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ACCESSION NBR: 8910040208 DOC. DATE: 89/09/22 NOTARIZED: NO DOCKET #  
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 50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316  
 AUTH. NAME AUTHOR AFFILIATION  
 ALEXICH, M.P. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele  
 RECIP. NAME RECIPIENT AFFILIATION  
 MURLEY, T.E. Document Control Branch (Document Control Desk)

SUBJECT: Application for amends to Licenses DPR-58 & DPR-74, adding  
 Tech Spec 4.0.4 exemptions to 18-month measurements.

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AEP:NRG:1102

Donald C. Cook Nuclear Plant Units 1 and 2  
License Nos. DPR-58 and DPR-74  
Docket Nos. 50-135 and 50-316  
DELTA T REACTOR TRIPS TECHNICAL  
SPECIFICATION 4.0.4 CHANGE

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

Attn: T. E. Murley

September 22, 1989

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 Units 1 and 2. Specifically, we propose to add T/S 4.0.4 exemptions to the 18-month measurement of hot leg-cold leg delta T. We intend to perform the measurement as part of the calibration of the overtemperature and overpower delta T reactor trips required by T/S Table 4.3-1 (Reactor Trip System Instrumentation Surveillance Requirements). The reasons for the proposed changes and our analyses concerning significant hazards considerations are contained in Attachment 1 to this letter. The proposed revised T/S 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 changes have been reviewed by the Plant Nuclear Safety Review Committee and the Nuclear Safety and Design Review Committee at their next regularly scheduled meeting.

In compliance with the requirements of 10 CFR 50.92 (b)(1), copies of this letter and its attachments have been transmitted to Mr. R. C. Callen of the Michigan Public Service Commission and the Michigan Department of Public Health.

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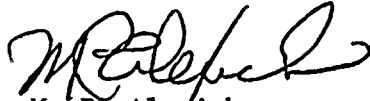
Dr. T. E. Murley

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AEP:NRC:1102

This document has been prepared following Corporate procedures that incorporate a reasonable set of controls to ensure its accuracy and completeness prior to signature by the undersigned.

Sincerely,



M. P. Alexich  
Vice President

ldp

Attachments

cc: D. H. Williams, Jr.  
W. G. Smith, Jr. - Bridgman  
R. C. Callen  
G. Charnoff  
A. B. Davis  
NRC Resident Inspector - Bridgman  
NFEM Section Chief

ATTACHMENT 1 TO AEP:NRG:1102

REASONS AND 10 CFR 50.92 ANALYSES  
FOR CHANGES TO THE DONALD C. COOK NUCLEAR PLANT  
UNITS 1 AND 2 TECHNICAL SPECIFICATIONS

In this letter, we are proposing to modify the T/S 4.0.4 exemptions for the 18-month calibration of the overtemperature and overpower delta T reactor trips required by T/S Table 4.3-1, Functional Units 7 and 8. These functional units currently have T/S 4.0.4 exemptions for the F delta I penalties associated with the overtemperature and overpower reactor trips via Note 9 to Table 4.3-1. We are proposing to add a T/S 4.0.4 exemption for the measurement of delta T to Note 9.

Submittal of this proposed T/S change fulfills a commitment made in Unit 2 licensee event report (LER) 89-10 (Attachment 3). During the last Unit 2 refueling outage, all four steam generators were replaced. Delta T measurements were taken during unit startup and eventually were incorporated into the overtemperature and overpower delta T channel calibrations. Previously, the full power delta T value had been assumed to be a fixed nominal value. The new steam generators, however, resulted in enough of a change in the delta T to place the overtemperature and overpower delta T channel calibrations, which had been performed as required prior to entry into Mode 2, outside the allowable range of T/S Table 2.2-1. Because the delta T value could change over time due, for example, to steam generator tube plugging or reactor coolant pump flow changes, we committed to measuring delta T values at the beginning of each cycle and adjusting the overtemperature and overpower delta T reactor trip calibrations as necessary. However, our T/Ss presently require the trips to be operable in Modes 1 and 2. T/S 4.0.4 prohibits entry into an operational mode or other specified applicability condition unless the surveillance requirements associated with the limiting condition for operation have been performed. The delta T measurements must be performed at full power since the overtemperature and overpower delta T functions are defined (in Table 2.2-1) as a function of the delta T at rated thermal power. Without an exemption to the requirements of T/S 4.0.4, the plant may be in literal noncompliance with the T/Ss between the time the initial calibration is performed (prior to entry into Mode 2) and the time the delta T measurements are taken and the initial calibration revised, as necessary.

Per 10 CFR 50.92, a proposed amendment will not involve a significant hazards consideration if the proposed amendment does not:

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

Criterion 1

The change is necessary to allow for proper calibration of the overtemperature and overpower delta T functions without violation of T/S requirements. The change therefore corrects an inconsistency in our present T/S, and makes the T/S more accurately reflect the system design. Since the change will allow us to measure delta T each cycle, rather than assuming a nominal value, the change should provide an enhancement to our calibration procedure. We therefore do not expect the change to involve a significant increase in the probability or consequences of a previously evaluated accident or significantly reduce the margin of safety.

Criterion 2

The change involves no physical modifications to the plant nor any significant changes in plant operations. Therefore, the change should not create the possibility of a new or different kind of accident from any accident previously analyzed or evaluated.

Criterion 3

See Criterion 1 above.

We note that the Commission has provided guidance concerning the determination of significant hazards by providing examples (48 FR 14870) of amendments considered not likely to involve significant hazards considerations. The first example refers to changes that are administrative in nature: for example, correction of errors. The change is similar to this example in that the present T/S does not reflect the fact that delta T measurements must be taken at full power. The sixth example refers to changes which may result in some increase to the probability or consequences of a previously analyzed accident or may reduce in some way a safety margin, but where the results of the change are within acceptable limits. Technically, the change provides relief from current T/S requirements regarding operability of the overtemperature and overpower delta T reactor trips. However, the change will allow measurement of the delta T value each cycle, rather than assuming a nominal value for delta T. This provides an enhancement to the calibration procedure, and therefore should increase rather than decrease safety. Based on the above discussion, we believe the examples cited are relevant and that the change should not involve significant hazards considerations.

We are also proposing a minor editorial change to Note 9 of T/S Table 4.3-1. The present Note 9 includes a reference to Note 1 of Table 2.2-1. This refers to the f delta I penalty of the overtemperature delta T. The inclusion of the delta T in the T/S 4.0.4 exemption provided by Note 9 would require expansion of the

reference to Notes 3 and 4 of Table 4.3-1, also. Rather than add the additional note numbers, we are proposing to modify the reference so that it refers generally to Table 2.2-1, rather than to the specific notes of Table 2.2-1. This will avoid cluttering Note 9 with the additional references. The change is purely administrative in nature, and therefore will not involve a significant increase in the probability or consequences of an accident previously evaluated, will not create the possibility of a new or different kind of accident from any previously analyzed or evaluated, and will not involve a significant reduction in a margin of safety.



ATTACHMENT 2 TO AEP:NRC:1102

PROPOSED REVISED TECHNICAL SPECIFICATION PAGES