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 50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316
 AUTH.NAME AUTHOR AFFILIATION
 ALEXICH,M.P. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele
 RECIP.NAME RECIPIENT AFFILIATION
 Document Control Branch (Document Control Desk)

SUBJECT: Forwards requested reference for computer codes used in criticality analyses.

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AEP:NRC:1071B

Donald C. Cook Nuclear Plant Units 1 and 2
License Nos. DPR-58 and DPR-74
Docket Nos. 50-315 and 50-316
MODIFICATION OF ANALYSIS LIMIT FOR
SPENT FUEL POOL CRITICALITY

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

Attn: T. E. Murley

September 30, 1988

Dear Dr. Murley:

Our letter AEP:NRC:1071, dated August 19, 1988, proposed Technical Specification (T/S) changes for the Donald C. Cook Nuclear Plant Units 1 and 2. Specifically T/S Sections 5.3.1, 5.6.1.2, and 5.6.2 were changed such that Advanced Nuclear Fuels Corp. (ANF) 17x17 fuel assemblies with enrichment up to 4.23 weight percent U-235 may be stored at the Cook Nuclear Plant.

The proposed changes were supported by criticality and thermal-hydraulic analyses performed by ANF. The criticality analyses given in ANF reports ANF-88-057 and ANF-88-112, Revision 1, supported storage of fuel with enrichment up to 5.0 weight percent U-235. Based on discussions with members of your staff, we are limiting the enrichment that the analyses may support to 4.31 weight percent U-235. For reasons discussed in our letter AEP:NRC:1071, we have restricted the maximum enrichment to 4.23 weight percent U-235 for the T/S changes.

As requested by your staff, the attachment to this letter includes the reference for the computer codes used in the criticality analyses.

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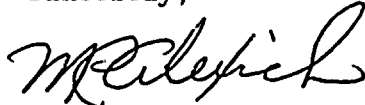
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Dr. T. E. Murley

-2-

AEP:NRC:1071B

Sincerely,



M. P. Alexich
Vice President

MPA/eh

Attachment

cc: D. H. Williams, Jr.
W. G. Smith, Jr. - Bridgman
G. Bruchmann
R. C. Callen
G. Charnoff
A. B. Davis - Region III
NRC Resident Inspector - Bridgman

ATTACHMENT TO AEP:NRG:1071B

References for Computer Codes
Used in Criticality Analysis

References

1. "SCALE: A Modular Code System for Performing Standardized Computer Analyses for Licensing Evaluation"; NUREG/CR-0200
 - a) L. M. Petrie, N. F. Landers; "KENO Va: An Improved Monte Carlo Criticality Program With Supergrouping"
 - b) L. M. Petrie, N. M. Greene; "XSDRNPM: A One-dimensional Discrete Ordinate Code for Transport Analysis"
2. Malte Edenius, Ake Ahlin, Bengt H. Forssen; "CASMO-3, A Fuel Assembly Burnup Program"; STUDSVIK/NFA-86/7 (CASMO-3G with gamma transport module).