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FACIL:50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana & 05000315
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HUNTER,R.S. Indiana & Michigan Electric Co.
RECIP.NAME RECIPIENT AFFILIATION
DENTON,H.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Requests emergency temporary relief from requirements of Tech Specs 3.9.9 action statement while in operating mode 6 (refueling).Relief needed in order to make necessary plant design changes.

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TITLE: Containment Purging

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July 21, 1982
AEP:NRC:0723

Donald C. Cook Nuclear Plant Unit No. 1
Docket No. 50-315
License No. DPR-58
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 an emergency temporary relief from the requirements of the Technical Specification (T/S) 3.9.9 'Action Statement' while in operating Mode 6 (refueling). This matter has been discussed with members of your staff. We are currently installing new Containment Purge System isolation valves of superior leak tight characteristics as we indicated in our letter No. AEP:NRC:0370A dated January 15, 1982. Replacement of the Lower Containment and Instrument Room valves is scheduled to commence upon entry into Mode 6 which is currently scheduled for the evening of July 21, 1982. During the course of this installation work in Mode 6 we will not be able to keep each of the affected purge penetrations capable of being isolated by two barriers as required by T/S 3.9.9. The single barrier will either be a blind flange or a closed purge isolation valve. The Upper Containment and Pressure Relief line purge isolation valves have already been replaced.

In addition, we are installing new radiation monitors during this refueling outage. 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 20) in Mode 6 for 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 able to fulfill the T/S 3.9.9 Action Statement with only one barrier in Lower Containment and the Instrument Room. As discussed below, for one train of the installed isolation valves in the upper containment, we will have completed the wiring necessary to provide the capability for automatic closure of those valves upon a high radiation indication.

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We are hereby seeking relief of the T/S 3.9.9 Action Statement requirement for the duration of the current refueling(Mode 6), which will last approximately from July 22, 1982 to early September 1982. This request will allow for the installation of two major plant design modifications during the current Unit 1 refueling outage. These two modifications (new purge isolation valves and improved radiation monitoring capability) will result in an overall improvement in plant safety once installed.

The new radiation monitors are part of an overall plant Radiation Monitoring System (RMS) upgrade package and include post-TMI requirements. It is our desire to complete this phase of the RMS upgrade work during the current Unit 1 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 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). We have already installed one of the two new radiation monitors. It is only 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 that we are unable to assure double purge isolation capability as conservatively required by T/S 3.9.9. The new radiation monitor already installed will be available during this period of time for monitoring purposes. The wiring of this monitor will also be completed such that it will be capable of automatically isolating those purge isolation valves in its electrical train that become installed and operational or are already installed (upper containment). During periods of time when no radiation monitor signal is wired 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. It is only now, during this refueling outage, when we are replacing the purge isolation valves and are deleting the single train of original RMS equipment and replacing it with equipment of higher quality that we seek this temporary T/S relief.

We have reviewed the accident analysis as presented in the FSAR. For Mode 6 the most limiting accident inside containment from the standpoint of direct radiation release to the environment is the Fuel Handling Accident. Purge and vent line isolation is required for this event to limit the consequences to those presented in the FSAR. The requirement to keep one purge isolation barrier closed during this relief period is consistent with the analysis. As such, the consequences of a fuel handling accident inside containment, if one occurred during this time, would be within the limits as analyzed in the FSAR.

Other serious 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 radiation 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 LOCA and/or MSLB, do not apply since neither the Reactor Coolant System nor the Secondary System are pressurized. Hence, granting this T/S relief will not have any adverse impact on public health and safety.

This request for emergency temporary T/S relief has been reviewed by the Plant Nuclear Safety Review Committee (PNSRC) as required by our T/S and will be reviewed by the Nuclear Safety and Design Review Committee (NSDRC) at their next regularly scheduled meeting. 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.

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. S. Hunter
Vice President

/md

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