

January 12, 2005

Mr. Mano K. Nazar  
Senior Vice President and Chief Nuclear Officer  
Indiana Michigan Power Company  
500 Circle Drive  
Bridgman, MI 49106

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION (RAI) FOR THE REVIEW OF  
THE DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2, LICENSE  
RENEWAL APPLICATION

Dear Mr. Nazar:

By letter dated October 31, 2003, Indiana Michigan Power Company (I&M or the applicant) submitted an application, pursuant to Title 10 Code of the *Federal Regulations* Part 54 (10 CFR Part 54), to renew the operating licenses for Donald C. Cook Nuclear Plant (CNP), Units 1 and 2, for review by the U.S. Nuclear Regulatory Commission (NRC). The NRC staff is reviewing the information contained in the license renewal application (LRA) and has identified, in the enclosure, an area where additional information is needed to complete the review.

This RAI was discussed with your staff, RAI B.1.3-2, and a mutually agreeable date for this response is within 30 days from the date of this letter. If you have any questions, please contact me at 301-415-4053 or e-mail [JGR@nrc.gov](mailto:JGR@nrc.gov).

Sincerely,

/RA/

Jonathan Rowley, Project Manager  
License Renewal Section A  
License Renewal and Environmental Impacts Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

Enclosure: As stated

cc w/encls: See next page

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Donald C. Cook Nuclear Plant, Units 1 and 2

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DISTRIBUTION: Ltr. to: M. Nazar, Re: RAI for DC Cook Nuclear Power Plant, Date: January 12, 2005

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DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2  
LICENSE RENEWAL APPLICATION (LRA)  
REQUEST FOR ADDITIONAL INFORMATION (RAI)

**RAI B.1.3-2**

Boral Surveillance: Monitoring and Trending

Part 1

In recent discussions between the applicant, NRC Regional III inspector, and NRC staff, the licensee explained that trending of Boral coupon measurements is not performed because the measurement uncertainty is equivalent to the acceptance criteria (5% B-10 decrease and 10% thickness increase). The staff's understanding is that the coupon either passes or fails the acceptance test based on these two criteria. According to the Boral Surveillance Program (12-THP-6020-SP-203), failure would require an investigation, engineering evaluation, and perhaps additional testing (such as blackness testing of the storage racks). Also according to the Boral Surveillance Program, the remaining measurement parameters are used to detect early indications of degradation and may prompt a change in measurement schedule.

In a letter dated August 11, 2004, the applicant stated that the most recent coupon thickness change ranged from -0.67% to 1.19%. This suggests a measurement precision better than  $\pm 10\%$ . The staff asks that the licensee respond to the following:

- (1) Please clarify the capability to measure and evaluate coupon thickness.
- (2) Please provide the results of the coupon evaluations. How did the measured neutron attenuation and thickness compare to the acceptance criteria? What were the results and conclusions from the other measurement parameters used to detect early indications of Boral degradation? If early indications of degradation were detected, what actions were taken?
- (3) In a clarification to RAI B.1.3-1, the applicant states 5% variation in B-10 areal density is within the "usual uncertainty tolerance applied in the nuclear criticality safety analyses." Please confirm that this value was used in the most recent criticality safety analyses for CNP.

Part 2

The "Schedule of Coupon Surveillance" in the applicant's Boral Surveillance Program specifies a range of years over which the first five test coupons can be removed from the rack for evaluation. According to the schedule, the time between coupon evaluations can range from 1 year to 5 years. For example, Coupon #3 and Coupon #4 could be pulled 3 years and 8 years, respectively, after removal of Coupon #1. Starting with Coupon #6, however, the evaluation interval is 5 years.

To determine the significance of establishing a 5-year test interval, the staff asks that the applicant respond to the following:

- (1) Please provide the dates that coupons were actually removed and evaluated, and

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- (2) Please explain how the coupon removal/evaluation times are determined. For example, how did the applicant decide if Coupon #4 would be removed and evaluated 6, 7, or 8 years after removal of Coupon #1?