

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9102250091 DOC. DATE: 91/02/15 NOTARIZED: NO DOCKET #
 FACIL: 50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana & 05000315
 50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316
 AUTH. NAME: ALEXICH, M.P. AUTHOR AFFILIATION: Indiana Michigan Power Co. (formerly Indiana & Michigan Ele
 RECIP. NAME: MURLEY, T.E. RECIPIENT AFFILIATION: Document Control Branch (Document Control Desk)

SUBJECT: Application for amends to Licenses DPR-58 & DPR-74, changing
 Tech Spec Section 5.6.1.1 re spent fuel pool during util
 Cycle 9 operation.

DISTRIBUTION CODE: A001D COPIES RECEIVED: LTTR 1 ENCL 1 SIZE: 5 + 62
 TITLE: OR Submittal: General Distribution

NOTES:

*See Proposed Change to
 Tech Spec.*

	RECIPIENT		COPIES			RECIPIENT		COPIES	
	ID CODE/NAME		LTTR	ENCL		ID CODE/NAME		LTTR	ENCL
	PD3-1 LA		1	1		PD3-1 PD		1	1
	COLBURN, T.		2	2					
INTERNAL:	NRR/DET/ECMB 9H		1	1		NRR/DET/ESGB		1	1
	NRR/DOEA/OTSB11		1	1		NRR/DST 8E2		1	1
	NRR/DST/SELB 8D		1	1		NRR/DST/SICB 7E		1	1
	NRR/DST/SRXB 8E		1	1		NUDOCS-ABSTRACT		1	1
	OC/LFMB		1	0		OGC/HDS2		1	0
	<u>REG FILE</u> 01		1	1		RES/DSIR/EIB		1	1
EXTERNAL:	NRC PDR		1	1		NSIC		1	1

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,
 ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION
 LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 18 ENCL 16

8411

1
2
3

4
5

6



AEP:NRG:1071N

Donald C. Cook Nuclear Plant Units 1 and 2
License Nos. DPR-58 and DPR-74
Docket Nos. 50-315 and 50-316
PROPOSED TECHNICAL SPECIFICATIONS CHANGES
FOR UNITS 1 AND 2 REGARDING THE SPENT FUEL POOL
DURING UNIT 2 CYCLE 9 OPERATION

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

Attn: T. E. Murley:

February 15, 1991

Dear Dr. Murley:

This letter and its attachments constitute an application for amendment to the Technical Specifications (T/Ss) for the Donald C. Cook Nuclear Plant Units 1 and 2. The proposed T/Ss changes affect Units 1 and 2 T/S Section 5.6.1.1, "Criticality - Spent Fuel," subparagraphs c.1 and c.2. Subparagraph c.1, which identifies storage requirements for Region 1 of the spent fuel pool, has been modified; the existing subparagraph c.2, which identifies storage requirements for the boundary between Regions 1 and 2, has been slightly modified and renumbered as c.3; and a new subparagraph c.2 that identifies storage requirements for Region 2 has been added. In addition, Figure 5.6-1 has been revised and Figure 5.6-2 is being added.

An administrative change is being requested to page 2 of Unit 2 Table 5.7-1 to correct the table number. This last change is purely editorial and is therefore not included in the significant hazards consideration analysis. Also, the pages for both units have been renumbered as necessary and any pages required to be submitted because of a change in page number have been included.

These changes would revise the 3-out-of-4 fuel storage scheme for highly reactive fuel assemblies currently allowed in Region 1 by the T/Ss. Currently, Westinghouse fuel assemblies with fuel enrichments greater than 3.95 weight percent U-235 and burnup less than 5,550 MWD/MTU are required to be stored in Region 1 of the spent fuel pool in a 3-out-of-4 array in which 1 of any 4 fuel storage cells of a symmetric arrangement must remain empty. The proposed changes will enable us to better utilize remaining open fuel pool storage

9102250091 910215
PDR ADOCK 05000315
PDR

210

Pool
11

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

100

locations in Region 1 by allowing 2-out-of-4 arrays of highly reactive fuel with adequately burnt fuel in a checkerboard pattern (see Figures 5.6-1 and 5.6-2) and by eliminating the required empty storage cells.

The proposed changes in subparagraphs c.1 and c.3 for Region 1 and the boundary between Regions 1 and 2 are supported by criticality analyses performed by Westinghouse, which are contained in Attachment 1. The proposed change in subparagraph c.2 is a clarification of the storage requirements for Region 2, which have not changed since our previous submittal AEP:NRC:1071F. Attachment 2 contains a description of the proposed T/Ss changes and our 10 CFR 50.92 significant hazards consideration analysis. Attachment 3 contains the proposed, revised T/Ss pages. Attachment 4 contains a copy of the existing T/Ss pages marked-up to reflect the changes proposed in this submittal. The T/Ss that we are proposing to revise with this submittal are not impacted by any other requests currently pending NRC review and approval.

We believe that the proposed T/Ss changes will not result in (1) a significant change in the amount of any effluents that may be released offsite, or (2) a significant increase in individual or cumulative occupational radiation exposure. This conclusion is based on the NRC staff's findings with regard to the environmental impact of extended burnup fuel, which were published in Volume 53, No. 39 of the Federal Register on February 29, 1988 (pp. 6040-6043).

In that Federal Register entry, the NRC staff concludes that:

. . . there are no significant adverse radiological or non-radiological impacts associated with the use of extended burnup fuel and that this use will not significantly affect the quality of the human environment. Therefore, pursuant to 10 CFR 51.31, the Commission has determined that an environmental impact statement need not be prepared for this action.

The NRC staff's evaluation covered fuel assembly enrichments up to 5.0 weight percent U-235 and fuel assembly average burnups up to 60,000 MWD/MTU. The Unit 2 Cycle 9 fresh fuel assemblies will be limited to 4.95 weight percent U-235 for storage in the spent fuel pool and at discharge will not exceed 56,000 MWD/MTU, and are therefore bounded by the staff's previous evaluation.

These proposed T/Ss changes have been reviewed by the Plant Nuclear Safety Review Committee and the Nuclear Safety and Design Review Committee.

Dr. T. E. Murley

-3-

AEP:NRC:1071N

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

Approval of this change is requested to accommodate storage of Unit 2 Cycle 9 fuel in the spent fuel pool, which is expected to be required approximately February 1992.

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

Sincerely,



M. P. Alexich
Vice President

ldp

Attachments

cc: D. H. Williams, Jr.
A. A. Blind - Bridgman
J. R. Padgett
G. Charnoff
A. B. Davis - Region III
NRC Resident Inspector - Bridgman
NFEM Section Chief



4

2

Dr. T. E. Murley

-4-

AEP:NRG:1071N

bc: S. J. Brewer/T. R. Satyan-Sharma/J. M. Nieto
T. O. Argenta/R. F. Kroeger w/o
J. G. Feinstein - w/o
M. L. Horvath - Bridgman - w/o
J. F. Kurgan - w/o
D. H. Malin/T. A. Georgantis/G. John/E. Neymotin
J. J. Markowsky w/o
J. B. Shinnock - w/o
S. H. Steinhart/S. P. Hodge w/o
B. Holian, NRC - Washington, D.C.
DC-N-6015.1 w/o
AEP:NRG:1071N