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

SUBJECT: Responds to 811217 safety evaluation re interim use of distributed ignition sys (DIS).DIS will be manually actuated from control room upon receipt of Phase B isolation signal or indication of inadequate core cooling.

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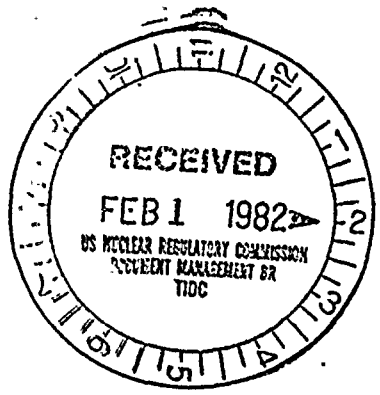
Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
SER on Interim Use of the DIS



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

Dear Mr. Denton:

This letter responds to Mr. S. A. Varga's letter of December 17, 1981 which transmitted to us the Staff's Safety Evaluation Report (SER) for interim use of the Distributed Ignition System (DIS) installed in the Donald C. Cook Nuclear Plant.

A discussion of the accident symptoms which would result in DIS actuation is found in Attachment No. 1 to our AEP:NRC:00500F letter dated October 28, 1981. Summarizing our earlier response, the DIS will be manually actuated from the control room upon either receipt of an automatic Phase B Isolation signal or upon indication of an inadequate core cooling (ICC) condition. These criteria were developed to explicitly address hypothetical accident sequences which may or may not result in Phase B Isolation and to assure that those systems required for hydrogen control were, in fact, operating prior to DIS actuation.

In Attachment No. 3 to our AEP:NRC:00500A submittal, dated April 24, 1981, the Containment Spray (CTS) and Hydrogen Skimmer (HYS) systems were identified as being required for hydrogen control; the CTS being needed for temperature and pressure control and the HYS being needed to assure adequate mixing of the containment atmosphere. As both the CTS and HYS are automatically initiated following a Phase B Isolation, it was logical to modify the 'Phase B Procedure' to include DIS actuation. In order to address hypothetical accidents which would not necessarily result in Phase B Isolation prior to the onset of hydrogen release into the containment, the "ICC Procedure" was modified to include manual

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activation of the HYS and CTS, if not already operating, and also manual activation of the DIS. This activation criteria provides assurance of early DIS actuation as well as operation of the other systems required for hydrogen control.

To activate the DIS following a safety injection signal, as the NRC proposes, would assure early DIS actuation but does not provide assurance of timely HYS and CTS operation. We have reviewed the NRC proposed actuation criteria and determined that it is neither practical nor necessary to require CTS and HYS actuation following receipt of a safety injection signal. Therefore it is our conclusion that the existing DIS actuation criteria are preferable to actuation of the DIS following a safety injection signal.

As for the second item, the appropriate procedures have been modified to require tripping of the ice condenser air handling units upon actuation of the DIS as per the request contained in Mr. Varga's letter.

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

RSH/os

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