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AUTH.NAME AUTHOR AFFILIATION
ALEXICH,M.P. Indiana & Michigan Electric Co.
RECIP.NAME RECIPIENT AFFILIATION
DENTON,H.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Forwards Exxon Nuclear Co 840416 explanation of statements re rod bow.Cycle 4 SER indicated that evaluation of rod bow & rod power should be made to if peaking factor limits need be adjusted.

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May 4, 1984

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Donald C. Cook Nuclear Plant Unit No. 2
Docket No. 50-316
License No. DPR-74
CYCLE 5 SAFETY ANALYSIS REPORT

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

Dear Mr. Denton:

The Cycle 4 Safety Evaluation Report (SER) indicated that an evaluation of rod bow and rod power should be made to determine if DNBR or peaking factor limits need to be adjusted to account for fuel rod bowing. During the course of our review of the Cycle 5 Safety Analysis Report (SAR), Exxon Nuclear Company (ENC) was asked to further explain the statements with respect to rod bow. We mentioned to Mr. D. Wigginton on April 6, 1984 that we would be clarifying the SAR statements on rod bow after receiving confirmation from ENC. We are attaching a copy of a letter on the subject from ENC for this purpose.

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

RBK 5/3/84

Attachment
bjs

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

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EXXON NUCLEAR COMPANY, Inc.

600 - 108th Avenue N.E., C-00777, Bellevue, Washington 98009, Telephone (206) 453-4300

April 16, 1984
ENC-AEP/0343

GJ

Mr. George John, Sr. Engineer APR 23 1984.
Nuclear Materials & Fuel Management
Indiana & Michigan Electric Company
c/o American Electric Power Service Corp.
One Riverside Plaza
Columbus, OH 43215

Dear George:

Subject: Supplemental Information to D. C. Cook 2, Cycle 5 Safety Analysis Report Regarding Effect of Rod Bow on DNB Margins

Ref: 1) XN-NF-83-85, Supp. 1, Rev. 1, "D. C. Cook Unit 2, Cycle 5 Safety Analysis Report," March 15, 1984

2) XN-NF-75-32(P)(A), Supps. 1, 2, 3 & 4, "Computational Procedure for Evaluating Fuel Rod Bowing," October 1983

3) XN-NF-82-32(P), Rev. 2, "Plant Transient Analysis for the Donald C. Cook Unit 2 Reactor at 3425 MWt: Operation with 5% Steam Generator Tube Plugging," February 1984

Exxon Nuclear has reanalyzed the effect of rod bow on DNB margin during the D. C. Cook Unit 2, Cycle 5. The effects were analyzed in accordance with the NRC Staff SER and Exxon Nuclear methodology (Reference 2). The results of the analysis show that no fuel assembly is expected to experience DNBR less than that reported (Reference 3) during Cycle 5. The analysis showed that the reduction in fuel assembly power due to burnup more than compensates for the effects of rod bow to EOC5.

Very truly yours,

H. G. Shaw
Contract Administrator

tlm

c: M. P. Alexich
J. M. Cleveland
W. L. Zimmermann