

**Consumers Energy**

A CMS Energy Company

Palisades Nuclear Plant  
27780 Blue Star Memorial Highway  
Covert, MI 49043Tel. 616 764 2276  
Fax. 616 764 2490**Nathan L. Haskell**  
Director, Licensing

October 29, 1999

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001**DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT  
TECHNICAL SPECIFICATIONS CHANGE REQUEST - COLR REFERENCES AND Pa**

A request for a change to the Palisades Technical Specifications, which revises 1) the peak calculated containment internal pressure,  $P_a$ , listed in Section 6.5.14, Containment Leak Rate Testing Program, and 2) the list of methodology documents in Section 6.6.5, Core Operating Limits Report, is enclosed. This change is desired to update the TS to reflect the design of the Cycle 15 core. Corresponding changes for the Palisades Improved Technical Specifications, now in the final review stages at the NRC, will be submitted at a later date.

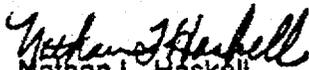
The change in  $P_a$  is due to a change in coatings within the containment; the change in the list of methodology documents is due to updating of calculational methods by our nuclear fuel vendor.

Palisades is currently in a refueling outage and will be installing a core designed using the methodologies presented in the enclosure to this letter. It is desired to have  $P_a$ , as listed in Section 6.5.14, and the list of approved methodologies presented on Section 6.6.5 reflect the analyses and design methodologies for Cycle 15 prior to taking the reactor critical with the new core installed. Our present schedule shows November 16, 1999 as the early date for reactor criticality. It is requested, therefore, that the license amendment associated with this change request be approved prior to that date, and be effective upon approval.

A copy of this letter has been sent to the appropriate official of the State of Michigan.

**SUMMARY OF COMMITMENTS**

Corresponding changes to those in this change request will be submitted at a later date for the Palisades Improved Technical Specifications.

  
Nathan L. Haskell  
Director, LicensingCC: Administrator, Region III, USNRC  
Project Manager, NRR, USNRC  
NRC Resident Inspector - Palisades  
Dennis R. Hahn, Michigan Department of Environmental Quality

Enclosure

**ENCLOSURE**

**CONSUMERS ENERGY COMPANY  
PALISADES PLANT  
DOCKET 50-255**

**TECHNICAL SPECIFICATIONS CHANGE REQUEST  
COLR REFERENCES AND Pa**

**CONSUMERS ENERGY COMPANY**  
**Docket 50-255**  
**Technical Specifications Change Request**  
**License DPR-20**

It is requested that the Technical Specifications contained in the Facility Operating License DPR-20, Docket 50-255, for the Palisades Plant be changed as described below.

Attachment 1 to this change request contains the proposed TS pages. The changed areas are marked with a vertical line in the margin. Attachment 2 contains the current TS and Bases pages marked to show the proposed changes. These pages show shading for proposed additions and a line drawn through deleted text. The proposed changes are described below.

**I. The following Changes are Proposed:**

- A.  $P_a$ , listed in TS Section 6.5.14, be revised from 52.64 to 53 psig.
- B. The list of methodology documents in TS Section 6.6.5 be revised as shown in Attachments 1 and 2.

**II. Discussion of Changes:**

**A. TS 6.5.14  $P_a$  Revision:**

The peak containment pressure prior to Cycle 14 was 52.64 psig. The current analysis yields a peak pressure of 52.68 psig, which has been rounded up to 53 psig. The change in peak calculated containment internal pressure,  $P_a$ , was due to modeling changes in the passive heat sinks within the containment.

There are two types of heat sinks modeled in the CONTEMP-LT/28 code: active and passive. Active heat sinks consist of containment air coolers and containment sprays. The Containment Response Analysis assumes that the LOCA occurs coincident with a loss of off-site power. The peak containment pressure occurs 13.2 seconds into the event, before the active heat sinks are in service.

Passive heat sinks consist of the heat structures (i.e. containment walls, installed equipment, structural steel). The change in the peak pressure was a result of the change to a passive heat sink, specifically, the use of Carboline 890 paint to re-coat a portion of the containment wall. Carboline 890 has a lower thermal conductivity and a greater allowed film thickness than the Carbo-Zinc 11/Carboline 3912 coating used previously. The assumed thermal conductivity of the containment wall has been revised to allow use of Carboline 890 to recoat up to 1000 square feet of surface. (Carboline, Inc. no longer manufactures the existing coating, Carbo-Zinc 11/Carboline 3912.)

**B. TS 6.6.5 Methodology List Revision:**

The following changes have been made to the Methodology List:

