UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 26, 1994

Docket No. 50-263

Mr. Roger O. Anderson, Director
Licensing and Management Issues
Northern States Power Company
414 Nicollet Mall
Minneapolis, Minnesota 55401

Dear Mr. Anderson:

SUBJECT: STAFF EVALUATION OF THE MONTICELLO NUCLEAR GENERATING PLANT INDIVIDUAL PLANT EXAMINATION (IPE) - INTERNAL EVENTS SUBMITTAL (TAC NO. M74435)

The purpose of this letter is to transmit our evaluation of your IPE which you submitted on February 27, 1992, in response to Generic Letter 88-20, "Individual Plant Examination for Severe Accident Vulnerabilities." In addition, Northern States Power Company (NSP) responded to the staff's request for additional information by letter dated February 16, 1993.

Enclosed is the staff evaluation report (Enclosure 1) on the internal events portion of the Monticello IPE submittal. The staff's conclusions are based on a "step 1" review of the IPE submittal and associated information.

The IPE estimated the core damage frequency (CDF) to be 1.9E-05/yr for internal events excluding internal flooding and 2.6E-05/yr with internal flooding. The IPE identified station blackout as the dominant contributor to the overall CDF (46 percent), followed by internal flooding (26 percent), transients with loss of high pressure reactor inventory makeup (13 percent), ATWS (10 percent), and LOCA (5 percent).

You indicated in your submittal that insights derived from your application of IPE Methodology identified events that were of low frequency or had little impact. You also indicated that the flooding analysis used bounding and conservative assumptions and that all flood events required additional random failures for inadequate core cooling to occur, from which you concluded that flood initiators do not contribute significantly to the risk of core damage. Other staff observations are presented in the Summary of the Monticello IPE Submittal on Internal Events (Enclosure 2).

Monticello has a Mark I pressure suppression containment. In general, Mark I containments are susceptible to liner melt-through. Containment failure from liner melt-through was modeled in the containment event trees, but was assigned a zero probability of occurrence. This assignment is based on the assumption that the volume of debris likely to exit the vessel, given core melt and vessel penetration, would be 8.7 cu m. You estimated the total volume of the containment sumps and interconnecting piping, inside and outside the pedestal region, to be 9 cu m (318 cu ft), a volume sufficient to contain the expected debris.

It should be noted, however, that the Boiling Water Reactor Owners Group (BWROG) has been actively engaged in identifying severe accident management strategies for licensees and, in particular, in developing procedural modifications to deal with the liner melt-through challenge to Mark I containments. A formal BWROG Emergency Procedures Guidelines (EPG) package is expected to be available for staff review by December 1994. The staff is following the issue and plans to make recommendations on a course of regulatory action as soon as appropriate alternatives are developed. You will be expected to follow NRC-sanctioned guidelines concerning the issue.

No specifi unresolved safety issues or generic safety issues were proposed for resolution as part of the Monticello IPE submittal. The staff has concluded that NSP has met the intent of Generic Letter 88-20 for Monticello.

Sincerely,

Original Signed By Beth A. Wetzel

Beth A. Wetzel, Acting Project Manager
Project Directorate III-1
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Enclosures:
1. Staff Evaluation Report
2. Monticello IPE Summary Report

cc w/enclosures:
See next page

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