

June 15, 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 - COMMITMENT FOR HYDROGEN IGNITER BACKUP POWER SUPPLY AND CLOSURE PROCESS FOR GENERIC ISSUE 189, "SUSCEPTIBILITY OF ICE CONDENSER AND MARK III CONTAINMENTS TO EARLY FAILURE FROM HYDROGEN COMBUSTION DURING A SEVERE ACCIDENT"

Dear Mr. Nazar:

This letter acknowledges your February 9, 2007, letter committing to changes at the Donald C. Cook Nuclear Plant, Units 1 and 2, that will enhance plant capabilities to mitigate the potential for early containment failure from hydrogen combustion. The proposed changes involve installing an alternate means of actuating the hydrogen igniters for each unit using existing emergency and backup diesel generators.

The Nuclear Regulatory Commission (NRC) staff agrees that the proposed modifications will resolve concerns related to Generic Issue 189 (GI-189), "Susceptibility of Ice Condenser and Mark III Containments to Early Failure from Hydrogen Combustion During a Severe Accident," and provide benefits for certain security scenarios. The NRC staff understands that your commitments and prior actions to establish backup power supplies will enhance the electrical independence of the containment hydrogen igniter system. This action is warranted for pressurized-water reactors with ice condenser containments because many systems that prevent core damage rely on the same power supplies and electrical distribution system as the hydrogen igniters. This enhancement mitigates the potential for early containment failure by allowing control of hydrogen within containment following certain beyond-design-basis events that may progress to core damage and preclude operation of the hydrogen igniters using the normal controls. The NRC staff expects this enhancement will provide hydrogen igniter system electrical independence commensurate with the expected frequency, challenges, and uncertainties associated with these beyond-design-basis events.

Consistent with the guidelines of NRC Management Directive 6.4, "Generic Issues Program," the NRC staff will perform a verification inspection at the Donald C. Cook Nuclear Plant. These inspections will include elements to verify that you establish procedures to provide back-up power to the hydrogen igniters, train appropriate staff in the procedures, and institute appropriate controls on the reliability and availability of necessary equipment. Procedures that allow trained personnel to establish backup power to the igniters within 3 hours are fully

consistent with goals to mitigate potential hydrogen accumulation. The NRC staff understands that existing procedures ensure adequate availability and reliability of the backup power supplies. In addition, NRC licensing project managers may verify the integrity of your commitments over time through established review procedures for your commitment management program.

Verification of your committed actions and those of other affected licensees will provide the basis by which the NRC will close out GI-189. The NRC staff will perform the verification inspections at a time consistent with the implementation time specified in your letter. Accordingly, please keep the NRC staff informed of any changes in the scope of modifications or the implementation date.

Sincerely,

**/RA by J. Lubinski/**

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

Docket Nos. 50-315 and 50-316  
License Nos. DPR-58 and DPR-74

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M. K. Nazar

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Verification of your committed actions and those of other affected licensees will provide the basis by which the NRC will close out GI-189. The NRC staff will perform the verification inspections at a time consistent with the implementation time specified in your letter. Accordingly, please keep the NRC staff informed of any changes in the scope of modifications or the implementation date.

Sincerely,

**/RA by J. Lubinski/**

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

Docket Nos. 50-315 and 50-316  
License Nos. DPR-58 and DPR-74

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**ADAMS Letter: ML071500574**

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