

INDIANA & MICHIGAN ELECTRIC COMPANY

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July 29, 1983
AEP:NRC:0745F

Donald C. Cook Nuclear Plant Unit No. 1
Docket No. 50-315
License No. DPR-58
APPLICATION FOR UNIT 1 CYCLE 8 RELOAD LICENSE AMENDMENT: ADDENDUMS
AND ANSWERS TO NRC QUESTIONS

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Denton:

This letter and certain of its attachments constitute an addendum to the Donald C. Cook Unit 1 "Application for Reload License Amendment Using Westinghouse Optimized Fuel Assemblies" contained in our letter No. AEP:NRC:0745C dated May 11, 1983. This addendum includes revisions to the Technical Specifications proposed in letter AEP:NRC:0745C. Further attachments to this letter contain answers to the questions posed in Steven A. Varga's June 29, 1983, letter to John Dolan, concerning information submitted in letter AEP:NRC:0745C.

In order to assure a timely licensing approval for Cycle 8 startup operations, the worst large break LOCA case has been reanalyzed using initial fuel rod conditions determined from the currently approved PAD fuel thermal safety model (WCAP-8720). This results in a lower LOCA FQ OF 1.97, compared to an FQ of 2.00 using the revised PAD thermal safety model (WCAP-8720-Addendum 2) as described in the May 11, 1983, licensing amendment application. Due to the reduced 1.97 FQ, this submittal contains pages revising AEP:NRC:0745C as follows:

This Submittal

AEP:NRC:0745C

Attachment A

Revises certain pages in Attachment A
(Proposed Technical Specifications)

Attachment B

Replaces Attachment B (Safety Evaluation)

Attachment C

Replaces Attachment D (Large Break LOCA Analysis)

Attachment D

Revises a page in Attachment F (Description
of Proposed Technical Specifications)

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The use of approved nuclear design methods has shown that the LOCA F_0 limit of 1.97 and its associated $K(Z)$ envelope limit will be satisfied. The revisions in the proposed Technical Specifications have been approved by the Plant Nuclear Safety Review Committee (PNSRC) and will be reviewed by the AEPSC Nuclear Safety and Design Review Committee (NSDRC).

Westinghouse has performed an evaluation to determine if the use of the revised PAD model impacts the core operating limits. This evaluation consisted of examining the fuel temperatures used in the non-LOCA transients described in the licensing application. In all cases, it was determined that the use of the fuel temperatures predicted by the revised PAD model has a slight impact on the non-LOCA safety analysis and the appropriate design bases are still met. The small break LOCA ECCS analysis was not reanalyzed. The small break LOCA peak clad temperature is approximately 500°F less limiting than large break LOCA peak clad temperatures. Additionally, small break peak clad temperatures are less sensitive to fuel initial conditions than large break, since clad heatup begins after the core uncovers, which is minutes into the transient. By this time, the initial stored energy effect is largely eliminated. Therefore standard PAD fuel initial conditions will have a negligible effect on small break LOCA peak clad temperatures, and the large break LOCA results will remain limiting. Thus it was concluded that the core operating limits determined by the non-LOCA and small break analyses are not altered by the use of the revised PAD model.

Further attachments to this letter are as follows:

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| Attachment E | Answers to Reactor Physics Questions
contained in letter, Varga to Dolan, June 29, 1983 |
| Attachment F | Answers to Fuels Questions contained in letter,
Varga to Dolan, June 29, 1983 |
| Attachment G | Peaking Factor Limit Report |

Please note that the Peaking Factor Limit Report submitted here is currently being updated. This update will be transmitted to you upon our receipt from Westinghouse and our review.

Attachment H to this letter contains our analysis, pursuant to the standards in 10 CFR 50.92, about the issue of no significant hazards considerations in this addendum to a license amendment request. This analysis is being submitted as required by 10 CFR 50.91 (a) (1).

As required by 10 CFR 50.91 (b) (1), a copy of this entire addendum to a license amendment application is being transmitted to the appropriate official of the State of Michigan.

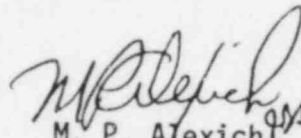
Our letter No. AEP:NRC:0745A, dated February 7, 1983, transmitted

the Class III fee levied by the NRC for the review of the Cycle 8 reload for Unit 1. We consider the requests and responses contained in this letter as part of that review and believe, therefore, no fee is required by this submittal.

The attached technical specification change request does not include a requirement to submit a peaking factor limit report to your office 60 days prior to reload. Nevertheless, it is our intent to request such change prior to the next reload.

This document has been prepared following Corporate Procedures which incorporate a reasonable set of controls to insure its accuracy and completeness prior to signature by the undersigned.

Very truly yours,


M. P. Alexich
Vice President

MPA:las

cc: John E. Dolan
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R. W. Jurgensen
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