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 FACIL: 50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana M 05000316  
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 RECIP. NAME      RECIPIENT AFFILIATION  
                          Document Control Branch (Document Control Desk)

SUBJECT: Application for amend to license DPR-74, revising  
 3/4.4.9.1 re heatup & cooldown curves to reflect recent  
 reactor vessel matl surveillance capsule reanalysis, per  
 direction of Reg Guide 1.99, Rev 2.

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AEP:NRC:0894U

Donald C. Cook Nuclear Plant Unit 2  
Docket No. 50-316  
License No. DPR-74  
TECHNICAL SPECIFICATION AMENDMENT REQUEST TO  
UPDATE THE UNIT 2 HEATUP AND COOLDOWN CURVES

U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D. C. 20555

Attn: T. E. Murley

February 22, 1994

Dear Dr. Murley:

This letter and its attachments constitute an application for amendment to Technical Specification 3/4.4.9.1 for Donald C. Cook Nuclear Plant Unit 2. Specifically, we request that the plant heatup and cooldown curves be changed to reflect the recent reactor vessel material surveillance capsule reanalyses which was performed by Westinghouse Electric Corporation per the direction provided in Regulatory Guide (R/G) 1.99, Rev. 2. The reasons for the proposed change and our proposed determination of no significant hazards consideration performed pursuant to 10 CFR 50.92(c), are contained in Attachment 1 to this letter. Attachment 2 contains the existing T/S pages marked to reflect the proposed changes. Attachment 3 contains the proposed T/S pages. The results of the capsule reanalyses (WCAP-13515), performed by Westinghouse, were submitted in our letter dated March 12, 1993, under AEP:NRC:0894T, Reactor Vessel Material Surveillance Reports. This report was used to generate the heatup and cooldown curves for 15 EFPY. These curves are being submitted in this letter to revise Figures 3.4-2 and 3.4-3 of Technical Specification 3/4.4.9.1, Pressure and Temperature Limits for the Reactor Coolant System.

We believe that the proposed changes will not result in (1) a significant change in the types of effluents or a significant

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Dr. T. E. Murley

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increase in the amounts of any effluent that may be released offsite, or (2) a significant increase in individual or cumulative occupational radiation exposure.

The revised heatup and cooldown curves in Attachment 3 have been evaluated against and reflect the criteria of 10 CFR 50, Appendix G, Paragraph IV.A.2. The impact of this T/S change request on our LTOP setpoint has been evaluated, and the current LTOP setpoint was not revised as it is valid up to 15 EFPY.

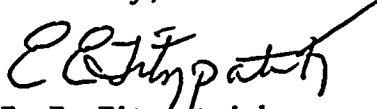
To implement the revised heatup and cooldown limits in an orderly fashion, we are proposing to institute these new heatup and cooldown limits during the refueling window (Mode 6) of the upcoming Cycle 9-10 refueling outage, prior to the unit returning to Mode 5. We presently anticipate the outage to begin as early as August 5, 1994; therefore, we request that your review of these changes be completed by September 4, 1994.

The proposed changes have been reviewed by the Plant Nuclear Safety Review Committee and by the Nuclear Safety and Design Review Committee.

In compliance with the requirements of 10 CFR 50.91(b)(1), copies of this letter and its attachments have been transmitted to Mr. J. R. Padgett of the Michigan Public Service Commission and to the Michigan Department of Public Health.

This letter is submitted pursuant to 10 CFR 50.30(b) and, as such, an oath statement is attached.

Sincerely,



E. E. Fitzpatrick  
Vice President

cad

Attachments

cc: A. A. Blind - Bridgman  
G. Charnoff  
J. B. Martin - Region III  
NFEM Section Chief  
NRC Resident Inspector - Bridgman  
J. R. Padgett

STATE OF OHIO)  
COUNTY OF FRANKLIN)

E. E. Fitzpatrick, being duly sworn, deposes and says that he is the Vice President of licensee Indiana Michigan Power Company, that he has read the forgoing Technical Specification Amendment Request to Update the Unit 2 Heatup and Cooldown Curves, and knows the contents thereof; and that said contents are true to the best of his knowledge and belief.

