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SUBJECT: Forwards revised proposed Cycle 6 Tech Specs 3/4.1.2.7 & 3/4.1.2.8 re borated water sources - shutdown & operating, respectively.

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SUBJECT: Forwards revised proposed Cycle 4 Tech Specs 3/4 1.2.7 & 3/4 1.2.8 re borated water sources - shutdown & operating, respectively.

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INDIANA & MICHIGAN ELECTRIC COMPANY

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May 1, 1986
AEP:NRC:0916S

Donald C. Cook Nuclear Plant Unit No. 2
Docket No. 50-316
License No. DPR-74
REVISION OF PROPOSED CYCLE 6 BORATED WATER SOURCES TECHNICAL SPECIFICATIONS

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

Dear Mr. Denton:

The purpose of this letter is to transmit revised versions of our proposed Unit 2 Cycle 6 Technical Specifications (T/Ss) 3/4.1.2.7 and 3/4.1.2.8 (Borated Water Sources--Shutdown and Operating, respectively). Proposed versions of these T/Ss were originally transmitted to you in our letter AEP:NRC:0916P, dated March 27, 1986. In that submittal, we proposed to increase the borated water volumes required for the Refueling Water Storage Tank (RWST) and the Boric Acid Storage Tank (BAST), because of new analyses performed by Exxon Nuclear Company (ENC) in support of the Cycle 6 reload. These analyses were extremely conservative, assuming that the Reactor Coolant System (RCS) was at 0 ppm boron prior to borated water addition to achieve the desired shutdown margin. Because of the operational difficulties posed by the drastically increased tank volumes, ENC reanalyzed the tank requirements using more realistic assumptions concerning initial RCS boron concentrations. Their evaluation, which has been included as Attachment 1 to this letter, concluded that our present T/S 3.1.2.8 requirements on the BAST and RWST volumes are conservative. Therefore, we propose to maintain our present T/S and therefore wish to withdraw our proposed version. For T/S 3.1.2.7, ENC determined that a BAST volume of 4,300 gallons, rather than the proposed 8,750 gallons, is sufficient. Likewise, they recommended an RWST volume of 90,000 gallons, as opposed to the proposed 190,000 gallons. The volumes cited are usable volumes. They will be adjusted administratively to account for water not available because of discharge line locations and other physical characteristics, as necessary.

These changes have been discussed with members of your staff. At their instruction, we are submitting revised versions of T/Ss 3/4.1.2.7 and 3/4.1.2.8, which contain the changes described above. We are also submitting a revised T/S Bases page B 3/4 1-3, which has been revised to reflect the new ENC analyses. Changes to our previous submittal are indicated by a double bar in the right hand margin of the affected pages. Because these changes represent revisions to our previous submittal, we believe no additional fees are required per 10 CFR 170.12.

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These changes will be reviewed by the Plant Nuclear Safety Review Committee (PNSRC) and by the Nuclear Safety and Design Review Committee (NSDRC) at their next regularly scheduled meeting.

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/rjn

cc: John E. Dolan
W. G. Smith, Jr. - Bridgman
G. Bruchmann
R. C. Callen
G. Charnoff
NRC Resident Inspector - Bridgman

Attachment 1 to AEP:NRC:0916S

ENC Evaluation of Required Tank Volumes

Attachment

This attachment is provided in response to a request for an evaluation of the D. C. Cook Unit 2 Technical Specification limits on borated water source contained volumes. The request was made due to the increased shutdown margin requirement for operation on the residual heat removal (RHR) system. The results obtained from the evaluation are provided below.

For modes 1-4, the minimum contained volumes for the boric acid storage tank (BAST) and the refueling water storage tank (RWST) was found to be 3700 gallons and 118000 gallons, respectively. These volumes, at the minimum boric acid concentrations, will allow boration of the primary coolant from HFP, critical, equilibrium Xenon conditions to a boron concentration sufficient to provide the shutdown margin required for Mode 4 RHR operation. Because these values are smaller than those currently specified in the Technical Specifications, it is recommended that the current Technical Specification 3.1.2.8 applicable to modes 1-4 remain unchanged. The current values have been established per criteria which are different from that of attaining required shutdown margin which is used in this evaluation.

For Mode 5 minimum contained volumes of 2400 gallons for the BAST and 90000 gallons for the RWST are required. These volumes are sufficient to allow boration of the primary coolant from the boron concentration required in mode 4, while one or more primary coolant pumps are operating, to a boron concentration which provides the shutdown margin required for mode 5 RHR operation. Furthermore, this calculation indicates that the BAST volume required to borate from mode 4 to mode 6 is 4300 gallons. This assumes a boron concentration of 2000 ppm for mode 6 (Technical Specification 3.9.1). It is recommended that these values (4300 gallons for the BAST and 90000 gallons for the RWST) be included in the Technical Specifications for modes 5 and 6.

The volumes cited above are usable tank volumes. They should be incremented by approprate allowances for line locations and other physical characteristics for operational use.

RAPIFAX NO. 440
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ATTN.