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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: DENTON, H.R. RECIPIENT AFFILIATION: Office of Nuclear Reactor Regulation, Director

SUBJECT: Requests extension of environ qualification deadline for certain instrument cables routed inside containment bldgs, pdr 10CFR50.46(h). Justification for continued operation encl.

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June 28, 1985
AEP:NRC:0775U

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
INSTRUMENT CABLE SUBMERGENCE QUALIFICATION

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

Dear Mr. Denton:

This letter requests an extension of environmental qualification deadline, pursuant to 10 CFR 50.49(h), for certain instrument cables routed inside the Donald C. Cook Nuclear Plant containment buildings. This extension request specifically applies to the submergence requirements for those cables serving four (4) steam generator narrow range level differential pressure transmitters in each unit, i.e., BLP-112, -122, -132, and -142.

During the design effort associated with the planned replacement of these transmitters, it was discovered that the instrument cables are routed below the maximum containment flood elevation, although their terminal points (at the instruments and at the flood-up boxes) are above this elevation. While these cables have been satisfactorily tested independently for submergence and radiation effects, they were not sequentially tested. Accordingly, we cannot be assured that the transmitters served by these cables will perform their long term post-accident monitoring function.

We now propose to relocate these cables above the maximum flood elevation as part of the effort associated with the replacement of the transmitters. The schedule for proposed corrective actions would therefore include relocation of the Unit 1 cables during the ten-year outage presently taking place, and relocation of the Unit 2 cables during the next refueling outage (currently anticipated to begin on or before November 30, 1985). Pending completion of the cable relocation work, the attached Justification for Continued Operation (JCO) applies for Unit 2. The JCO also justifies operation of Unit 1 prior to the current ten-year outage.

It is noted that the proposed JCO has been reviewed by the Plant Nuclear Safety Review Committee (PNSRC) and the Nuclear Safety-Design Review Committee (NSDRC). Additionally, pursuant to 10 CFR 170.12(c), an application fee of \$150.00 has been enclosed.

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This document has been prepared following Corporate procedures which incorporate a reasonable set of controls to ensure its accuracy and completeness prior to signature by the undersigned.

Very truly yours,


M. P. Alexich
Vice President
RDK
6/28/85

MPA/dam
Enclosures

cc: John E. Dolan
W. G. Smith, Jr. - D. C. Cook Plant
R. C. Callen
G. Bruchmann
G. Charnoff
NRC Resident Inspector - D. C. Cook Plant

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ATTACHMENT TO AEP:NRC:0775U
JUSTIFICATION FOR CONTINUED OPERATION
DONALD C. COOK NUCLEAR PLANT UNIT NOS. 1 AND 2

Equipment Description: Steam Generator Narrow Range Level Differential Pressure Transmitters and Associated Instrument Cable

Equipment Manufacturers: ITT Barton (Transmitters); Samuel Moore, Boston Insulated Wire (Cables)

Equipment Model/Item Nos.: 764 (Transmitters); 3075 (Cables)

Plant Identification Nos.: BLP-112, -122, -132, and -142 (Transmitters); 8584CY-1, 8585CY-1, 8586CY-1, 8587CY-1, 8584CY-2, 8585CY-2, 8586CY-2, and 8587CY-2 (Cables)

