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 FACIL:50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316  
 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: Informs that Exxon Nuclear Co transmitted two repts on  
 850403 & 04, Administrative control will be modified to allow  
 use of K(Z) curve from Exxon rept & in Tech Specs, LOCA/ECCS  
 analyses will be submitted by 850426.

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# INDIANA & MICHIGAN ELECTRIC COMPANY

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April 4, 1985  
AEP:NRC:0860Y

Donald C. Cook Nuclear Plant Unit No. 2  
Docket No. 50-316  
License No. DPR-74  
Exxon EXEM/PWR LOCA Model - FLECHT Recorrelation  
Unit 2, Cycle 5 LOCA/ECCS Analysis

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

Dear Mr. Denton:

As discussed with your staff, this letter is to inform you that Mr. J. C. Chandler of Exxon Nuclear Company (ENC) has transmitted the reports listed below. This transmittal was by ENC letters JCC:064:85 dated April 3, 1985 and JCC:068:85 dated April 4, 1985.

- 1) Report 1: "Modification of the FLECHT Based Reflood Quench and Heat Transfer correlations for D. C. Cook Unit 2," XN-NF-85-20(P).
- 2) Report 2: "Donald C. Cook Unit 2, Cycle 5, 5% Steam Generator Tube Plugging Limiting Break LOCA-ECCS Analysis": K(Z) curve.

Report 1 provides the revised 17X17 FLECHT correlations for use in the D. C. Cook Unit 2 LOCA/ECCS Analysis. Report 2 details the results of the LOCA/ECCS analysis performed for D. C. Cook Unit 2, Cycle 5. The analysis, using the correlation in Report 1 indicate significant improvements in the Fq limits at the upper core elevations due to the use of the more accurate reflood heat transfer coefficients at the top portion of the reactor. This is reflected in the K(Z) curve shown in Figure 2.1 of Report 2. Based on discussions with your staff we will modify the administrative control discussed in our letter AEP:NRC:0860X dated February 1, 1985. This modification will allow use of the K(Z) curve in Report 2 along with the K(Z) curve in our Unit 2 technical specifications, whichever is the most limiting at any axial location. Based on discussions with Exxon Nuclear Co., we believe operation in the above manner will assure compliance with 10 CFR 50.46 and Appendix K to 10 CFR Part 50.

As can be seen in Report 2, there is considerable margin in peak clad temperature for analyses with skewed power distributions. In order to utilize this PCT margin, ENC is currently performing LOCA/ECCS analyses with a less restrictive K(Z) for Unit 2, Cycle 5. We plan to transmit these analyses to you on or before April 26, 1985. We expect the K(Z) curve to be less restrictive than that shown in Figure 2.1 of Report 2.

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1. The first part of the report is a summary of the work done during the year. It is a brief statement of the results of the work, and is intended to give a general impression of the progress made.

2. The second part of the report is a detailed account of the work done during the year. It is a full and complete statement of the results of the work, and is intended to give a detailed impression of the progress made.

3. The third part of the report is a summary of the work done during the year. It is a brief statement of the results of the work, and is intended to give a general impression of the progress made.

4. The fourth part of the report is a detailed account of the work done during the year. It is a full and complete statement of the results of the work, and is intended to give a detailed impression of the progress made.

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7. The seventh part of the report is a summary of the work done during the year. It is a brief statement of the results of the work, and is intended to give a general impression of the progress made.

8. The eighth part of the report is a detailed account of the work done during the year. It is a full and complete statement of the results of the work, and is intended to give a detailed impression of the progress made.

9. The ninth part of the report is a summary of the work done during the year. It is a brief statement of the results of the work, and is intended to give a general impression of the progress made.

Operation under the new administrative limit will be reviewed by our Corporate and Plant Safety committees prior to implementation.

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

EBK  
4/4/85

cm

Attachments

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

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