



A CMS Energy Company

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Nathan L. Haskell
Director, Licensing and
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February 12, 2001

U S Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

**DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT
TECHNICAL SPECIFICATION CHANGE REQUEST - CORE OPERATING LIMITS REPORT
REFERENCES**

Enclosed is a request for a change to the Palisades Technical Specifications (TS) to revise the list of approved methodology documents in Section 5.6.5, Core Operating Limits Report (COLR). The requested change adds a reference related to statistical methods for transient and setpoint analysis.

In the upcoming refueling outage, scheduled to begin March 30, 2001, Palisades will be installing a core which was designed using both the methodologies identified in TS 5.6.5, and the new methodology which is the subject of this TS change request. The need for this change was discovered during the final design verification reviews for the Cycle 16 core design, where it was identified that the new methodology would need to be included in the list of approved methodologies contained in the Technical Specifications. This changed TS will be needed following the upcoming refueling outage, prior to taking the reactor critical with the new core installed. The present schedule shows May 4, 2001 as the date for reactor criticality. Therefore, Consumers Energy requests the amendment associated with this change 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

This letter establishes no new commitments and makes no revisions to existing commitments.

Nathan L. Haskell
Director, Licensing and Performance Assessment

CC: Administrator, Region III, USNRC
Project Manager, NRR, USNRC
NRC Resident Inspector - Palisades

Enclosure

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CONSUMERS ENERGY COMPANY

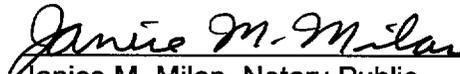
**TECHNICAL SPECIFICATION CHANGE REQUEST -
CORE OPERATING LIMITS REPORT REFERENCES**

To the best of my knowledge, the content of this Technical Specifications change request, which revises the Palisades Technical Specifications to incorporate changes to the list of Core Operating Limits Report approved methodologies, is truthful and complete.



Nathan L. Haskell
Director, Licensing and Performance Assessment

Sworn and subscribed to before me this 12th day of February 2001



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

(Seal)

ENCLOSURE

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

**TECHNICAL SPECIFICATION CHANGE REQUEST -
CORE OPERATING LIMITS REPORT REFERENCES**

8 Pages

CONSUMERS ENERGY COMPANY

Docket 50-255

License DPR-20

Request for Change to the Technical Specifications
CORE OPERATING LIMITS REPORT REFERENCES

It is requested that the Technical Specifications contained in the Facility Operating License DPR-20, Docket 50-255, issued to Consumers Power Company on February 21, 1991, for the Palisades Plant be changed as described below.

The following attachments have been included with this change request :

1. The proposed Technical Specifications pages; changes are indicated by a vertical line in the margin.
2. The existing Technical Specifications pages marked to show the proposed change. Deleted text is shown as strike-out; added text is shown with a shaded background.

I. Proposed Changes

TS 5.6.5.b. is revised to add:

17. EMF-1961(P)(A), Revision 0, Siemens Power Corporation, July 2000, "Statistical Setpoint/Transient Methodology for Combustion Engineering Type Reactors."
(LCOs 3.1.6, 3.2.1, 3.2.2, 3.2.4)

II. Discussion

Technical Specification 5.6.5, "CORE OPERATING LIMITS REPORT," in subparagraph b., identifies that analytical methods used to determine the core operating limits shall be those approved by the NRC, specifically those described in the latest approved versions of the identified documents. The requested change will add reference to additional NRC approved methodology for use in Palisades core design and analysis. This change is necessary because the added methodology is being used in the design of the Cycle 16 core, which will be installed during the next refueling outage beginning on March 30, 2001.

The new reference describes Framatome Advanced Nuclear Power's (ANP) statistical methods for transient and setpoint analysis. Evaluation of the Thermal Margin/Low Pressure (TM/LP) trip function, as well as several setpoints not used by Palisades (the Local Power Density (LPD) Limiting Safety System Setting trip function, the Departure from Nucleate Boiling Limiting Condition of Operation (DNB LCO) and the LPD LCO) are included in the setpoint discussion. The statistical evaluation of transients for DNB, fuel centerline melt and system pressures is described. The NRC approved this methodology

Request for Change to the Technical Specifications
CORE OPERATING LIMITS REPORT REFERENCES

for use on Combustion Engineering (CE) type reactors on July 12, 2000, with the following restrictions:

- “1. This methodology is approved only for CE type reactors which use protection systems as described in the topical report.
2. The methodology includes a statistical treatment of specific variables in the analysis; therefore, if additional variables are treated statistically SPC should re-evaluate the methodology and document the changes in the treatment of the variables. The documentation will be maintained by SPC and will be available for NRC audit.”

The first limitation prevents the methodology from being applied to any Palisades trip input parameter that is not described in the topical report (i.e., the T_{inlet} LCO). Based on the NRC approval of ANP's statistical methodology for CE plants, ANP can apply the methodology to the Cycle 16 core design to calculate fuel centerline melt limits, analyze transients statistically and confirm the TM/LP trip statistically. Again, this methodology does not cover the T_{inlet} LCO.

The second limitation places conditions on ANP (then Siemens Power Corporation) with regard to the extension of the number of variables treated statistically and does not affect use of the approved methodology for Palisades.

