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SUBJECT: Application for amend to License DPR-58 & DPR-74 modifying functional testing surveillance requirements of Tech Spec 3/4.7.8 for Unit 1 & 3/4.7.7 for Unit 2 increasing length of surveillance interval & number of snubbers tested.

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July 22, 1987
AEP:NRC:0931B

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 TO
LENGTHEN THE FUNCTIONAL TESTING INTERVAL
FOR SNUBBERS

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

Attn: T. E. Murley

Dear Dr. Murley:

This letter and its attachments constitute an application for amendment to the Technical Specifications (T/Ss) for the Donald C. Cook Nuclear Plant Unit Nos. 1 and 2. Specifically, we propose to modify the functional testing surveillance requirements of T/S 3/4.7.8 for Unit 1 and 3/4.7.7 for Unit 2 by increasing the length of the surveillance interval and correspondingly increasing the number of snubbers tested. In addition, we are proposing a minor editorial change to the visual inspection requirements for this T/S.

In letter AEP:NRC:0967D, dated October 1, 1986, we requested a one-time extension for the Unit 1 snubber functional testing surveillance requirements. This request was due to an extended refueling cycle caused by our self-imposed reduced power operation. In an SER dated December 20, 1986, your staff approved this request but suggested that we address the long-term aspects of the problem since we may continue operating at reduced power with extended refueling cycles. The SER also required that we perform additional snubber testing during our upcoming Unit 1 refueling outage. The additional testing is intended to achieve the same level of confidence for snubber operability as provided by our current T/S requirements. Calculations were performed to determine the appropriate sample size for the upcoming refueling outage. We believe these calculations, which are based on extension of the surveillance interval from 18 to 24 months, show that testing a representative sample of 14% of each type of snubber should achieve the same level of confidence for snubber operability as that provided by the current T/S requirements.

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Therefore, during the present Unit 1 refueling outage, the number of small-bore snubbers tested will be increased from 8 to 11 and the number of steam generator snubbers tested will be increased from 2 to 3 in accordance with our calculations.

In order to address the long-term aspects of the problem, we are submitting this T/S change request. We are proposing a 24-month surveillance interval and a 14% representative sample. A description of the proposed change, the reasons for the change, and our analysis concerning significant hazards are contained in Attachment 1 to this letter. A description of the calculational method used as the basis for this change is also included in Attachment 1. The proposed revised 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

cm

Attachments

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

ATTACHMENT 1 TO AEP:NRC:0931B

REASONS AND 10 CFR 50.92 ANALYSIS FOR

CHANGE TO THE

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

TECHNICAL SPECIFICATIONS

We are proposing the following changes to the Technical Specifications for the Donald C. Cook Nuclear Plant Unit Nos. 1 and 2.

1. Extended Surveillance Intervals For Snubber Functional Testing

As stated in the cover letter, the NRC staff has suggested that we address the long-term aspects of the snubber surveillance problem since we may continue operating at reduced power with extended refueling cycles. We are therefore submitting the T/S change request described below to address this problem.

Description of Proposed Change

The proposed change involves extending the functional testing surveillance intervals for snubbers and correspondingly increasing the number of snubbers tested in the initial sample to ensure that the level of confidence for snubber operability is maintained. We are therefore proposing to extend the surveillance interval from 18 months to 24 months and to increase the number of snubbers functionally tested in the initial sample from 10% to 14%. We believe that an extended surveillance interval should not affect the requirement that an additional 10% be tested for each snubber that does not meet the acceptance criteria. We are therefore proposing no changes to this requirement.

It should be noted that a section on pages B 3/4 7-6 for both units was moved to the previous page to make space for the additional paragraph added to the Bases.

Description of Calculational Method

The following assumptions are used in performing the calculation:

1. When the 18-month functional tests are performed, we want to be 95% confident that we will have zero snubber failures in the 10% sample.

2. The probability of failure of each snubber is independent of the failure mode of other snubbers.

3. The probability of zero failures during functional testing is equated to the probability of zero failures during operation.

The calculations were performed as follows:

The Binomial Distribution was used with the current sample size and assumption 1 above to calculate the probability of an individual snubber failure during functional testing. The Poisson Distribution was then used to provide a failure rate (failures/month) and subsequently the probability of zero failures during 24 months of operation. The probability of zero failures in 24 months and the calculated probability of an individual snubber failure were used with the Binomial Distribution to determine the required sample size for 24 months.

Analysis of Significant Hazards

Per 10 CFR 50.92, a proposed amendment will involve no significant hazards considerations if the amendment does not:

(1) involve a significant increase in the probability or consequences of an accident previously analyzed,

(2) create the possibility of a new or different kind of accident from any accident previously analyzed or evaluated, or

(3) involve a significant reduction in a margin of safety.

Our evaluation of the proposed change with respect to these criteria is provided below.

Criterion 1

This change involves increasing both the length of the surveillance intervals and the number of snubbers functionally tested in the initial sample. The proposed number of snubbers to be tested is based on calculations which were performed to ensure that the confidence in snubber operability is maintained; therefore, we believe that this change will not significantly increase the probability or consequences of an accident previously analyzed. In addition, it is noted that Subsection IWF of Section XI of the ASME Boiler and Pressure Vessel Code specifies that a representative sample of 10% of the total number of snubbers whose load rating is less than 50 kips should be tested during each inspection period. We conclude that our selection of the number of small-bore snubbers to be tested is greater than the code currently requires.

Criterion 2

The requested change will not result in a change in plant configuration or operation. Therefore, this change will not create the possibility of a new or different type of accident from any accident previously analyzed or evaluated.

Criterion 3

We believe that the proposed change will not significantly reduce a margin of safety for the reasons given in Criterion 1 above. Therefore, we believe this change does not involve a significant reduction in a margin of safety.

2. Editorial Change

During issuance of Amendment 104 for Unit 1 and 91 for Unit 2, the percent signs were inadvertently deleted from the ± values of the visual inspection intervals of 4.7.8.a. Without the percent signs, it is not clear whether the ± values are ± 25 months, ± 25 days, or ± 25%. Therefore, to avoid misinterpretation, we are requesting that

the visual inspection intervals be modified to again include the percent signs.

Analysis of Significant Hazards

We note that the Commission has provided guidance concerning the determination of significant hazards by providing certain examples (48 FR 14870) of amendments considered not likely to involve a significant hazards consideration. The first of these refers to a purely administrative change. Since the proposed change corrects an error in the T/Ss, produced during issuance of previous amendments, we believe that the proposed change falls within the scope of this example.

Therefore, we believe this change does not involve a significant hazards consideration as defined in 10 CFR 50.92.