

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9002080117 DOC. DATE: 90/01/26 NOTARIZED: YES 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 AUTHOR AFFILIATION
 ALEXICH, M.P. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele
 RECIP. NAME RECIPIENT AFFILIATION
 MURLEY, T.E. Document Control Branch (Document Control Desk)

SUBJECT: Responds to NRC Bulletin 89-003, "Potential Loss of Required Shutdown Margin During Refueling Operations."

DISTRIBUTION CODE: IE29D COPIES RECEIVED: LTTR 1 ENCL 1 SIZE: 4
 TITLE: Bulletin 89-03, Potential Loss of Required Shutdown Margin During Refu

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD3-1 LA	1 0	PD3-1 PD	1 1
	GIITTER, J.	1 1		
INTERNAL:	AEOD/DOA	1 1	AEOD/DSP/TPAB	1 1
	KOPP, LARRY	1 1	LABARGE, DAVE	1 1
	NRR/DET/ECMB 9H	2 2	NRR/DET/EMEB9H3	1 1
	NRR/DOEA/OEAB11	1 1	NRR/DOEA/OGCB11	1 1
	NRR/DREP/PEPB9D	1 1	NRR/DST 8E2	1 1
	NRR/PMAS/ILRB12	1 1	NUDOCS-ABSTRACT	1 1
	<u>REG FILE 02</u>	1 1	RES/DSIR/EIB	1 1
	RGN3 FILE 01	1 1		
EXTERNAL:	LPDR	1 1	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 22 ENCL 21



AEP:NRC:1111

Donald C. Cook Nuclear Plant Units 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
NRC BULLETIN NO. 89-03, "POTENTIAL LOSS OF REQUIRED SHUTDOWN
MARGIN DURING REFUELING OPERATIONS"; RESPONSE TO REQUESTED
ACTIONS

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

Attn: T. E. Murley

January 26, 1990

Dear Dr. Murley:

This letter responds to Mr. Charles E. Rossi's letter dated November 21, 1989, which transmitted NRC Bulletin No. 89-03 regarding potential loss of shutdown margin during refueling. It is our intention to implement the actions requested by the Bulletin at the Cook Nuclear Plant prior to our next scheduled refueling outage (currently planned for Unit 2 in June 1990). Our specific responses to the requested actions are provided below.

NRC Requested Action 1

"Assure that any intermediate fuel assembly configuration (including control rods) intended to be used during refueling is identified and evaluated to maintain sufficient refueling boron concentration to result in a minimum shutdown margin of approximately 5%."

Response

Our current Technical Specification (T/S) for core reactivity during refueling requires that the more restrictive of the following conditions is met: (a) maintain a K-eff of 0.95 or less, or (b) maintain a boron concentration greater than or equal to 2400 ppm. In compliance with T/S requirements, our current refueling practice is to maintain a boron concentration of at least 2400 ppm. This boron concentration

has been substantially higher than that required to ensure a K-eff not greater than 0.95 in all previous fuel cycles for both Cook Nuclear Plant units. We recognize, however, that positive variations in core reactivity can occur during fuel movement for refueling as a result of placement of fuel assemblies in intermediate locations that differ from the locations specified (and analyzed) for the final design core loading pattern. The AEPSC Nuclear Fuel and Analyses (NFA) Section has evaluated this potential. On the basis of this evaluation, NFA has developed detailed guidelines that explicitly identify various intermediate fuel assembly configurations considered to be acceptable during fuel movement for refueling. Control of boron concentration in the core in conjunction with implementation of the additional restrictions on allowable intermediate fuel assembly configurations will provide further assurance that adequate shutdown margin is available during refueling operations (i.e., a minimum shutdown margin of approximately 5%).

NRC Requested Action 2

"Assure that fuel loading procedures only allow those intermediate fuel assembly configurations that do not violate the allowable shutdown margin and that these procedures are strictly adhered to."

Response

The restrictions regarding acceptable intermediate fuel assembly configurations discussed in our response to requested Action 1 will be formally incorporated into Cook Nuclear Plant refueling procedures. The procedure revisions necessary to incorporate these additional controls will be in place prior to our next scheduled refueling outage (June, 1990). The explicit identification, via procedure, of acceptable intermediate fuel assembly configurations provides further assurance that shutdown margin will remain at a minimum of approximately 5% during fuel assembly movement associated with refueling activities. The importance of strict adherence to refueling procedures will continue to be emphasized to refueling personnel.

NRC Requested Action 3

"Assure that the staff responsible for refueling operations is trained in the procedures recommended in Item 2 above and

Dr. T. E. Murley

-3-

AEP:NRC:1111

understand the potential consequences of violating these procedures. This training should include the fundamental aspects of criticality control with higher enriched fuel assemblies."

Response

Refueling personnel responsible for directing the placement and movement of fuel assemblies in the core will be trained in the revised procedures discussed in our response to requested action 2. The restrictions to be imposed in the revised procedures on allowable intermediate fuel assembly configurations directly include consideration of variations in fuel assembly enrichment. Criticality control with higher fuel enrichments will therefore be included as part of training in the revised refueling procedures.

This letter is submitted pursuant to 10 CFR 50.54(f) and, as such, an oath is enclosed.

Sincerely,



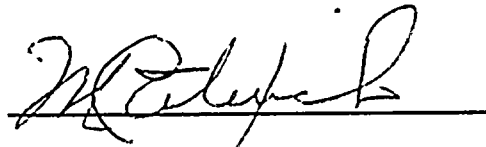
M. P. Alexich
Vice President

eh

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


STATE OF OHIO)
COUNTY OF FRANKLIN)

Milton P. Alexich, being duly sworn, deposes and says that he is the Vice President of licensee Indiana Michigan Power Company, that he has read the forgoing Response to NRC Bulletin No. 89-03, "Potential Loss of Required Shutdown Margin During Refueling Operations" and knows the contents thereof; and that said contents are true to the best of his knowledge and belief.



Subscribed and sworn to before me this 24th

day of January, 1990.


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