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 AUTH. NAME AUTHOR AFFILIATION  
 ALEXICH, M. P. Indiana & Michigan Electric Co.  
 RECIP. NAME RECIPIENT AFFILIATION  
 DENTON, H. R. Document Control Branch (Document Control Desk)

SUBJECT: Application for amends to Licenses DPR-58 & DPR-74, revising.  
 Tech Specs to support Cycle 10 reload, Fee paid.

*see proposed changes to tech specs.*

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# INDIANA & MICHIGAN ELECTRIC COMPANY

P.O. BOX 16631  
COLUMBUS, OHIO 43216

March 26, 1987  
AEP:NRC:0916W

Donald C. Cook Nuclear Plant Units No. 1 and No. 2  
Docket Nos. 50-315 and 50-316  
License Nos. DPR-58 and DPR-74  
PROPOSED TECHNICAL SPECIFICATION FOR  
UNIT 1 CYCLE 10 RELOAD AND RELATED  
UNIT 2 PROPOSALS

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

Dear Mr. Denton:

This letter and its attachments constitute an application for amendment to the Technical Specifications (T/Ss) for the Donald C. Cook Nuclear Plant Unit No. 1 and Unit No. 2. Specifically, these changes are those that are necessary to support the upcoming Unit 1 Cycle 10 reload, as well as numerous other changes which are discussed in further detail below and in the attachments to this letter.

Because of the numerous changes which are being requested via this letter, we have included several attachments which are designed to facilitate their review. Attachment 1 is our 10 CFR 50.92 significant hazards evaluation. It is divided into 12 groups of similar or related changes. Attachment 2 contains the proposed T/S changes. Attachment 3 is a summary description of the changes. This attachment describes the change in greater detail than was able to be done in Attachment 1. Attachment 3 summarizes our basis for the change, lists which Attachment 1 significant hazards group the change is covered in, and indicates whether the change was previously approved for Unit 2 via Amendment 82 to the Unit 2 T/Ss. (As will be discussed further below, many of the changes we are proposing are intended to incorporate changes into the Unit 1 T/Ss which were added to the Unit 2 T/Ss in Amendment 82.) Where more detailed information or a reference was deemed appropriate, Attachment 3 directs the reviewer to these references. Many of the references discussed in Attachment 3 are contained in the balance of the attachments. Following this cover letter is an index to all of the attachments. In some cases, the attachments contain new information which is being submitted to justify the proposed T/S changes. In other cases, for the sake of convenience, we have retransmitted documents which are related to the changes but which have been submitted previously.

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## UNIT 1 CYCLE 10 TECHNICAL SPECIFICATIONS

Certain of the changes proposed in this letter are necessary to support the Unit 1 Cycle 10 reload. The present Unit 1 cycle, Cycle 9, is currently scheduled to end in early June, 1987. Fuel loading for the Cycle 10 core should be completed by June 12, 1987 and the unit should be back on line by August 1, 1987. The changes related to the Cycle 10 core include increasing the required boric acid concentration in the accumulators and refueling water storage tank (T/Ss 3/4.1.2.7, 3/4.1.2.8, 3/4.5.1, and 3/4.5.5), and a change to make the moderator temperature coefficient a ramp function with power rather than a step function (T/S 3/4.1.1.4). These changes will allow optimization of the core design and permit fuel management flexibility. Because we are planning to optimize the Cycle 10 design, we will not begin final core design work until the end of the current cycle, so that accurate information on cycle burnup and information from fuel leak testing can be included in the design. Although we would appreciate issuance of all the T/S changes proposed in this letter by June 1, 1987, it is particularly important that we receive those changes related to the Unit 1 Cycle 10 reload by that date. This is necessary so that the Cycle 10 core design can be completed on schedule. This approach was discussed with your staff on March 23, 1987. The specific T/S pages needed by June 1, 1987 are:

<u>T/S</u>	<u>Title</u>	<u>Page</u>
3/4.1.2.7	Borated Water Sources - Shutdown	3/4 1-15
3/4.1.2.8	Borated Water Sources - Operating	3/4 1-16
3/4.5.1	Accumulators	3/4 5-1
3/4.5.5	Refueling Water Storage Tank	3/4 5-11
3/4.1.1.4	Moderator Temperature Coefficient	3/4 1-5, 3/4 1-5a

