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SUBJECT: Application for amends to Licenses DPR-58 & DPR-74,changing App R shutdown Tech Specs.Fee paid.

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INDIANA MICHIGAN POWER

AEP:NRC:0692BJ

Donald C. Cook Nuclear Plant Units 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
REVISED APPENDIX R ALTERNATE
SAFE SHUTDOWN TECHNICAL SPECIFICATIONS

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

Attn: T. E. Murley

June 16, 1988

Dear Dr. Murley:

This letter constitutes an application for amendment to the Technical Specifications (T/Ss) for the Donald C. Cook Nuclear Plant Units 1 and 2. Specifically, we are proposing changes to address those systems in the fire-unaffected unit required for support of the alternate safe shutdown or emergency remote shutdown of the opposite fire-affected unit. Changes similar to these were submitted in our letters AEP:NRC:0692AJ dated May 30, 1986 and AEP:NRC:0692AR dated June 23, 1986; however, during recent discussions with your staff, we were requested to submit a revised amendment application. This letter constitutes that revised submittal and is intended to supersede the earlier submittals. We are also proposing an additional change to address fire watches in areas where a CO_2 discharge is likely to occur. A detailed description of the proposed changes and our analyses concerning significant hazards considerations are included in Attachment 1 to this letter. Attachment 2 contains the proposed revised T/Ss pages.

The difference between the Appendix R T/Ss included in this submittal and those included in our earlier submittals involve changes to the action statements. The action statements of our earlier submittals required us to submit a report to the NRC if the necessary equipment was out of service for more than 30 days. The action statement has been changed to require us to begin shutting down the opposite unit within 67 days if the necessary

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equipment has not been returned to available status. We are also developing a plant procedure which lists the opposite unit equipment which is required along with the surveillances necessary to ensure that this equipment is capable of fulfilling its intended Appendix R alternate safe shutdown function. We have also separated the Appendix R remote shutdown instrumentation from the other remote shutdown instrumentation and included an action statement to address inoperability of the opposite unit power supply.

It should be noted that we do not intend to administratively implement these T/Ss while NRC approval is pending; however, we will maintain administrative implementation of the T/Ss submitted in AEP:NRC:0692AJ and AEP:NRC:0692AR. We prefer not to implement the new T/Ss due to the administrative and training burden associated with implementation and training burden associated with implementation and the fact that other fire protection activities are presently limiting our available resources.

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 amount of any effluents 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 and will be reviewed by the Nuclear Safety and Design Review Committee 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 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/o attachment)
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:0692BJ

REASONS AND 10 CFR 50.92 SIGNIFICANT

HAZARDS EVALUATION FOR

CHANGES TO THE TECHNICAL SPECIFICATIONS FOR

DONALD C. COOK UNITS 1 AND 2

This letter proposes changes to Technical Specifications (T/Ss) 3/4.1.2.3, 3.3.3.5 (Table 4.3-6), 3/4.7.1.2, 3/4.7.3, and 3/4.7.4, for both units and creates T/S 3.3.3.5.1 along with its associated Tables (Table 3.3-9A and 4.3-6A). In addition, we are also proposing changes to Bases pages 3/4 1-3, 1-4, 3-2, 7-2, 7-4, and 7-8 for Unit 1 and 3/4 1-3, 3-2, 7-2, 7-4, and 7-7 for Unit 2.

1. CHANGES RELATED TO APPENDIX R ALTERNATE SAFE SHUTDOWN

The reason for the proposed changes in this section is to accommodate the alternate safe shutdown requirements of 10 CFR 50, Appendix R-III.G.3. These changes provide for opposite (fire-unaffected) unit support for safe-shutdown systems of the fire-affected unit in the "complete alternative shutdown" method as described in our submittal AEP:NRC:0692E, dated March 31, 1983.

Specifically, opposite unit support is provided via unit cross-ties for the essential service water, component cooling water, auxiliary feedwater, and chemical and volume control systems. The Technical Specification modifications proposed require portions of these systems to be available regardless of that unit's operating status, as long as the opposite unit is in Mode 1, 2, 3, or 4 (except auxiliary feedwater, which is required in Modes 1, 2, or 3). The other T/S change request enclosed pertains to maintaining available an excore neutron instrument channel. This is a new instrument, on each unit, and will indicate neutron level over all power ranges. This instrument is powered from the opposite unit and has read out capability remote to the control room.

As was discussed in Section 4.4.7 of the report submitted under cover of AEP:NRC:0692E (hereinafter called the "Safe Shutdown Analysis"), the essential service water (ESW) system is necessary to support the cooling needs of the component cooling water system (CCW) and emergency power supply (diesel generator) systems. In certain fire scenarios, both trains of the ESW system will be lost. For hot shutdown and cold shutdown, operation of the fire-affected unit's residual heat removal (RHR) system will require manual realignment of certain ESW flow paths. This realignment will divert a portion of the unaffected unit's ESW flow to a CCW heat exchanger in the fire-affected unit. This diversion, made through normally open ESW unit cross-tie motor operated valves, in combination with a similar realignment of CCW, will provide cooling water to one RHR pump and heat exchanger in the fire-affected unit.

