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 AUTH. NAME AUTHOR AFFILIATION
 HUNTER, R.S. Indiana & Michigan Electric Co.
 RECIP. NAME RECIPIENT AFFILIATION
 DENTON, H.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Submits info re main steam pressure monitors & containment water level monitoring sys, per 810512 telcon. Exposure to hydrogen combustion environ would not adversely affect operation of containment water level monitoring sys.

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P. O. BOX 18
BOWLING GREEN STATION
NEW YORK, N. Y. 10004

May 26, 1981
AEP:NRC:00500B

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
Supplementary Information to AEP:NRC:0500A

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

Dear Mr. Denton:

This letter serves to provide additional information with regard to our AEP:NRC:00500A submittal, dated April 24, 1981, as requested by members of your staff during a telephone conversation held on May 12, 1981. Specifically, the Staff has requested that we provide the bases for excluding the "Main Steam Pressure Monitors" (MSPM) and the Containment Water Level Monitoring System" from the list of "Inadequate Core Cooling/Hydrogen Control Equipment Inside Containment" contained in Attachment No. 3 of the aforementioned submittal. A discussion of these items follows.

(1) Main Steam Pressure Monitors

As stated in our response to IE Bulletin No. 79-01B, the MSPM are located outside reactor containment. (Reference: Attachment No. 1 to AEP:NRC:00356A, dated March 7, 1980). Since this equipment is located outside of reactor containment, the MS pressure monitors would not be susceptible to the effects of a hydrogen combustion environment and hence are not within the scope of Attachment No. 3 to AEP:NRC:0500A.

(2) Containment Water Level Monitoring System


A containment water level monitoring system will be installed in accordance with the requirements of Item II.F.1, Attachment 5, of NUREG-0737 as described in our letter of January 9, 1981 (AEP:NRC:00398). The in-containment portions of this system will be environmentally qualified to meet the

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NUREG. Based on the conservative heat transfer calculations presented in Attachment No. 4 to our AEP:NRC:00500A submittal, and the LOCA/MSLB qualification of the in-containment portions of the system being installed to meet the requirements of NUREG-0737, we believe that exposure to a hydrogen combustion environment would not adversely affect operation of the containment water level monitoring system. The function performed by the system is not essential to either achieve and maintain the reactor in a safe shutdown condition or to assure adequate hydrogen control capability. At the Cook Plant, Emergency Core Cooling System (ECCS) switchover from the injection mode to the sump recirculation mode does not rely on indication of containment water level. Switchover is accomplished by manual actions based on Refueling Water Storage Tank (RWST) level indication with the containment water level indication providing backup information. The RWST level monitors are located outside reactor containment and would not be susceptible to the effects of a hydrogen combustion environment. In addition, the residual heat removal (RHR) pumps would be automatically tripped, as a backup measure to the operator action, when the RWST reaches the low-low level (References: Response to NRC Question Nos. 212.1 and 212.30 contained in Appendix 'Q' to the Cook Plant Final Safety Analysis Report (FSAR) - Amendment Nos. 77 and 78 dated July 1977 and October 1977 respectively). Conservative calculations indicate that injection of the "minimum usable RWST volume", specified in the plant technical specifications (350,000 gallons), into containment will result in adequate NPSH for the RHR and containment spray pumps when the pumps are aligned to take suction from the recirculation sump. (Reference: Response to NRC Question No. 212.29 (Part 2) contained in Appendix 'Q' to the FSAR). For these reasons, it is clear that indication of containment water level is not essential for proper ECCS switchover.

Very truly yours,


R. S. Hunter
Vice President

cc: John E. Dolan - Columbus
R. W. Jurgensen
R. C. Callen
G. Charnoff
D. V. Shaller - Bridgman
Region III Site Inspector - Bridgman