In order to maintain consistency between the Unit 1 and Unit 2 T/Ss, we are proposing the change to increase the RWST and accumulator boron concentration for Unit 2 as well. These changes are being submitted at this time in anticipation of possible need in the next Unit 2 cycle (Cycle 7) and to simplify their review since the evaluations in support of the changes are essentially identical for the two units. Since increasing the boric acid concentration of the RWST and accumulators is very difficult to perform on line, and since the changes are not necessary to support the present cycle, we would prefer not to be required to implement these changes before the next Unit 2 refueling outage. Cycle 6 is currently projected to end in January of 1988. We request that your safety evaluation report specify that implementation of these specific changes is not required before the next Unit 2 refueling outage. The affected Unit 2 T/Ss and pages are as follows:

<u>T/S</u>	<u>Title</u>	<u>Page</u>
3/4.1.2.7	Borated Water Sources - Shutdown	3/4 1-15
3/4.1.2.8	Borated Water Sources - Operating	3/4 1-16
3/4.5.1	Accumulators	3/4 5-1
3/4.5.5	Refueling Water Storage Tank	3/4 5-11
3/4.9.1	Boron Concentration	3/4 9-1

An additional change which is related to the Unit 1 Cycle 10 reload involves the Peaking Factor Limit Report, which the NRC's Safety Evaluation Report for Amendment 74 to the Unit 1 T/Ss requires us to submit at least 60 days prior to initial cycle criticality. One of our proposed T/S changes places the requirement to submit the report in the T/Ss, using wording similar to that found in draft Rev. 5 of the Standard Technical Specifications (STS). Our proposal, found in proposed Unit 1 T/S 6.9.1.11, modifies the Amendment 74 and STS requirements in that it requires the Peaking Factor Limit Report to be submitted 15 days instead of 60 days prior to initial criticality. The shorter time period is requested because, as discussed above, in order to optimize the core design it is necessary to utilize end of cycle burnup data and information from fuel leak testing operations which are unattainable before the end of cycle. Since it is possible that this T/S change will not be approved sooner than 60 days before the initial criticality of Cycle 10 (tentatively August 1, 1987), we request written confirmation by May 1, 1987 as to the acceptability of submitting the report 15 days prior to the Cycle 10 initial criticality. Additional information related to this change is found in Attachments 1, 3, and 9.

#### CHANGES TO INCREASE THE SIMILARITY BETWEEN UNITS

Many of the changes requested for Unit 1 via this letter were previously approved for Unit 2 via Amendment 82 to the Unit 2 T/Ss. The Amendment 82 T/S changes represented an extensive effort on our part to incorporate into T/Ss requirements which stemmed from the Unit 2 Cycle 6 safety analyses, rather than to rely in large part on administrative controls to supplement the T/Ss. Many of the requirements which were added to the Unit 2 T/Ss were equally applicable to Unit 1 as well, and are thus being proposed at this time to maintain consistency between the units. These changes include changes to the shutdown margin requirement (T/S 3/4.1.1.1 and 3/4.1.1.2) to ensure adequate response to a boron dilution event, and changes to required RWST and boric acid storage tank (BAST) volumes (T/Ss 3/4.1.2.7 and 3/4.1.2.8) to ensure the ability to maintain the new shutdown margin. Another change of this nature includes modifications to the pressurizer power operated relief valve (PORV) specification (T/S 3/4.4.11) to ensure availability of the PORVs to assist in depressurization of the reactor coolant system in the event of a steam generator tube rupture.

In addition to incorporating requirements of the safety analyses into the T/Ss, Amendment 82 also made extensive changes to the Unit 2 T/Ss which were intended to correct errors contained in the document, to remove requirements which were no longer applicable or necessary, and to simplify the T/Ss. These changes are for the most part being proposed for the Unit 1 T/Ss as well. These changes include removal of references to 3-loop operation in Modes 1 and 2 throughout the T/Ss, simplifications to the power distribution T/Ss including removal of references to the Axial Power Distribution Monitoring System (T/Ss 3/4.2.2, 3/4.2.6, and 3/4.3.3.6), and clarification of the Differential Pressure Between Steam Lines - High signal of T/S Table 3.3-3. Other changes in this category involve the inclusion of additional applicable modes for the nuclear instrumentation power range detectors (T/S Table 3.3-1), the addition of T/S 4.0.4 exemptions in various locations throughout the T/Ss, inclusion of footnotes which clarify the meaning of positive reactivity additions and boron dilutions with regards to the RWST, relaxation of



auxiliary feedwater discharge pressure requirements, (T/S 3.4.7.1.2) and other miscellaneous changes.