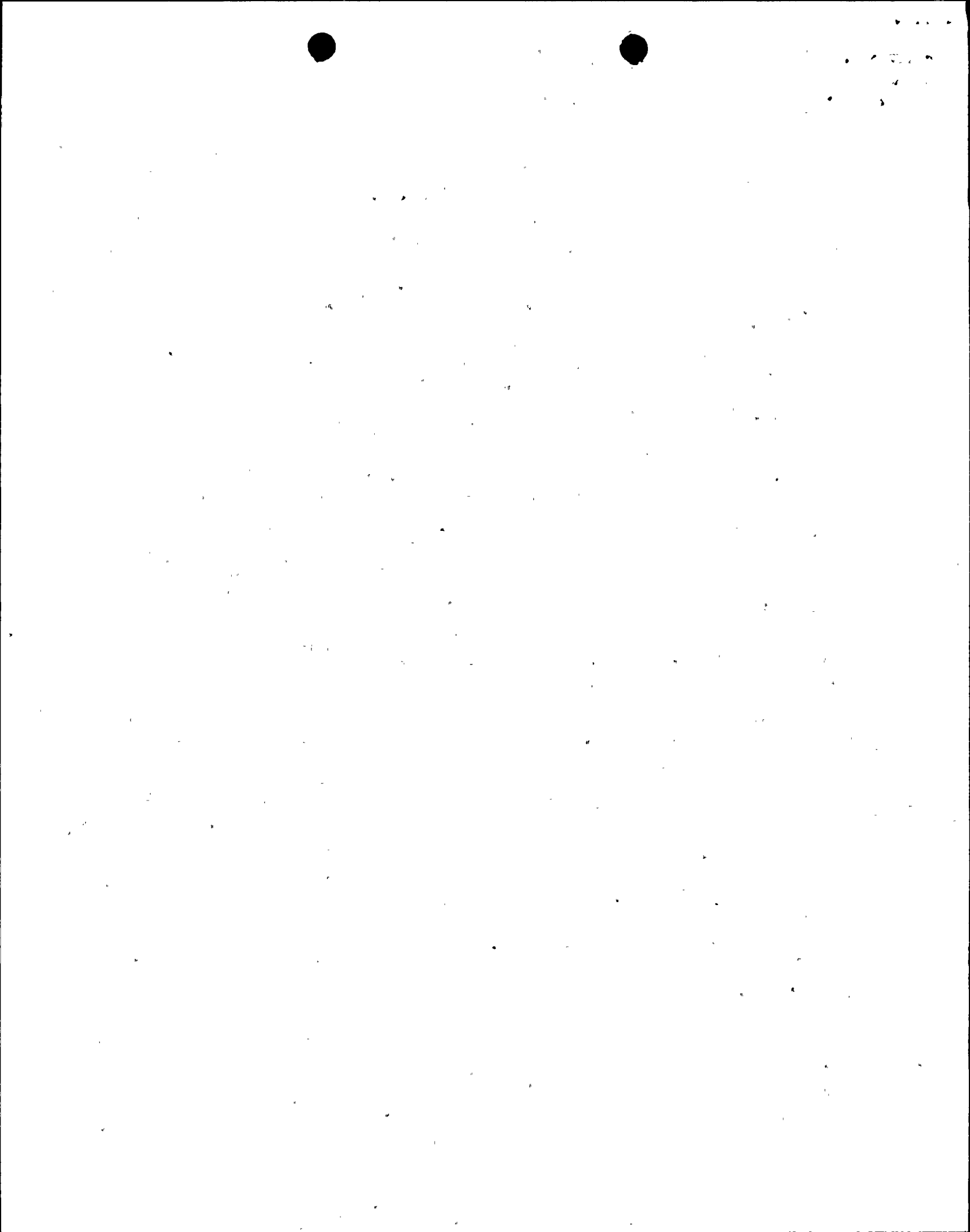
Deficiency: Cable Submergence

Justification for Continued Operation (JCO):

The steam generator narrow range level transmitters (BLPs) perform two functions for the D. C. Cook Nuclear Plant, a short term trip function and a long term post-accident monitoring function.

With regard to the short term trip function, the BLPs must respond within 22.1 seconds into a Main Steam Line Break (MSLB). During this time period, the containment flood elevation will not rise above the minimum mounting elevation for any of the twelve (12) BLPs inside containment. It is therefore believed that the BLPs will be available to provide the necessary reactor protective function for the short term.

For the long term, the D. C. Cook Nuclear Plant Technical Specifications require at least one (1) available BLP per steam generator for post-accident monitoring purposes. In this capacity, the BLPs are considered a redundant indication of auxiliary feedwater flow, normally provided by four (4) transmitters located outside containment (FFI-210, -220, -230, and -240). Here it is noted that the FFIs share a common, balance-of-plant power supply; however, neither the power supply nor the FFIs will be exposed to the same design basis accident (DBA) environment as the BLPs. Therefore the FFIs are expected to be available following the DBA.



In summary, it is believed that the minimum necessary post-accident auxiliary feedwater flow monitoring function will be available following a DBA. This is supported by the following:

- The cables in question have been subjected to separate effects testing. In one test, the cables were subjected to submergence conditions following exposure to a harsh accident environment; however, radiation exposure was not included. In another test, the cables were qualified for harsh environmental conditions including radiation exposure, but were not subjected to a long term submergence test. The cables successfully passed the test criteria in both cases. Thus we have no reason to believe the BLPs to be unqualified for post-accident use, but rather we lack documentation of sequential testing to assure full compliance with 10 CFR 50.49.

- Additional indication of auxiliary feedwater flow is expected to be available through the FFIs as discussed above. Since this instrumentation and its power supply are not subjected to the same DBA harsh environment as the BLPs, concurrent failure of this instrumentation with the occurrence of the DBA is considered unlikely.



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