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SUBJECT: Forwards response to 970507 RAI re util 941116 request for
 change in min time decay required after shutdown for
 movement of irradiated fuel from core to storage in spent
 fuel pool.

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July 8, 1997

AEP:NRC:1202C

Docket No.: 50-315
50-316

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

Gentlemen:

Donald C. Cook Nuclear Plant Units 1 and 2
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
REGARDING REFUELING OPERATIONS DECAY TIME

This letter and its attachment constitute a response to the May 7, 1997, NRC request for additional information concerning our November 16, 1994, submittal. Our original submittal requested a change in the minimum time decay required after shutdown for movement of irradiated fuel from the core to storage in the spent fuel pool.

Sincerely,

E. E. Fitzpatrick
Vice President

SWORN AND SUBSCRIBED BEFORE ME

THIS 8 DAY OF July 1997
Janice M. Bickers
Notary Public

JANICE M. BICKERS
Notary Public, Berrien County, MI
My Commission Expires Feb. 16, 2001

My Commission Expires 2/16/2001

vlb

Attachment

c: A. A. Blind
A. B. Beach
MDEQ - DW & RPD
NRC Resident Inspector
J. R. Padgett

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PDR ADDOCK 05000315
PDR



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ATTACHMENT TO AEP:NRC:1202C

REQUEST FOR ADDITIONAL INFORMATION
REGARDING REFUELING OPERATIONS DECAY TIME RESPONSE

Question

"Provide a discussion of the procedures to be utilized by the Donald C. Cook site staff to monitor and control the spent fuel pool water temperature and the decay heat load so as to remain within the design basis limiting values for routine refuelings and the maximum heat load cases. Include discussion of the location of needed instrumentation, means of monitoring it, and integration of operations staff activities with engineering staff activities in order to implement the procedure(s)."

Response to Question

Normal operating procedures, annunciator response procedures, routine monitoring procedures, augmented monitoring procedures, and abnormal operating procedures provide direction for the operation and control of the spent fuel pool cooling and cleanup system (SFPCCS). The cumulative guidance of these procedures and current practices are discussed in this response.

The thermal design bases of the SFPCCS are to maintain temperature less than 159.5°F, with a heat load such that boiling will not occur for at least 5.74 hours in the event of loss of all cooling capability. Peak spent fuel pool (SFP) temperature and time to boil analyses are coordinated by regulatory affairs and engineering staff prior to full core offloads to ensure these design bases are not violated during refueling operations.

SFP temperature indication and annunciation are available locally at the SFP (two thermal sensors located in the east end of the SFP), and remotely at the control subpanel in the SFP pump room. An SFP temperature annunciator alarm is available in each unit's control room, and is monitored by the control room staff. The procedures require tours be performed each shift by the operations staff to confirm local SFP temperature readings are within acceptable ranges.

The normal operating temperature range for the SFP is determined from an administrative temperature goal substantially lower than the design basis temperature. Prior to a full core offload, the peak SFP temperature analysis result is utilized by engineering staff to determine the maximum SFP temperature goal for the specific refueling operation. The control room SFP temperature annunciator is utilized to maintain the SFP temperature below the determined administrative goal. Annunciator response procedures provide direction to the operations staff to return the SFP temperature to the normal operating temperature range.

Additional oversight and monitoring of the SFPCCS is provided during refueling operations as a portion of the shutdown risk management program. This program provides administrative controls for establishing overall plant requirements so that overall shutdown risk levels are evaluated and minimized. A "guarded equipment" designation has historically been assigned to the SFP component cooling water supply and supporting systems, as well as the power supply to the SFP cooling. A "guarded equipment" designation limits maintenance activities on the equipment.

In addition, SFPCCS performance monitoring, trending, system walkdowns, and engineering reviews are conducted by the engineering staff.

