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AUTH. NAME AUTHOR AFFILIATION
ALEXICH, M. P. Indiana & Michigan Electric Co.
RECIP. NAME RECIPIENT AFFILIATION
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SUBJECT: Forwards proposed Tech Spec change requests principally associated w/NUREG-0737 Item II.F.1.5 re containment water level monitoring. Description of proposed change & analyses re significant hazards considerations also encl. Fee paid.

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INDIANA & MICHIGAN ELECTRIC COMPANY

P.O. BOX 16631
COLUMBUS, OHIO 43216

July 16, 1987
AEP:NRC:0856T

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
TECHNICAL SPECIFICATION CHANGE REQUEST FOR CONTAINMENT WATER LEVEL MONITORING INSTRUMENTATION (NUREG-0737, ITEM II.F.1.5)

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Attn: T. E. Murley

Dear Dr. Murley:

This letter is being submitted in response to your May 6, 1987 Preliminary Safety Evaluation of our proposed changes to the Technical Specifications for the Donald C. Cook Nuclear Plant (Attachment 1). The proposed changes were associated with TMI Action Item II.F.1.5 (Containment Water Level Monitoring Instrumentation) and were transmitted to you by our letter AEP:NRC:0856I, dated May 19, 1986 (Attachment 2). I&MECo was requested to establish an acceptable position with regard to this item, and this submittal is intended to fulfill that request.

This letter and its attachments transmit proposed Technical Specification (T/S) change requests principally associated with NUREG-0737 Item II.F.1.5 regarding containment water level monitoring. A description of the proposed change and our analyses concerning significant hazards considerations are contained in Attachment 4. The proposed revised Technical Specification pages are contained in Attachment 5.

We believe that the proposed changes will not result in (1) a significant change in the types of effluents or a significant increase in the amounts of any effluent that may be released offsite, or (2) a significant increase in individual or cumulative occupational radiation exposure.

These proposed changes have been reviewed by the Plant Nuclear Safety Review Committee (PNSRC) and will be reviewed by the Nuclear Safety and Design Review Committee (NSDRC) at their next scheduled meeting.

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In the Preliminary Safety Evaluation, your staff concluded that I&MECo had not provided sufficient rationale for deviating from the Generic Letter 83-37 requirement that the plant be brought to hot shutdown following 30 days of inoperability of sump level instrumentation and that this instrumentation not be one of the topics for which special reports can be written in lieu of taking other action. In addition, your staff concluded that I&MECo had not adequately justified the 25% instrument drift contained in the post-accident instrumentation bases for containment water level measurement. It is noted that these conclusions are contrary to our understanding of what we believed your staff had considered acceptable at previous meetings. This has necessitated a change in our schedule for compliance with the requirements associated with containment water level monitoring. Further detail is provided below.

We believe that the problems we are experiencing with instrument drift are due mainly to air leakage into the instrument tubing. Routine refill and recalibration of these instruments has not been successful in minimizing this drift, particularly with regard to the containment sump level instrumentation. The containment water level instrumentation is also experiencing drift, but it is typically on the order of 4-5%, in contrast to the large values of drift we are seeing on the sump instrumentation. As a result, we currently plan to either modify the existing narrow-range instrumentation to avoid the drift problems or replace both the wide-range and the narrow-range containment water level instrumentation. This action is being taken in direct response to your staff's concern with the instrument drift that we have experienced with the presently installed level instrument channels. The modification or the new instrumentation, if required, will be provided consistent with our current policy of compliance with the recommendations of Regulatory Guide 1.97, Rev. 3. A copy of the pertinent sections of Regulatory Guide 1.97, Rev. 3 is included with this letter as Attachment 3. The replacement level instrumentation will consist of two containment water level channels. In addition, there will be at least one containment sump level channel installed which will meet the Reg. Guide 1.97, Rev. 3 recommendations for Category 2 instrumentation.

We are presently evaluating several different types of level-measuring systems in order to determine which design is best suited for the Cook Plant. We are also surveying other utilities to determine what instrument designs they have found to be acceptable for measurement of this variable.

Installation of the new level instrumentation would require changes to plant drawings; design, procurement, fabrication, and delivery of the new instruments; removal of the installed instruments and installation of the new level measurement systems (including installation of new instrument cables and modification of signal-conditioning cabinets); changes to numerous plant procedures; and final instrument calibration and testing.

With regard to plant operation in the interim period before the modification or replacement of the instruments is accomplished, we believe the justifications provided in our original submittal of May 1986 are still valid. Reference to the 25% drift in the May 1986 submittal was based primarily on concern with the narrow-range level instrumentation. Drift associated with the wide-range containment water level instrumentation has not been a significant problem. We do not believe that the drift associated with the narrow-range instruments constitutes a significant problem, since humidity monitors, indication of sump pump run time, and radiation monitors can be relied upon as backups to the narrow-range level instruments if necessary.

In light of the above, modification of the narrow-range instrumentation or replacement of both the wide-range and the narrow-range instrumentation must be performed when the unit is shut down. This modification or replacement is currently planned for the next regularly scheduled refueling outage for each unit. Consequently, we would expect to complete this work during the Unit 2 refueling outage currently scheduled for May 1988 and the Unit 1 refueling outage currently scheduled for February 1989.

In view of the concerns raised by your staff, and consistent with the information provided above, the proposed Technical Specifications attached to this submittal represent a revision to those originally submitted in May 1986. Specifically, the following revisions have been made:

1. Reference to a Special Report to be issued at the end of a 30-day period of containment sump level channel inoperability is deleted. Instead, this channel is treated in the same way as other post-accident instruments, that is, the inoperable channel will be restored to operable status within 30 days or the unit will be brought to hot shutdown within the next 12 hours.

2. The acceptability of a 25% instrument drift is deleted from the Technical Specification Bases.

3. A footnote is added to the Technical Specifications stating that the proposed changes will become effective after the level instruments are modified or replaced and become operational.

In compliance with the requirements of 10 CFR 50.91(b)(1), copies of this letter and its attachments have been transmitted to Mr. R. C. Callen of the Michigan Public Service Commission and Mr. G. Bruchmann of the Michigan Department of Public Health.

Pursuant to 10 CFR 170.12(c), enclosed is an application fee of $150.00 for the proposed amendments.

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,

M. P. Alexich
Vice President

cm

Attachments
cc: John E. Dolan
W. G. Smith, Jr. - Bridgman
R. C. Callen
G. Bruchmann
NRC Resident Inspector - Bridgman
A. B. Davis - NRC-Region III

Attachment 1 to AEP:NRC:0856T

NRC Preliminary Safety Evaluation dated May 6, 1987