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DENTON, H. R. Office of Nuclear Reactor Regulation, Director (post 851125)

SUBJECT: Application for amends to Licenses DPR-58 & DPR-74,
authorizing extension of 72 h time limit for loop
inoperability when essential svc water pump out of svc for
replacement or repair. Fee paid.

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January 17, 1986

AEP:NRC:0972

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
TECHNICAL SPECIFICATION CHANGE REQUEST:
ESSENTIAL SERVICE WATER PUMP INOPERABILITY TIME LIMIT

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

Dear Mr. Denton:

This letter and its attachments constitute an application for amendment to the Technical Specifications for the Donald C. Cook Nuclear Plant Unit Nos. 1 and 2. We request that this application be expedited to avoid the possibility of an unwarranted unit shutdown. Specifically, we are requesting that the 72-hour limit for loop inoperability be extended when an Essential Service Water (ESW) pump is out of service for repair or replacement. As a compensatory measure, we are proposing an additional change to require the other three ESW pumps to be operable (one pump from the affected unit and the other two from the opposite unit with the ESW system aligned in the cross-tie mode).

This change is being requested for both units. For reasons described below, we may require this change in order to allow Unit 1 to continue operation at power. We are requesting an identical change for Unit 2 for consistency between units.

In-service testing data for the Unit 1 West ESW pump has indicated gradual degradation in the pump's performance. Data taken on December 23, 1985 indicated degradation to the point where pump replacement may be required in the near future and prior to any scheduled cold shutdown outage. We would prefer to begin this replacement by the end of February 1986, to ensure that the pump does not fall below minimum performance standards.

In the last five years, four Unit 1 ESW pump replacements have been performed, of which one was in a mode in which the ESW pumps were required to be operable. On that occasion the necessary work was accomplished in 60 hours, which is within the 72 hours allowed by the Action Statement of Technical Specification 3.7.4.1. However, repair times twice as long have

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been experienced when complications have arisen. In all cases where pump repair or replacement is required, we will proceed with diligence to return the pump to operable status as rapidly as possible and within the presently allowed 72 hours. Based on experience, however, we feel that it is necessary to request this change in order to avoid the possibility of a unit shutdown.

Our analysis concerning significant hazards considerations is contained in Attachment 1 to this letter. The proposed Technical Specification pages are contained in Attachment 2.

We believe that the proposed changes will not result in (1) a significant change in the types of effluents or a significant increase in the amounts of any effluent that may be released offsite, or (2) a significant increase in individual or cumulative occupational radiation exposure.

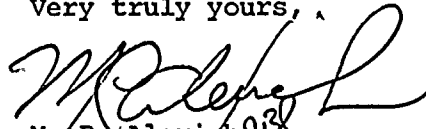
These proposed changes have been reviewed by the Plant Nuclear Safety Review Committee (PNSRC) and will be reviewed by the Nuclear Safety and Design Review Committee (NSDRC) at their next regularly scheduled meeting.

In compliance with the requirements of 10 CFR 50.91(b)(1), copies of this letter and its attachments have been transmitted to Mr. R. C. Callen of the Michigan Public Service Commission and Mr. G. Bruchmann of the Michigan Department of Public Health.

Pursuant to 10 CFR 170.12(c), we have enclosed an application fee of \$150.00 for the proposed amendments.

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 11/17/86

Attachments

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

1. The first part of the report is a general statement of the purpose and scope of the study. It is followed by a brief review of the literature on the subject.

2. The second part of the report is a description of the methods used in the study. This includes a discussion of the subjects, the instruments used, and the procedures followed.

3. The third part of the report is a presentation of the results of the study. This is done in the form of a series of tables and graphs, which are accompanied by a detailed discussion of the findings.

4. The fourth part of the report is a discussion of the implications of the findings. This includes a consideration of the theoretical and practical significance of the results.

5. The fifth part of the report is a conclusion. This summarizes the main findings of the study and offers some suggestions for further research.

6. The sixth part of the report is a list of references. This includes a list of all the books, articles, and other sources used in the study.

7. The seventh part of the report is an appendix. This contains a list of all the data collected during the study, as well as a list of all the calculations and other work done in connection with the study.

8. The eighth part of the report is a list of figures. This includes a list of all the tables and graphs included in the report.

9. The ninth part of the report is a list of tables. This includes a list of all the tables included in the report.

10. The tenth part of the report is a list of figures. This includes a list of all the figures included in the report.

11. The eleventh part of the report is a list of tables. This includes a list of all the tables included in the report.

ATTACHMENT 1 TO AEP:NRC:0972

REASONS AND 10 CFR 50.92 ANALYSES FOR

CHANGES TO THE

DONALD C. COOK NUCLEAR PLANT UNIT NOS. 1 AND 2

TECHNICAL SPECIFICATIONS

Technical Specification 3.7.4.1 requires that at least two independent essential service water (ESW) loops be operable in Modes 1 through 4. The action associated with only one independent loop operable allows 72 hours to restore the other loop to operable status. In order to perform routine maintenance necessary because of normal pump degradation, it is necessary to voluntarily remove one ESW pump from service. To ensure that maintenance is thoroughly performed, it may be necessary to take more time than the 72 hours allowed. Thus, we are requesting to add a footnote to pages 3/4 7-17 (Unit 1) and 3/4 7-13 (Unit 2). The footnote will allow continued power operation provided that three ESW pumps are operable and remain available to either of the Cook units. The Bases section (page B 3/4 7-4 for both units) has been revised to reflect this change.

As described in Section 9.8 of the Updated FSAR, the ESW system contains four pumps that are shared between the units via cross-tie valves. The ESW system supplies cooling water from Lake Michigan for the component cooling heat exchangers, containment spray heat exchangers, emergency diesel generators, and the control room air conditioning units. Additionally, the ESW system provides a backup water source for the auxiliary feedwater pumps, should the condensate storage tank be unavailable or empty.

As seen in Table 9.8-5 of the Updated FSAR, only two of the four ESW pumps are necessary for design-basis conditions with both units at power. We have also stated in the Updated FSAR that we have the capability to provide sufficient ESW water to service a LOCA in one unit while the other unit is undergoing cooldown. The latter case requires three pumps to remove the heat load, and is outside the plant design basis. (This is because the design basis of Cook establishes hot shutdown as the safe condition.) Nevertheless, we will require three pumps to be operable to ensure we maintain the capability for unit cooldown beyond the hot shutdown condition.

Even though these changes may result in an increase in the probability of occurrence or consequences of a previously analyzed accident, the results are clearly within acceptable limits as established in the D. C. Cook FSAR. We thus believe these changes do not involve a significant hazards consideration as defined in 10 CFR 50.92.

In addition, an editorial change has been made on one of the affected pages. In Unit 2, page B 3/4 7-4, the word "emergency" has been changed to lower case to reflect the fact that it is not a defined term.

