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SUBJECT: Application for amends to Licenses DPR-58 & DPR-74, amending Tech Spec Section 3.9.7 re crane travel over spent fuel storage pool bldg. Fee paid.

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February 14, 1986
AEP:NRC:0514 O

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
CRANE TRAVEL--SPENT FUEL STORAGE POOL BUILDING
EMERGENCY TECHNICAL SPECIFICATION CHANGE REQUEST

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

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 Nos. 1 and 2. Specifically we are proposing a change to T/S 3.9.7, Crane Travel--Spent Fuel Storage Pool Building. Currently this T/S section prohibits loads in excess of 2,500 lbs from traveling over the spent fuel assemblies in the storage pool. We believe that the original T/S for our plant was written to be applicable to loads hanging from the hook. Subsequent evaluations concerning control of heavy loads have now indicated that the main load block, which weighs more than 2,500 lbs, should be considered as a heavy load. As an alternative to requesting a T/S interpretation in this matter that states that the load block when deenergized need not be considered as a heavy load, we believe it to be more prudent to request this change to T/S 3.9.7.

The proposed change will add a footnote that will permit the main load block (which weighs approximately 4.25 tons) to travel over the spent fuel pool when the main hoist is deenergized and the main hook is unloaded. Upon approval of this T/S change request, appropriate precautions will be implemented in our load handling procedures.

This change is requested on an emergency basis to allow continued operation of the crane, which will permit us to complete the upcoming refueling activities at Donald C. Cook Nuclear Plant Unit No. 2 as scheduled. Without relief from this requirement, the refueling activities and subsequent plant operations will be adversely impacted. This change is required by March 1, 1986. We currently believe that, unless the change is granted, we will have to delay certain critical-path activities (e.g., moving the fuel assemblies) associated with the upcoming refueling outage on D. C. Cook Unit No. 2, and subsequent unit startup. We cannot determine the extent of the delay at this time, since we have not yet been able to evaluate the schedular impact of operating under the current T/S.

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It is to be noted that, for reasons cited in Attachment 1, we consider this a temporary change. We are requesting this change for a period of one year in order to allow us to conduct refueling without delay, to perform load drop analyses or other appropriate evaluations, and possibly to prepare a T/S change request more suitable for our plant to be processed on a routine basis.

The reasons for the proposed change and our analysis concerning significant hazards considerations are contained in Attachment 1 to this letter. The proposed revised Technical Specification pages for Units 1 and 2 are contained in Attachment 2.

We believe that the proposed change 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 discussed with plant management, will be formally reviewed by the Plant Nuclear Safety Review Committee (PNSRC) shortly, and will be reviewed by the Nuclear Safety and Design Review Committee (NSDRC) soon after the date of this transmittal.

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.

Although the substantive matters in this letter have been discussed by the appropriate levels of plant and Corporate management, due to the emergency nature of this change, this document has been prepared without our full Corporate review. The subsequent Corporate review or the reviews by the PNSRC and NSDRC may necessitate some minor changes to this letter. If this should occur, we will notify you as appropriate.

Very truly yours,

M. P. Alexich
Vice President

cm

Attachments

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

ATTACHMENT 1 TO AEP:NRC:0514 O

REASON AND 10 CFR 50.92 ANALYSIS FOR

CHANGE TO THE

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

TECHNICAL SPECIFICATIONS

The Auxiliary Building crane, located in the Auxiliary Building spent fuel pool area, is the primary crane for moving equipment into and out of the Donald C. Cook Nuclear Plant Auxiliary Building. The trolley of this crane has two hooks, a main hook and an auxiliary hook. Both hooks have associated load blocks, the load block of the main hook weighing approximately 4.25 tons, and that of the auxiliary hook weighing less than 1,000 lbs.

When either hook is in use, both hooks will move in unison with a center line separation between the two hooks of 4'-7". Our current T/Ss prohibit us from moving loads greater than 2,500 lbs over the pool. This restriction has been an operational inconvenience whenever the auxiliary hook is in use. Since the two hooks move together, this sometimes necessitated moving the main load block near or above the spent fuel pool.

In order to allow us to use the auxiliary hook, we are proposing changes to the following Technical Specification pages for both units:

Unit 1, page 3/4 9-8; Section 3.9.7.
Unit 2, page 3/4 9-7; Section 3.9.7.

This change will add the following footnote to T/S 3.9.7, Crane Travel--Spent Fuel Storage Pool Building, in reference to the 2,500-lb load limitation:

> "This does not include the main load block, which weighs approximately 4.25 tons. Whenever the load block is moved over the pool, the main hoist must be deenergized and be carrying no load."

As stated above, the weight of the main load block exceeds the 2,500-lb limitation of this T/S. For reasons cited in the cover letter, it is our current understanding that the main load block must be considered as a heavy load under the provisions of T/S section 3.9.7 even when it is not carrying any load. In order to justify this T/S change request, we have investigated the potential for dropping the main hook and load block when it is over the pool. The major concern is that the load block may drop on or near the spent fuel assemblies in the pool causing a release of radioactive gas. Since the crane and hook are Class I components, this postulated accident would not be considered credible except for the concern associated with two-blocking (i.e., the movement of the lower block into contact with the upper load block and subsequent winding of the cable until it snaps and the load block drops). Since we do not have time to perform necessary load drop analyses to possibly justify the consequences of such a postulated accident, we have elected to administratively deenergize the main hoist, as a supplement to the already existing limit switches, and keep the main hook unloaded whenever load-handling activities are being performed utilizing the auxiliary hook over or adjacent to the pool.

We believe that when the main hoist is deenergized and there are no loads on the main hook, the load block will be a passive component of the trolley rather than an active component and will be an integral part of the crane. In this condition the load block is a static component and is considered to be part of the crane. The crane and the trolley are Seismic Class I components and are capable of resisting loads required for Seismic Class I structures. Therefore we believe that operation of the crane in the manner discussed in this letter will not involve a significant increase in the probability or consequences of a previously analyzed accident.

In addition, operation of the crane in the proposed manner, in which both the main load block and the trolley are static components, will not place the plant in a new or unanalyzed condition. Therefore, we believe this change will not introduce a new or different kind of accident from those that have been previously analyzed.

There are both geared and paddle-type upper-limit switches for the main hook to prevent the lower load block from moving up and coming into contact with the upper block and thus potentially stretching the cable to failure. In addition to these limit switches, we are deenergizing the main hook and are ensuring that there is no load on the hook. Under these conditions, movement of the main load block over the pool will not involve a significant reduction in a margin of safety.

Although this change may result in some increase to the probability or consequences of a previously analyzed accident or may reduce in some way a safety margin, we believe that the results of this change are clearly within all acceptable criteria with respect to the system specified in the safety analysis. Based on the above, we believe that this change does not involve a significant hazards consideration as defined by 10 CFR 50.92. This T/S change request is made on an emergency basis for reasons cited in the cover letter.

In addition to the above, we also note that the load block and main hook will at times move in an area adjacent to the pool (i.e., between a designated load path and the edge of the pool). Although movement of the load block is not restricted in this area by the current T/Ss, we agree to extend the above administrative restrictions for the main load block in this area as well.

This T/S change is considered temporary because we eventually plan on doing a load drop evaluation or other appropriate evaluation and submitting it to the Commission for relief from these administrative limits. This evaluation cannot be performed with this application due to the emergency nature of this change.

ATTACHMENT 2 TO AEP:NRC:0514 O

REVISED PAGES FOR THE

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

TECHNICAL SPECIFICATIONS