  
2300 N Street, N. W.  
Washington DC 20037

Michigan Department of Attorney  
General  
Special Litigation Division  
630 Law Building  
P.O. Box 30212  
Lansing, Michigan 48909



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

CONSUMERS POWER COMPANY

DOCKET NO. 50-255

PALISADES PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 166  
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 October 20, 1992, 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;
  - 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 the license amendment and Paragraph 2.C.(2) of Facility Operating License No. DPR-20 is hereby amended to read as follows:

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Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 166, and the Environmental Protection Plan contained in Appendix B are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

*Janet L. Kennedy*

Janet L. Kennedy, Project Manager  
Project Directorate III-1  
Division of Reactor Projects - III/IV  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: May 22, 1995

## 5.2 CONTAINMENT DESIGN FEATURES (Cont'd)

### 5.2.2 Penetrations

- a. All penetrations through the steel-lined concrete structure for electrical conductors, pipe, ducts, air locks and doors are of the double-barrier design.
- b. The automatically actuated containment isolation valves are designed to close upon high radiation or high pressure in the containment structure. No single component failure in the actuation system will prevent the isolation valves from functioning as designed.

### 5.2.3 Containment Structure Cooling Systems

- a. The containment air cooling system includes four separate self-contained units which cool the containment air during normal operation and limit the pressure rise in the event of a design accident. Three units, with a total cooling water flow of 5580 gpm with an inlet temperature of 85°F, will remove  $230 \times 10^6$  Btu/hr of heat.
- b. The containment spray system is capable of removing  $233 \times 10^6$  Btu/hr (two pumps) from the containment atmosphere at 283°F by spraying the water from the 270,000-gallon SIRW tank. Recirculation of spray water from the containment sump through heat exchangers into the containment atmosphere is also provided. Under this mode of operation, the heat removal capability is  $167 \times 10^6$  Btu/hr based upon 4000 gpm of component cooling water flow with 114°F inlet temperature through the heat exchanger and 1420 gpm of spray water flow at 283°F inlet temperature.

## 5.3 NUCLEAR STEAM SUPPLY SYSTEM (NSSS)

### 5.3.1 Primary Coolant System Design Pressure and Temperature

The primary coolant system is designed, and shall be maintained:

- a. In accordance with the Code requirements specified in Section 4.2 of the FSAR with allowance for normal degradation pursuant to the surveillance requirements,
- b. For a pressure of 2500 psia,
- c. For a temperature of 650°F, except the pressurizer, which shall be 700°F, and
- d. With a volume of approximately 10,900 cubic feet.





UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 166 TO FACILITY OPERATING LICENSE NO. DPR-20  
CONSUMERS POWER COMPANY  
PALISADES PLANT  
DOCKET NO. 50-255

1.0 INTRODUCTION

By letter dated October 20, 1992, the Consumers Power Company (the licensee) requested an amendment to the Technical Specifications (TS) appended to Facility Operating License No. DPR-20 for the Palisades Plant. The proposed amendment would revise TS 5.3.1a to reflect changes being made to the Palisades Final Safety Analysis Report (FSAR) Section 4.2. The proposed FSAR changes correct and clarify the cyclic design load descriptions resulting from the replacement of the Palisades steam generators.

2.0 EVALUATION

The proposed FSAR changes to Section 4.2 are described below:

1. In FSAR Section 4.2.2, Item 3, the design load of 15,000 power change cycles with a ramp load change of 15% of full load per minute, is being deleted since the replacement steam generators were not analyzed for this load change rate.
2. In FSAR Section 4.2.2, Item 5, a statement is being added to reflect the relationship between the allowable temperature and maximum primary to secondary pressure differential as referenced in Combustion Engineering Report, "Specification for Steam Generator Assemblies for Consumers Power Company."
3. In FSAR Section 4.2.2, Items 6 and 7, changes to primary leak testing design load are being added to show the assumptions used in the design analysis.
4. In FSAR Section 4.2.2, in the middle of page 4.3-6 following Item 8, the edition of the American Society of Mechanical Engineers (ASME) Code is deleted since the replacement steam generators are not built to Section III, Class A of the 1965 edition. FSAR Section 4.2.4 describes the applicable Code edition.
5. In FSAR Section 4.2.2, a change is being made to better define the abnormal transient loads. The description of one cycle of loss of secondary system pressure is also clarified.

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6. FSAR Section 4.2.2, Items 1 through 8 are being renumbered to reflect the deletion of Item 3.

Change No. 1

This change deletes one of the design cyclic transients which were used in the fatigue analysis of the original steam generators. Specifically, the transient for 15,000 power change cycles over the range of 50% to 100% of full load with a ramp load change of 15% of full load per minute, is being deleted, as it does not apply to the replacement steam generators that were installed at Palisades in late 1990. This change does not affect plant operation because there is no design or licensing requirement that the plant be capable of 15% per minute load changes. In addition, by deleting the 15% per minute load change rate from the FSAR, the operation of the plant is unaffected because the 5% per minute limit on load rate change transient (FSAR Section 4.2.2, Item 2) is more limiting. Furthermore, the staff previously reviewed the steam generator replacement design change in Amendment 135.

Change No. 2

This change adds the reference for assumptions on steam generator differential pressure. The reference that was added is a Combustion Engineering Report, "Specification for Steam Generator Assemblies for Consumers Power Company, Specification No. 19377-PE-120." This specification was used in the design of the replacement steam generators and is added to account for limits on differential pressure to avoid steam generator tube degradation.

Change No. 3

This change is being made to add changes to the primary leak testing design to show the assumptions used in the design analysis. This change simply adds design information used in the replacement steam generators.

Change No. 4

This change deletes the specific edition of the ASME Code because the replacement steam generators are not built to Section III, Class A of the 1965 edition. FSAR Section 4.2.4 describes the applicable edition. The design of the replacement steam generators to the 1977 ASME Code was addressed by the staff in Amendment 135 to the Palisades TS.

Change No. 5

This change adds clarifying information to better define the abnormal transient loads during a loss of secondary system pressure for the replacement steam generators.

#### Change No. 6

This change renumbers Items 1 through 8 in FSAR Section 4.2.2. Because of the deletion of Item 3 in Section 4.2.2, the design cyclic loads will be numbered 1 through 7.

#### Conclusion

With the exception of Change No. 1, the proposed changes to FSAR Section 4.2 are editorial in nature and serve to clarify the existing information in FSAR Section 4.2 following replacement of the steam generators. Changes 2 through 6 are, therefore, acceptable.

The deletion of the 15,000 power change cycles over the range of 50% to 100% of full load with a ramp load change of 15% of full load per minute does not apply to the Palisades' replacement steam generators. The replacement steam generators were not designed to meet this cyclic load transient and are not required to do so. Based upon the fact that there is no license requirement and no NRC requirement to meet this design load, the change to delete it is acceptable.

#### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Michigan State official was notified of the proposed issuance of the amendment. The Michigan State official had no comments.

#### 4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes 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. 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 the amendment involves no significant hazards consideration and there has been no public comment on such finding (60 FR 18624). Accordingly, the 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 the amendment.

## 5.0 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, (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.

Principal Contributor: J. Kennedy

Date: May 22, 1995