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 FACIL: 50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana & 05000315  
 50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316  
 AUTH. NAME ALEXICH, M. P. AUTHOR AFFILIATION Indiana & Michigan Electric Co.  
 RECIP. NAME RECIPIENT AFFILIATION Document Control Branch (Document Control Desk)

SUBJECT: Advises that unless otherwise directed, util will incorporate methodology presented in encl Impell Corp rept, "Main Steam Line Break Effect Environ Analysis, DC Cook Units 1 & 2," in FSAR update scheduled for issuance on 870722.W/o encl.

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# INDIANA & MICHIGAN ELECTRIC COMPANY

P.O. BOX 16631  
COLUMBUS, OHIO 43216

March 3, 1987  
AEP:NRC:0775AJ

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2  
Docket Nos. 50-315 and 50-316  
License Nos. DPR-58 and DPR-74  
MAIN STEAM LINE BREAK ENVIRONMENTAL ANALYSIS

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

Dear Sirs:

This letter and its attachment respond to your staff's concerns regarding superheated steam release following a main steam line break as expressed in IE Information Notice No. 84-90: "Main Steam Line Break Effect On Environmental Qualification of Equipment." We presented the findings of our preliminary review in our letter AEP:NRC:0775M, dated August 3, 1984.

In order to respond to the superheated steam issue, the Westinghouse Owners Group developed mass and energy release data and, in a letter from J. O. Cermak to D. L. Wigginton dated October 28, 1985, informed your staff that the evaluation had been completed.

We transmitted the mass and energy release data to our consultant, Impell Corporation, for detailed evaluation of the effects of a main steam line break (MSLB) on the qualification of safety-related equipment in the affected areas.

The attachment to this letter is a report prepared by Impell Corporation, entitled "MSLB Environmental Analysis, Donald C. Cook Units 1 and 2." It presents the methodology and results of the analysis performed to evaluate the effects of an MSLB in the east and west main steam enclosures and main steam accessway on the qualification of safety-related equipment at the Cook Plant. The results of the analysis show that the new temperature and pressure profiles of such equipment will differ from those in Section 14.4 of the current FSAR. Unless otherwise directed, we plan to incorporate this new information in our next FSAR update, which is scheduled to be issued on July 22, 1987.

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The results of the attached report show that the environmental qualification of the subject electrical equipment is unaffected, with one exception: a Continental cable was found to have a surface temperature 13°F in excess of its qualification temperature. It should be pointed out that this was a hypothetical bounding case. In an effort to determine whether the Continental cable could withstand temperatures greater than the qualification temperature, AEPSC performed a high-temperature test on a cable with a generically similar insulation type. The results of this preliminary testing show that the cable suffered no loss of function due to the high temperature. In addition to this preliminary testing, AEPSC intends to show that the cable remains qualified through a testing program (in accordance with IEEE-323, 1974) using a qualified vendor. This task has been tentatively scheduled to be completed in 1987.

We wish to make one remark with regard to the attached report. During our review, we discovered an error in the calculation of volume 4 of the East Main Steam Enclosure (Table 3.2). Our engineering review indicated that the volume should be 18,000 cubic feet rather than 8,100 cubic feet as used in the report. We have reviewed this error with the vendor and found it does not affect the final analysis. Because this error does not substantially change the results of the analysis, and in fact is an added conservatism, we have allowed the value in the report to stand.

With the exception of the Continental cable, we feel we have fulfilled our obligation to show that the release of superheated steam during an MSLB does not affect the qualification of the safety-related equipment listed in the attachment to AEP:NRC:0775M and in Table 3.7 of the attached report.

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

Attachment

cc: John E. Dolan  
W. G. Smith, Jr. - Bridgman  
R. C. Callen  
G. Bruchmann  
G. Charnoff  
NRC Resident Inspector - Bridgman  
J. G. Keppler - Region III