III. Analysis of No Significant Hazards Consideration

Consumers Energy finds the activities associated with this proposed Technical Specifications (TS) change involve no significant hazards and accordingly, a no significant hazards determination in accordance with 10 CFR 50.92(c) is justified. The proposed change would add an NRC approved core design and analysis methodology to the list in TS 5.6.5.b.

The following evaluation supports the finding that operation of the facility in accordance with the proposed change would not:

- (1) 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 5.6.5.b. would not increase the probability or consequence of an accident previously evaluated. Accidents previously evaluated will be unaffected by the addition of a methodology reference because they were analyzed using approved methods. The results of these event analyses met their respective acceptance criteria.

Request for Change to the Technical Specifications
CORE OPERATING LIMITS REPORT REFERENCES

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.

- (2) 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 5.6.5.b. would not create the possibility of a new or different accident than previously analyzed. The proposed change only adds an approved methodology document. All accidents remain analyzed using applicable NRC 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.

- (3) Involve a significant reduction in a margin of safety.

The proposed change to the list of methodology documents in Specification 5.6.5.b. 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, the proposed change to the Technical Specifications would not involve a significant reduction in a margin of safety.

IV. Environmental Review

The proposed change to the Core Operating Limits Report references does not alter any design requirements, equipment specifications or safety analysis modeling assumptions. The change does not require any hardware modifications. The plant operating procedures are not impacted. Therefore, the proposed change will not increase the type or amount of any effluent which may be released offsite, or increase the individual or cumulative occupational radiation exposure. In addition, Consumers Energy has determined that the proposed change involves no significant hazards consideration. As such, this change meets the criteria for "categorical exclusion" for not requiring an environmental review in accordance with 10 CFR 51.22.

V. Conclusion

The Palisades Plant Review Committee has reviewed this Technical Specifications change request and has determined that the change involves no significant hazards consideration.

**ENCLOSURE
ATTACHMENT 1**

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

**TECHNICAL SPECIFICATION CHANGE REQUEST
CORE OPERATING LIMITS REPORT REFERENCES**

PROPOSED PAGE 5.0-27

5.6 Reporting Requirements

5.6.5 COLR (continued)

9. EMF-92-153(P)(A) and Supplement 1, "HTP: Departure from Nucleate Boiling Correlation for High Thermal Performance Fuel," Siemens Power Corporation. (LCOs 3.2.1, 3.2.2, & 3.2.4)
 10. XN-NF-621(P)(A), "Exxon Nuclear DNB Correlation for PWR Fuel Designs," Exxon Nuclear Company. (LCOs 3.2.1, 3.2.2, & 3.2.4)
 11. XN-NF-82-06(P)(A) and Supplements 2, 4, and 5, "Qualification of Exxon Nuclear Fuel for Extended Burnup," Exxon Nuclear Company. (LCOs 3.1.6, 3.2.1, 3.2.2, & 3.2.4)
 12. ANF-88-133(P)(A) and Supplement 1, "Qualification of Advanced Nuclear Fuels' PWR Design Methodology for Rod Burnups of 62 GWD/MTU," Advanced Nuclear Fuels Corporation. (LCOs 3.1.6, 3.2.1, 3.2.2, & 3.2.4)
 13. XN-NF-85-92(P)(A), "Exxon Nuclear Uranium Dioxide/Gadolinia Irradiation Examination and Thermal Conductivity Results," Exxon Nuclear Company. (LCOs 3.1.6, 3.2.1, 3.2.2, & 3.2.4)
 14. EMF-92-116(P)(A), "Generic Mechanical Design Criteria for PWR Fuel Designs," Siemens Power Corporation. (LCOs 3.1.6, 3.2.1, 3.2.2, & 3.2.4)
 15. EMF-2087(P)(A), "SEM/PWR-98: ECCS Evaluation Model for PWR LBLOCA Applications," Siemens Power Corporation. (LCOs 3.1.6, 3.2.1, & 3.2.2)
 16. ANF-87-150 Volume 2, "Palisades Modified Reactor Protection System Report: Analysis of Chapter 15 Events," Advanced Nuclear Fuels Corporation. [Approved for use in the Palisades design during the NRC review of license Amendment 118, November 15, 1988] (LCOs 3.1.6, 3.2.1, & 3.2.2)
 17. EMF-1961(P)(A), Revision 0, Siemens Power Corporation, July 2000, "Statistical Setpoint/Transient Methodology for Combustion Engineering Type Reactors." (LCOs 3.1.6, 3.2.1, 3.2.2, 3.2.4)
- c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems limits, nuclear limits such as shutdown margin, transient analysis limits, and accident analysis limits) of the safety analysis are met.
 - d. The COLR, including any mid cycle revisions or supplements, shall be provided, upon issuance for each reload cycle, to the NRC.

**ENCLOSURE
ATTACHMENT 2**

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

**TECHNICAL SPECIFICATION CHANGE REQUEST
CORE OPERATING LIMITS REPORT REFERENCES9**

EXISTING PAGE 5.0-27 MARKED TO SHOW PROPOSED CHANGE

5.6 Reporting Requirements

5.6.5 COLR (continued)

9. EMF-92-153(P)(A) and Supplement 1, "HTP: Departure from Nucleate Boiling Correlation for High Thermal Performance Fuel," Siemens Power Corporation. (LCOs 3.2.1, 3.2.2, & 3.2.4)
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