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KEPPLER,J.G. Region 3, Chicago, Office of the Director

SUBJECT: Responds to NRC 791130 ltr & IE Bulletin 79-27 "Loss of Nonclass IE Instrumentation & Control Power Sys Bus During Operation," Safety-related power supply inverters at facility Class IE. No revised design mods required.

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March 7,1980
AEP:NRC:00327

Donald C. Cook Nuclear Plant Units 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
IE Bulletin No. 79-27

Mr. James G. Keppler, Director
Office of Inspection and Enforcement
Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

This letter responds to your letter of November 30, 1979 which we received on December 3, 1979 and which transmitted to us IE Bulletin No. 79-27 "Loss of Non-Class IE Instrumentation and Control Power System Bus During Operation." An extension of time to answer your letter by March 7, 1980 was granted over the telephone by a member of your Staff on February 27, 1980.

The numbered paragraphs below address the "Actions to Be Taken by Licensees" Section of the Bulletin in the order presented.

ITEM 1

Each of the safety (Class IE) and non-safety control and instrumentation buses were reviewed for each unit. The review included the following:

a) Identification of the control room annunciators and other indicators which would alert the operator in the event of a loss of power to a control bus.

b) The power source to each of the instruments or devices necessary to achieve cold shutdown. The review evaluated the effect of the loss of the control bus on the required main safeguards equipment, its auxiliaries, power sources and support devices. In all cases but for one, redundant indicators or devices powered from diverse sources are available to the operator should the loss of any one control bus occur. The one exception, where the loss of a control bus would prevent achieving automatic cold shutdown, is caused by

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the loss of the 120 volt a.c. vital instrumentation buses CRID I or CRID IV. Loss of one of the two buses will cause the output relay operated by Reactor Coolant System pressure to de-energize, a situation which corresponds to a higher Reactor Coolant System pressure than is acceptable for Residual Heat Removal operation. The consequence of the de-energized output relay is to close one or the other of the two isolation valves in series, ICM-129 or IMO-128, located in the normal RHR cooldown line between the reactor coolant loop 2 hotleg and the RHR pump suction. This line is required for recirculation through the RHR system. This exception is being addressed in the procedure being developed and described under Item 2, below.

c) No design modifications are proposed, as none were determined to be necessary as a result of the review.

ITEM 2

A formal procedure has been written by Donald C. Cook Plant Operations which addresses restoration of power to the vital instrument buses from their backup sources. This procedure is in effect as of this writing.

Alternatively, a qualified C & I technician could physically override the high pressure interlock, which resulted in the closing of motor operated valves ICM-129 or IMO-128 on loss of power to the vital instrument buses CRID I or CRID IV respectively, within a period of one hour. Overriding the interlock, after verifying correct coolant pressure from a redundant instrumentation channel in the Control Room, will allow the operator to open the necessary valves in the RHR recirculation path to allow RHR operation. The one hour period of time required to override the interlock is not considered to be an undue delay in achieving cold shutdown. In addition, these valves can be opened manually from within the containment, if so desired, within a period of one hour.

ITEM 3

All safety related power supply inverters are Class IE at the Donald C. Cook Nuclear Plant. IE Circular 79-02 was again reviewed with no change in the results found previously. No revised design modifications or additional administrative controls are required as a result of this review.

Very truly yours,

John E. Dolan

John E. Dolan
Vice President

JED:da

cc: R. C. Callen
G. Charnoff
R. S. Hunter
R. W. Jurgensen
D. V. Shaller-Bridgman