#### OTHER CHANGES

Other changes being proposed include a decrease in the minimum required reactor coolant system flowrate for dilution and Mode 6 operation from 3000 gpm to 2000 gpm (T/Ss 3/4.1.1.3 and 3/4.9.8.1). This change, which is proposed for both units, is intended to decrease the possibility of vortexing the RHR pumps while operating in Mode 5 in the half-loop configuration. Other changes will achieve consistency between the two units' T/Ss by choosing the more conservative of various requirements where the units presently differ; still other changes remove temporary requirements from the Unit 1 T/Ss which were included in Amendment 91 to the Unit 1 T/Ss, clarify the Physics Tests Special Test Exception (T/S 3/4.10.4) with regards to the Power Range Neutron Flux low and high setpoints, and enhance the internal consistency of the T/Ss with regards to reactor coolant pump requirements (T/Ss 3/4.4.1.2 and 3/4.4.1.3).

#### IMPLEMENTATION DATE

Because the number of changes requested in this letter is large, we request that we be allowed 120 days for implementation after they are issued by the NRC. This will ensure that we have sufficient time to revise procedures to reflect the new requirements and train personnel in these requirements. This 120 day request does not apply to those changes related to the Unit 1 Cycle 10 reload, which must be in place prior to restart, or to the Unit 2 changes for which we requested implementation be delayed until the upcoming Unit 2 refueling outage. These issues were discussed above.

#### PROPRIETARY DOCUMENTS

Several of the documents which we have transmitted as attachments to this letter are proprietary in nature. All of the proprietary documents have been transmitted previously, and are being retransmitted only for the sake of convenience. Since these documents are proprietary in nature, we request that they not be made available to the public. We believe this is proper since application for withholding and non-proprietary versions have previously been submitted and this submission clearly references the pertinent previous submission. This approach was discussed with and agreed to with your staff on February 12, 1987. Attachment 20 is a list of retransmitted proprietary documents and the attachments in which they are retransmitted. In order to simplify the withholding of this information from public disclosure, we are transmitting the proprietary attachments separately from the main document.

#### OTHER LICENSING CONSIDERATIONS

Some of the T/S pages affected by this submittal are pages for which changes are pending due to prior submittals. The proposed changes contained in this submittal are in addition to our previous requests, and do not supersede them. The pages included in this category and the applicable prior submittals which have not yet been processed are provided in the table below.





<u>Letter No.</u>	<u>Date</u>	<u>T/S Page Nos.</u>
<u>Unit 1</u>		
AEP:NRC:1018A	March 13, 1987	3/4 2-7, 3/4 2-20, 3/4 2-23
AEP:NRC:1015	December 5, 1986	3/4 2-14, 3/4 2-15
AEP:NRC:0692AJ	May 30, 1986	3/4 1-11, 3/4 7-5 B 3/4 1-3, B 3/4 7-2
AEP:NRC:0895D	December 13, 1984	3/4 3-5, 3/4 3-8 B 2-8
AEP:NRC:0433L	July 3, 1986	3/4 4-5, 3/4 7-1, 3/4 7-10
AEP:NRC:0856I	May 19, 1986	6-19
AEP:NRC:0895A	December 13, 1984	B 2-7
AEP:NRC:0896B	January 16, 1987	3/4 8-5
AEP:NRC:0967F	January 9, 1987	3/4 8-5
<u>Unit 2</u>		
AEP:NRC:0692AJ	May 30, 1986	3/4 1-11 B 3/4 1-3
AEP:NRC:0856I	May 19, 1986	6-19
AEP:NRC:0896B	January 16, 1987	3/4 8-5

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 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 (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 amendment.

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

cf

Attachment

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