As stated in the safe shutdown analysis, two operable ESW pumps are sufficient to carry the heat removal duties of two units at hot shutdown or cold shutdown simultaneously. Assurance that

As stated in the safe shutdown analysis, two operable ESW pumps are sufficient to carry the heat removal duties of two units in hot shutdown or cold shutdown simultaneously. Assurance that this can be achieved during postulated fire conditions is provided by proposed changes to T/S 3/4.7.4, which requires at least one ESW flowpath from the opposite unit. Technical specification changes to support both units while either is in Modes 1, 2, 3, and 4 are included in Attachment 2.

Section 4.4.6 of the Safe Shutdown Analysis describes the safe shutdown equipment to be serviced by CCW in each unit, and further descriptive material on the alignment of the systems, including the inter-unit cross-ties. Two CCW pumps in the unaffected unit are sufficient to support all required CCW cooling demands for both units when alternative shutdown is required. The present unaffected unit LCO encompasses the shutdown cooling needs of both units when the unaffected unit is in Mode 1, 2, 3, or 4. The proposed changes to T/S 3/4.7.3 for both units requires that at least one CCW flow path be available when the opposite unit is in Mode 1, 2, 3, or 4.

For those fire zones in which the operability of all three trains of auxiliary feedwater (AFW) can be threatened due to hypothesized fires, the shutdown functions of the AFW system will be achieved by opening the manual inter-unit cross-tie valves and initiating and aligning the associated equipment in one or both of the unaffected unit's motor driven auxiliary feedwater trains. The proposed changes to T/S 3/4.7.1.2 are for the purpose of maintaining one motor driven AFW pump available for opposite unit support whenever the opposite unit is in Mode 1, 2, or 3.

For those fire zones in which hypothesized fires will create a loss of the fire-affected unit's chemical and volume control system (CVCS), the functions of the system will be achieved by the operation of an inter-unit four-inch centrifugal charging discharge header cross-tie line. Operation of the line's manual isolation valves will achieve reactor coolant system make-up via the reactor coolant pump seal injection path or boron injection tank path. In this way, it is assured that a pathway will exist to provide sufficient water of adequate boron content to make up for primary system volume loss as in the event of a hypothesized fire.

The proposed change to T/S 3/4.1.2.3 involves maintaining one centrifugal charging pump available in Modes 5 and 6 to support the opposite unit in the case of the hypothesized fire. Additionally, an 18-month surveillance requirement has been added for cycling the manual cross-tie valve in the CVCS, AFW, and CCW

systems. Section 5.5 of the Safe Shutdown Analysis requires addition of certain changes to local shutdown indication (LSI) panels. In order to reflect these modifications in our T/S, we have created T/S 3.3.3.5.1 along with its associated Tables.

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

These proposed T/S changes require that some plant systems be available to support shutdown of the opposite unit in accordance with Appendix R. In addition, we have added requirements for various Appendix R remote shutdown monitoring instrumentation. Since these T/Ss place additional requirements on various plant equipment to ensure an alternative method of shutting down during a fire scenario, we believe this change will not involve a significant increase in the probability or consequences of a previously analyzed accident.

Criterion 2

The proposed T/S changes assure that safe shutdown systems are available without placing the plant in a configuration inconsistent with the design basis. In addition, the proposed changes add requirements that certain safety systems be available that are not currently required. For this reason, we believe that the proposed T/S changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

Criterion 3

The proposed T/S changes introduce new CVCS cross-tie valves into the plant, and thus introduce additional risk of error or failure. However, the operation and surveillance procedures associated with these valves are similar to those for other safety related systems. As noted in Criterion 1, these changes impose additional requirements on various plant equipment to ensure an alternate

method of shutting down during a fire scenario. For this reason, we believe the proposed changes do not constitute a significant reduction in the margin of safety.

Lastly, 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 significant hazards considerations. The second of these examples refers to changes that impose additional limitations, restrictions, or controls not presently included in the T/Ss. The changes proposed in this letter are of the type cited in this example. Therefore, we believe these changes do not involve a significant hazards consideration as defined by 10 CFR 50.92.

2. CHANGE RELATED TO FIRE PATROLS IN AREAS WHERE CO_2 DISCHARGE IS LIKELY

In July 1987 a discrepancy was identified between T/S 3.7.9.3 Action Statement b and T/S Surveillance Requirement 4.7.9.3.b, if they are literally interpreted. In order to implement the surveillance requirement for CO_2 system "puff testing," the CO_2 system to be tested is made inoperable by isolation at the main header, thus causing entry into T/S 3.7.9.3 Action Statement b. This action statement requires a continuous fire watch within one hour of making the system inoperable. Technical specification surveillance requirement 4.7.9.3.b requires verification of flow through the nozzles. This results in a discharge of CO_2 into the affected areas. The result is a condition in which literal compliance with the action statement results in personnel safety being compromised by placing fire watches (in SCBAs) in an area where a CO_2 discharge is likely to occur.

This condition has been discussed with our Resident Inspector and our previous NRR Project Manager. They concur that the above condition is not appropriate and have indicated that it is acceptable to "pull" the fire watches during those portions of the test where a CO_2 discharge will likely occur. This is our current and past practice. It was suggested that a statement documenting the acceptability to remove the fire watches from the area being tested be added to the Bases for Specification 3.7.9. This statement was amended to also include the acceptability of not establishing a fire watch within an area following an inadvertent discharge of CO_2 until the area has been determined habitable.

ATTACHMENT 2 TO AEP:NRC:0692BJ

PROPOSED CHANGES TO THE

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

TECHNICAL SPECIFICATIONS