

October 29, 1987

Docket Nos. 50-315  
and 50-316

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Mr. John Dolan, Vice President  
Indiana and Michigan Power Company  
c/o American Electric Power Service  
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1 Riverside Plaza  
Columbus, Ohio 43216

Dear Mr. Dolan:

By letter dated August 13, 1987 the Indiana and Michigan Power Company responded to a request for additional information regarding item 4.2, parts 3 and 4 of Generic Letter 83-28. We are nearing completion of our review of this item and need clarification or additional information as detailed in Enclosure. This was discussed with your staff.

Please provide the requested information or a schedule for submittal within 30 days. If further discussion is needed to close this issue out, please let us know.

Sincerely,

*151*

David L. Wigginton, Acting Director  
Project Directorate III-3  
Division of Reactor Projects

Enclosure:  
As stated

cc: See next page

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REQUEST FOR ADDITIONAL INFORMATION  
ITEM 4.2 (PARTS 3&4) OF GENERIC LETTER 83-28  
DONALD C. COOK NUCLEAR POWER PLANT, UNITS 1,2

Item 4.2 of Generic Letter 83-28 requires licensees or applicants to describe their preventative maintenance and surveillance program for ensuring reliable reactor trip breaker (RTB) operation. Parts 3 and 4 of Item 4.2 pertains to life testing of an acceptable sample size of the breakers, and periodic replacement of the breakers or components consistent with demonstrated life cycles. The licensee submitted a response by letter dated August 13, 1987, to staff's March 9, 1987 request for additional information.

Staff's principle concerns in the March 9, 1987 request for additional information was with respect to possible cyclic and non-cyclic age-related failures of the RTB itself and non-cyclic age-related failures of the undervoltage trip attachment (UVTA) and shunt trip attachment (STA). Staff accepted WCAP-10852 as adequately addressing the cyclic life of the UVTA and STA.

The licensee states that the portions of the RTB mechanism that perform a safety function are composed of metallic parts which have a life that greatly exceeds the expected life of the plant, with mechanical wear being the only limiting factor. No statistical or test data was furnished to support that the life of the RTB exceeds the life of the plant.

The licensee notes that although the RTB closing coil and control relay are not wholly metallic, these components do not participate in the tripping sequence and therefore serve no safety function. Similarly, the licensee states that although the holding coil of the UVTA is susceptible to thermal aging effects, this device is inherently fail safe in that the failure of the coil results in a reactor trip. The possibility that the above components or other components could disintegrate and interfere with the tripping function is not addressed.

The licensee states that the STA is normally deenergized and not prone to accelerated degradation due to thermal aging effects. However, staff is aware that the STA is subjected to relatively high momentary currents, as compared to its continuous current rating, during testing and upon demand energization.

In response to the staff's question on what action would be taken upon any future failure of the RTB, the licensee gave as an example the actions taken after a previous failure in 1985. No commitments were made with respect to future failures that may occur.

Based upon the above considerations, the staff concludes that the licensee should (1) provide documentation to support their contention that the cyclic life of the reactor trip breaker (RTB) exceeds the RTB's cyclic requirements over its lifetime, and (2) commit, for any future failure of the RTB to trip, either during testing or upon demand, to make a determination of whether the failure could have been age-related, and if so, to assume that the failure was age-related, and to take appropriate action accordingly.