UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

August 10, 1992

Docket Nos. 50-315
and 50-316

Mr. E. E. Fitzpatrick, Vice President
Indiana Michigan Power Company
c/o American Electric Power Service Corporation
1 Riverside Plaza
Columbus, OH 43216

Dear Mr. Fitzpatrick:

SUBJECT: NRC BULLETIN 88-08, "THERMAL STRESSES IN PIPING CONNECTED TO REACTOR COOLANT SYSTEMS" (TAC NOS. M69618 AND M69619)

The NRC Bulletin 88-08, "Thermal Stresses in Piping Connected to Reactor Coolant Systems," dated June 22, 1988, requested all licensees to (1) review their reactor coolant system (RCS) to identify any connected unisolable piping that could be subjected to temperature distributions which would result in unacceptable thermal stresses; and (2) take action, where such piping is identified, to ensure that the piping will not be subjected to unacceptable thermal stresses. Following the original Bulletin, three supplements were issued which contained no additional reporting requirements. Supplement 1 issued June 24, 1988, provided information about an event at a foreign plant similar to the event described in the original Bulletin. Supplement 2 dated August 4, 1988, emphasized the need for an enhanced ultrasonic examination with the appropriate expertise when performing Action 2 of the Bulletin. Supplement 3, issued April 11, 1989, informed licensees about a related event at a foreign plant with an initiating mechanism significantly different from that which was discussed in the original Bulletin.

By letters dated September 29, 1988, August 8, and November 1, 1989, Indiana Michigan Power Company (IMPC) provided responses to the requirements of the subject Bulletin for the D. C. Cook Nuclear Plant, Units 1 and 2. The responses did not provide adequate assurances that all unisolable portions of piping connected to the RCS would not be subject to temperature distributions which would result in unacceptable thermal stresses. Specifically, the NRC staff was concerned with the pressurizer auxiliary spray piping. The licensee proposed the use of non-destructive examination each refueling outage to detect the presence of cracks.

By letter dated November 1, 1991, the NRC staff informed IMPC this method was unacceptable as the final resolution to Bulletin 88-08 concerns because the fundamental precept of the Bulletin is to prevent the initiation of cracks in piping; inservice inspection is not an acceptable technique identified in the Bulletin for preventing such cracks. In the November 1, 1991 letter, the NRC staff also provided information to IMPC to assess the adequacy of the D. C. Cook Nuclear Plant, Units 1 and 2, with respect to Action 3 of the Bulletin and Supplement 3.

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By letter dated January 31, 1992, IMPC committed to install instrumentation on the pressurizer auxiliary spray piping near appropriate welds and bends to take data on Unit 1, which is scheduled for outage in June 1992, to determine if the pressurizer auxiliary spray line is susceptible to thermal stresses and fatigue cracking. Data will be collected for one fuel cycle. At the end of the cycle, if the data provides indications that such high cycle thermal loads exist in the pipe, IMPC has committed to make modifications in both Units 1 and 2 to be in compliance with Bulletin 88-08.

We have reviewed your January 31, 1992, response and find that the data that will be recorded during only one cycle may not be sufficient to capture the effects of valve leakage, since the absence of valve leakage during this cycle does not translate to no valve leakage during future cycles. Accordingly, we find your commitments to be acceptable subject to the following conditions: (1) the data collection period should be of sufficient duration (greater than one cycle if necessary) such that the data collected captures conditions reflecting leakage from an upstream closed isolation valve through the auxiliary spray line, and (2) this data is used to determine whether the resultant thermal cyclic stresses, together with other concurrent cyclic stresses, will initiate fatigue cracking in the main spray or auxiliary spray line during the life of the plant.

Therefore, based on the commitments made by IMPC, and subject to the above conditions, the NRC staff finds that D. C. Cook Nuclear Plant, Units 1 and 2, will meet the requirements of Bulletin 88-08. Within sixty days of the receipt of this letter please provide a final implementation schedule for all modifications required for Bulletin 88-08. This completes our activity on TAC Nos. M69618 and M69619.

Sincerely,

Original signed by

John F. Stang, Project Manager
Project Directorate III-1
Division of Reactor Projects -III/IV/V
Office of Nuclear Reactor Regulation

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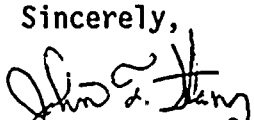

John F. Stang, Project Manager
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