September 26, 2007

Mr. Mano K. Nazar
Senior Vice President and
Chief Nuclear Officer
Indiana Michigan Power Company
Nuclear Generation Group
One Cook Place
Bridgman, MI 49106

SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 - COMPLETION OF REVIEW OF RESPONSE TO SITE-SPECIFIC BACKFIT LETTER RE: DEGRADED VOLTAGE PROTECTION (TAC NO. M4959 AND MD4960)

Dear Mr. Nazar:

By letter dated November 9, 2005 (Agencywide Document Access and Management System (ADAMS) Accession No. ML050680057), the Nuclear Regulatory Commission (NRC) staff imposed a facility-specific backfit on Donald C. Cook Nuclear Plant, Units 1 and 2 (CNP). The letter stated that:

> As described in the enclosed backfit evaluation, the existing degraded voltage protection design during normal operation at CNP does not comply with the provisions of 10 CFR 50.55a(h)(2) because the protection system is not consistent with the facility's licensing basis, including the requirements of CNP technical specifications, and the requirements of applicable Institute of Electrical and Electronic Engineers standards. Therefore, the NRC staff finds that a modification is necessary to bring the facility into compliance with the provisions of its license, the rules and orders of the Commission, and the licensee's written commitments, in accordance with the backfit requirements of 10 CFR 50.109(a)(4)(i). The staff finds that the design must be modified to provide automatic degraded voltage protection during normal operations when the safety buses are supplied from the unit auxiliary transformers.

The NRC staff held a meeting with your staff on May 18, 2006 (see meeting summary at ADAMS Accession No. ML061350112) to discuss the potential fixes. This meeting was followed up by a conference call on September 8, 2006.

By letter dated February 8, 2006 (ADAMS Accession No. ML060530405) CNP agreed to implement modifications in response to the backfit letter, and by letter dated March 30, 2007 (Accession No. ML071000266), provided technical details of the fixes. In the second letter CNP also affirmed the implementation dates of the modifications: the fall 2007 refueling outage for CNP, Unit 2, and the spring 2008 refueling outage for CNP, Unit 1.

The NRC staff has completed its review of the proposed modifications conveyed by your letters cited above. Specifically, you have committed to add automatic protection from a degraded voltage condition during normal operations when the safety buses are supplied from the auxiliary transformers. Your March 30, 2007, letter provided a summary of changes to the degraded

voltage protection components and logic. Based on its review of your proposed implementation, the NRC staff has determined that the proposed plant modifications will achieve compliance with IEEE 279-1968 and IEEE 279-1971. In addition, based on its review of your discussions on the alternating current circuit and administrative controls, the NRC staff also concluded that automatic voltage protection is not necessary for the alternate alternating current circuit. Therefore, the NRC staff determined that your planned implementation of the degraded voltage backfit acceptable since it meets the NRC staff's November 9, 2005, backfit letter.

Please note that implementation of the backfit modifications are subject to future NRC inspections.

Sincerely,

/RA by TMcGinty for/

Catherine Haney, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

cc: See next page

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Catherine Haney, Director
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Office of Nuclear Reactor Regulation

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*By memo of 8/9/07

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