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DENTON,H.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Request for temporary relief from requirements of Tech Specs 3.9.9 & 3.3.3.1 while in Mode 6 & Tech Spec 3.0.4 to allow crossing from Modes 5 to 6 while in action statement, in order to install isolation valves.

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October 29, 1982
AEP:NRC:0723B

Donald C. Cook Nuclear Plant Unit No. 2
Docket No. 50-316
License No. DPR-74
TECHNICAL SPECIFICATION RELIEF REQUEST

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

Dear Mr. Denton:

The purpose of this letter is to request temporary relief from the requirements of the Unit 2 Technical Specification (T/S) 3.9.9 and 3.3.3.1 "Action Statement" while in Mode 6 (refueling); and relief from T/S 3.0.4 to allow the crossing from Modes 5 to 6 while in an "Action Statement".

The relief from T/S 3.9.9 and T/S 3.0.4 will enable us to install the new Containment Purge System isolation valves which are of superior leak tight characteristics in Cook Unit 2 as we have recently done in Unit 1. During the course of this installation work, we will be unable to have each of the affected purge penetrations capable of being isolated by two barriers as required by T/S 3.9.9, and the crossing down to Mode 6 would be prevented by T/S 3.0.4 under this condition. There will, however, be a single barrier provided either by a blind flange or a closed purge isolation valve during all phases of the installation.

In addition, we are installing new radiation monitors in Unit 2 during this refueling outage just as we have completed in Unit 1. When installing these monitors, we have to make portions of the existing radiation monitoring equipment inoperable. The operability of the existing radiation monitors is required in Mode 6 by T/S 3.3.3.1. The Action Statement of T/S 3.3.3.1 (Action 22) for Mode 6 in Table 3.3-6, Item 2 also requires that the Action Statement of T/S 3.9.9 be applied. For the reasons discussed above we will be unable to fulfill the T/S 3.9.9 Action Statement requiring two barriers.

We are hereby seeking relief from the requirements of the Action Statements of T/S 3.9.9, T/S 3.3.3.1; and T/S 3.0.4 for the

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duration of the refueling outage which is scheduled to commence in November of 1982. This request will allow for the installation of two major plant design modifications during the Unit 2 refueling outage. These two modifications (the installation of the new Containment Purge isolation valves and improved radiation monitoring capability) will result in an overall improvement in plant safety once installed. The proposed revision to the affected T/S page is attached to this letter.

The new radiation monitors are part of an overall plant Radiation Monitoring System (RMS) upgrade package which includes Post-TMI requirements. It is our desire to complete this phase of the RMS upgrade work during the Unit 2 outage so that we can have the equipment operational in time to meet the operability dates stated in our letter of December 23, 1981 (AEP:NRC:0652) for the post-TMI items.

The new monitors which initiate closure of the purge isolation valves are of a redundant design, with each monitor train oriented to a corresponding Class 1E electrical train. Thus, in the final design, the new monitors will initiate closure of their respective train of Containment Ventilation Isolation (CVI) valves (7 of 14 isolation valves per Unit). When we remove from service the original radiation monitoring equipment (R-11 and R-12) and enter the Action Statement of T/S 3.3.3.1, we will be unable to meet T/S 3.9.9 which requires two isolation barriers as explained above. This fact, concurrent with the partial availability of radiation monitoring isolation signals due to the replacement of R-11 and R-12, necessitates that we request relief from T/S 3.0.4 to be able to cross from Modes 5 to 6. During the period of time when no radiation monitor signal can be transmitted to initiate automatic closure of the inside or outside containment valve, a man in the Control Room will have the responsibility to initiate manual closure upon high radiation indication or we will maintain these valves closed. The containment area monitor (R-2) will be available during Mode 6 as required by T/S 3.3.3.1. It is only for the upcoming refueling outage, when we are replacing the purge isolation valves and are deleting the single train of the original RMS equipment and replacing it with equipment of higher quality, that we seek this temporary T/S relief.

We have reviewed the accident analyses as presented in the FSAR. One accident analysis performed in the FSAR for Mode 6 that would significantly affect the containment atmosphere was the Fuel Handling Accident. Potential consequences of a Fuel Handling accident were evaluated using both the conservative assumptions listed in Regulatory Guide 1.25, and the realistic assumptions given in Regulatory Guide 4.2, Appendix I. For both conservative and realistic cases, no credit was taken for the closure of the containment purge isolation valves. The results of these analyses concluded that the radiological consequences due to a Fuel Handling Accident inside containment are well within the limits set forth in 10.CFR.100. By assuring that at least one barrier is present during the relief period for each penetration, we will be providing an added margin of safety to minimize any potential radioactive release.

Other Mode 6 events that could potentially occur are the "Boron Dilution Event", and the "Loss of Decay Heat Removal Cooling". While these events are of concern, the safety considerations, as far as immediate direct release from the containment to the environment, are bounded by the "Fuel Handling Accident" discussed above. Other accident analyses presented in the FSAR, such as the LOCA and/or MSLB, do not apply since neither the Reactor Coolant System nor the Secondary System are pressurized during refueling. Hence, granting this T/S relief will not have any adverse impact on public health safety.

This request for emergency temporary T/S relief has been reviewed by the Plant Nuclear Safety Review Committee (PNSRC) and by the Nuclear Safety and Design Review Committee (NSDRC) as required by our T/S.

This request for T/S relief allows us to make the necessary plant design changes to implement requirements covered by other NRC reviews. As such, we interpret 10.CFR.170 as requiring that no fee accompany this submittal.

A similar request for Unit 1 was reviewed by your staff in response to our letter No. AEP:NRC:0723, dated July 21, 1982. Approval of our request was contained in License Amendment No. 56 issued on July 23, 1982. Your expeditious handling of this request will be appreciated.

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,

R. F. Hering
Vice President

/os

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Attachment to
AEP:NRC:0723B