1. EMF-96-029 (PRISM) replaces XN-75-27 (XTGPWR). All neutronic parameters used for the verification of the Palisades Cycle 15 safety analyses were calculated using PRISM. The significant neutronics parameters used in the licensing basis analysis for each event were compared to the Cycle 15 specific values determined by PRISM. This review concluded that the values used in the analyses of record bound the Cycle 15 specific values. In addition, Cycle 15 specific values of MDNBR and LHGR were calculated for the limiting events using power distributions, including radial augmentation factors, determined by PRISM. As a result, the current licensing calculations for Palisades Cycle 15 are completely supported by neutronics parameters determined by PRISM and references to XTGPWR are no longer necessary.
2. Editorial change to remove the base report and the supplements from the reference because only the sited reference has been approved.
3. No change.
4. Editorial to change ANF to EMF, remove the supplements from the reference, and change Advanced Nuclear Fuels Corporation to Siemens Power Corporation.
5. Editorial change to remove the base report from the reference because only the sited reference has been approved.
- 6a & 6b. Editorial change to separate current reference 6a because supplement 2 was approved separately from the base report and Supplements 1, 3, and 4.
- 6c. Editorial to change current reference 6b to 6c.
- 6d & 6e. Editorial change to separate current reference 6c because Supplements 1 and 2 were approved separately from Supplements 3 and 4.
- 6f & 6g. Editorial change to add proprietary(P) and change Exxon Nuclear Company to Advanced Nuclear Fuels Corporation.
7. Editorial change to add non-proprietary(NP) to the reference.
8. No change.
9. Editorial change adds Supplement 1 to the reference.
10. A reference is added for the XNB DNB correlation.
11. & 12. Two references are added for the mechanical design methodology.
13. A reference is added for the gadolinia methodology.
14. A reference is added for the generic design criteria.
15. Our current large break LOCA analysis is based on the methodology listed in reference 6. We expect to reanalyze this event using this new methodology during Cycle 15.
16. The current reference 8 (DNB correlation) is removed. A reference is added for the Palisades setpoint methodology which was approved for use in the Palisades design during the NRC review of license Amendment 118, November 15, 1988. (Safety Evaluation Reference 29)

### III. Analysis of No Significant Hazards Consideration

#### A. Does the TS 6.5.14 P<sub>a</sub> Revision:

- a. Involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed change to the calculated peak calculated containment internal pressure for the design basis loss of coolant accident, P<sub>a</sub>, does not alter the assumed initiators to any analyzed event. The probability of an accident previously evaluated will not be increased by this proposed change.

The Containment Leak Rate Testing Program limits containment leakage to 0.1% of the containment air weight per day with containment pressure at P<sub>a</sub>. Since all Palisades radiological consequence analyses are performed assuming design containment pressure (55 psig), the change in P<sub>a</sub> will not cause the containment leakage to be above the design value of 0.1% at 55 psig. The consequences of an accident previously evaluated will not be increased by this proposed change.

Therefore, operation of the facility in accordance with the proposed change to TS section 6.5.14 would not involve a significant increase in the probability or consequences of an accident previously evaluated.

- b. Create the possibility of a new different kind of accident from any accident previously evaluated

The proposed change provides a higher peak calculated containment internal pressure for the design basis loss of coolant accident than currently exists in the TS. This change is a result a change to the coatings used on internal containment surfaces. The change does not involve any alteration in the plant configuration (no new or different type of equipment will be installed) or make changes in the methods governing normal plant operation. The change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Therefore, operation of the facility in accordance with the proposed change to TS section 6.5.14 would not create the possibility of a new or different kind of accident from any previously evaluated.

- c. Involve a significant reduction in a margin of safety

The peak calculated containment pressure remains below the containment design pressure of 55 psig. Since all Palisades radiological consequence analyses are performed assuming design containment pressure (55 psig), a change in the peak calculated containment internal pressure of 0.36 psi does not represent a significant change in the margin of safety.

Therefore, operation of the facility in accordance with the proposed change to TS section 6.5.14 does not involve a significant reduction in the margin of safety.

**B. Does the TS 6.6.5 Methodology List Revision:**

- a. Involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed change to the list of methodology documents in Specification 6.6.5 would not increase the probability or consequence of an accident previously evaluated. Accidents previously evaluated will be unaffected by changes in methodology references because they were analyzed using approved methods. The results of these event analyses met their respective acceptance criteria.

Therefore, operation of the facility in accordance with the proposed change to the Technical Specifications would not involve a significant increase in the probability or consequences of an accident previously evaluated.

- b. Create the possibility of a new or different kind of accident from any previously evaluated.

The proposed change to the list of methodology documents in Specification 6.6.5 would not create the possibility of a new or different accident than previously analyzed. The proposed change only changes the approved methodology documents. All accidents remain analyzed using approved methodologies.

Therefore, operation of the facility in accordance with the proposed change to the Technical Specifications would not create the possibility of a new or different kind of accident from any previously evaluated.

- c. Involve a significant reduction in a margin of safety.

The proposed change to the list of methodology documents in Specification 6.6.5 would not reduce the margin of safety. Because all analyses use approved methodologies and their results satisfy their respective acceptance criteria, the margin of safety is not reduced.

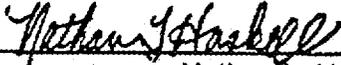
Therefore, operation of the facility in accordance with the proposed change to the Technical Specifications would not involve a significant reduction in a margin of safety.

**III. Conclusion**

The Palisades Plant Review Committee has reviewed this TS Change Request and has determined that proposing this change does not involve an unreviewed safety question. Further, the change involves no significant hazards consideration. This change has been reviewed by the Nuclear Performance Assessment Department.

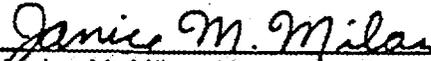
**CONSUMERS ENERGY COMPANY**  
**TECHNICAL SPECIFICATIONS CHANGE REQUEST**

To the best of my knowledge, the content of this Technical Specifications change request, which revises 1) the list of methodology documents in Section 6.6.5 and 2) the peak calculated containment internal pressure,  $P_c$ , listed in Section 6.5.14, is truthful and complete.



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Nathan L. Haskell  
Director, Licensing

Sworn and subscribed to before me this 29th day of October 1999



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Janice M. Milan, Notary Public  
Allegan County, Michigan  
(Acting in Van Buren County, Michigan)  
My commission expires September 6, 2003