

March 21, 2003

Mr. A. Christopher Bakken III, Senior Vice President
and Chief Nuclear Officer
Indiana Michigan Power Company
Nuclear Generation Group
500 Circle Drive
Buchanan, MI 49107

SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 - REGARDING
CONTAINMENT STRUCTURE CONFORMANCE TO DESIGN AND LICENSING
BASIS REQUIREMENTS

Dear Mr. Bakken:

During the extended shutdown of the Donald C. Cook (D. C. Cook) Nuclear Plant, Units 1 and 2, the Indiana Michigan Power Company (licensee) discovered that containment structures did not conform to their design and licensing basis requirements. Prior to restart of both Units 1 and 2 in 2000, the licensee committed to return the containment structures to their original design and licensing basis requirements. The Nuclear Regulatory Commission (NRC) staff performed a detailed review of the methods and calculations used to restore the original design and licensing basis requirements and margins to the containment structural components. In addition to the review of the licensee's material at the NRC Headquarters Offices, the NRC staff performed a design audit at the licensee's office on January 8-10, 2002. The audit reviewed structural calculations and other documentation to verify conformance with design and licensing basis requirements for various structural components within the containment structure.

Based on the review of the design records, the NRC staff identified areas where adequate technical information in sufficient detail was not available to enable the NRC staff to make an independent assessment regarding the containment structures conformance to design and licensing basis requirements. By letter dated May 31, 2002, the NRC issued a request for additional information (RAI). By letters dated July 16 and August 23, 2002, the licensee responded to the RAI.

Based on the results of the evaluation and audit, the NRC staff found, with the exception of the Upper Reactor Cavity area (Control Rod Drive Missile Shield), the licensee used acceptable methods and appropriate assumptions and design parameters to restore the original design and licensing basis requirements and margins to the containment structural components.

For the Control Rod Drive Missile Shield in the Upper reactor Cavity, the licensee changed the original design and licensing basis limits, via Title 10 of the *Code of Federal Regulations*, Part 50.59, to allow the use of yield strength values for steel reinforcement bar obtained from certified material test reports (CMTRs). The NRC staff does not, in principal, accept the use of material CMTR limits (e.g., yield strength) in lieu of normal specified code properties. Therefore, for the Control Rod Drive Missile Shield, the NRC staff found that the licensee has

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not used an acceptable method to restore the original design and licensing basis requirements and margins in accordance with commitments made by the licensee.

Based on the above, within 30 days after receipt of this letter, please provide a letter to the NRC detailing the corrective actions to be taken to restore the original design and licensing basis margins and requirements for the Control Rod Drive Missile Shield, in accordance with your previous commitment.

With respect to containment operability, the Nuclear Reactor Regulation staff continues to have reasonable assurance that the Control Rod Drive Missile Shield in the Upper Reactor Cavity will perform its intended function. The operability of the Control Rod Drive Missile Shield was previously evaluated by the NRC prior to restart of D. C. Cook, Units 1 and 2, in 2000.

If you have any questions concerning this issue, please contact me at (301) 415-1345 at the earliest opportunity.

Sincerely,

/RA/

John F. Stang, Senior Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

cc: See next page

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