

April 29, 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 (DCCNP-1 & -2) -
PRESSURIZER SURGE, SPRAY, SAFETY, AND RELIEF NOZZLE WELD
SUSCEPTIBILITY TO PRIMARY WATER STRESS CORROSION CRACKING
(TAC NOS. MD4146 AND MD4147)

Dear Mr. Nazar:

This letter acknowledges the receipt of information from Indiana Michigan Power Company pertaining to the pressurizer surge, spray, safety, and relief nozzle and safe end welds at DCCNP-1 & -2.

The discovery, in October 2006, of five circumferential indications in three Alloy 82/182 dissimilar metal (DM) welds on the pressurizer at the Wolf Creek Generating Station (Wolf Creek) raised safety concerns based on the size and location of the indications. At Wolf Creek, three indications were in the pressurizer surge nozzle-to-safe end weld, and two separate indications were in the safety and relief nozzle-to-safe end welds. These findings also indicated that significant concerns might exist with the inspection schedules for addressing the pressurizer weld concerns issued by the industry-sponsored Materials Reliability Program (MRP), in "Primary System Piping Butt Weld Inspection and Evaluation Guideline (MRP-139)."

The Nuclear Regulatory Commission (NRC) is concerned about the pressurizer surge nozzle-to-safe end weld indications, as this is the first time that multiple circumferential primary water stress-corrosion cracking (PWSCC) indications have been identified in a weld. This condition calls into question the degree of safety margin present in past structural integrity evaluations for flawed DM welds susceptible to PWSCC, since multiple stress-corrosion cracking flaws may grow independently and ultimately grow together, significantly reducing the time from flaw initiation to leakage or rupture.

Based on discussions with the NRC staff, licensees of plants susceptible to this condition have committed to enhanced inspection frequency and reactor coolant system leakage monitoring until actions to mitigate the potential of PWSCC in the affected welds have been completed.

In your letter dated January 26, 2007 (Accession No. ML070390047), you stated that the DCCNP-1 & 2 pressurizer surge, spray, safety, and relief nozzle-to-safe end welds containing Alloy 82/182 material have been mitigated through application of full structural weld overlay.

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As a result, your response adequately addresses the concerns that the NRC has at this time regarding PWSCC susceptibility of these welds. If you have any questions, please contact your project manager, Mr. Peter Tam at 301-415-1451.

Sincerely,

/RA/

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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