E E Fitzpatrick

Subscribed and sworn to before me this 23rd  
day of February, 19 84.

Rita D. Hill  
NOTARY PUBLIC

RITA D. HILL  
NOTARY PUBLIC, STATE OF OHIO  
MY COMMISSION EXPIRES 6-28-94

Attachment 1 to AEP:NRC:0894U

10CFR50.92 DETERMINATION FOR PROPOSED CHANGES TO THE  
DONALD C. COOK NUCLEAR PLANT UNIT 2  
TECHNICAL SPECIFICATIONS

## 1.0 SECTIONS CHANGED

Unit 2 Technical Specification (T/S) 3.4.9.1 Figure 3.4-2, Reactor Coolant System Heatup Limitations, and Figure 3.4-3, Reactor Coolant System Cooldown Limitations are being changed. Also, the bases for Technical Specification 3/4.4.9 are being updated to reflect the analyses performed by Westinghouse, and the extended time frame of 15 EFY.

## 2.0 EXTENT OF CHANGES

We are proposing to change the heatup and cooldown curves shown in Figures 3.4-2, and 3.4-3, as well as the bases for those specifications, to reflect an extended time frame of 15 EFY.

## 3.0 CHANGES REQUESTED

The T/S changes found in Attachments 2 and 3 are based on implementation of R/G 1.99, Revision 2. The following Unit 2 T/S pages are impacted by this change:

Page 3/4 4-25  
Page 3/4 4-26

Page B 3/4 4-6  
Page B 3/4 4-10

## 4.0 DISCUSSION

### Pages 3/4 4-25 and 3/4 4-26

Figures 3.4-2 and 3.4-3 are the heatup and cooldown (P-T) limit curves for Unit 2. These composite curves reflect the adjusted reference temperature of the most limiting material at the end of 15 EFY, and are based on the following considerations.

1. Intermediate shellplate, C5556-2, is the limiting material as determined by position 1 of R/G 1.99, Revision 2, with a Cu and Ni content of 0.15% and 0.57%, respectively.
2. The fluence values contained in Table 6-14 of Westinghouse WCAP-13515, "Analysis of Capsule U from Indiana Michigan Power Company, Cook Nuclear Plant Unit 2 Reactor Vessel Radiation Surveillance Program", dated February 1993. This report was submitted as an attachment to letter AEP:NRC:0894T, dated March 12, 1993.





Pages B 3/4 4-6 and B 3/4 4-10

The Pressure - Temperature bases are proposed to be modified to reflect the Unit 2 Capsule U Analysis, as presented in Westinghouse WCAP-13515.

5.0 NO SIGNIFICANT HAZARDS DETERMINATION

We have evaluated the proposed T/Ss, and have determined that it should not represent a significant hazards consideration based on the criteria established in 10CFR50.92(c). Operation of the Cook Nuclear Plant in accordance with the proposed amendment will not:

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

The proposed changes to the P-T curves are being updated as a result of the Unit 2 Capsule U analysis, WCAP-13515. The analysis was required per the removal schedule established in Table 4.4-5 of the Cook Nuclear Plant Technical Specifications. The analysis was performed based on guidance from R/G 1.99, Revision 2. The change only involves a revised time frame for material qualification from 12 EFPY to 15 EFPY as supported by the aforementioned Westinghouse analysis. Therefore, we conclude that the changes will not involve a significant increase in the probability or consequences of a previously evaluated accident, nor will the changes involve a significant reduction in a margin of safety.

- (2) Create the possibility of a new or different kind of accident from any previously analyzed.

The proposed changes do not involve any physical modifications to the plant. Therefore, the changes should not create the possibility of a new or different kind of accident from any previously analyzed or evaluated.



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

See the response to (1) above.

6.0 PENDING T/Ss PROPOSALS IMPACTING THIS SUBMITTAL

There are currently no other T/Ss proposals under review that would impact this submittal.

