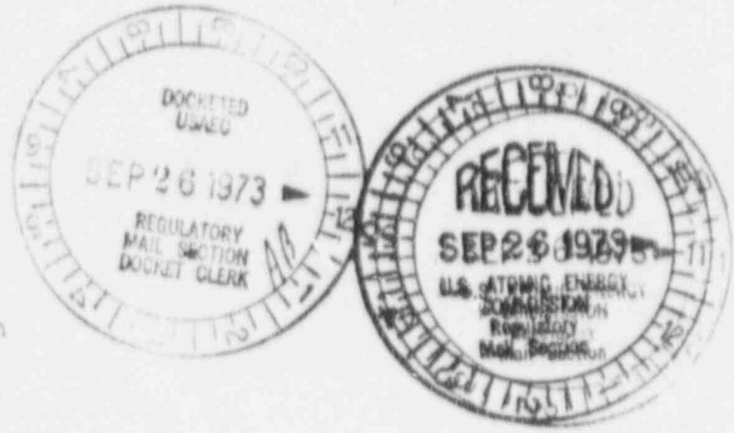
NSP

NORTHERN STATES POWER COMPANY

MINNEAPOLIS, MINNESOTA 55401



September 13, 1973

Mr. J F O'Leary, Director
Directorate of Licensing
Office of Regulation
U S Atomic Energy Commission
Washington, D C 20545

Dear Mr. O'Leary:

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22

Change Request Dated September 13, 1973

Attached are three signed originals and 37 conformed copies of a request for a change of Technical Specifications, Appendix A, of the Provisional Operating License, DPR-22, for the Monticello Nuclear Generating Plant. This change request has been reviewed by the Operations Committee and the Safety Audit Committee.

We request these changes as a result of a reanalysis of pressure transients for the end of cycle fuel exposures. We believe that these proposed changes do not introduce concerns not previously raised or reviewed by the Commission.

Also included in this transmittal are 40 copies of a report prepared by General Electric Company which presents transient analyses in support of the requested change in Technical Specifications. This report is provided to supplement your review. It should be noted, however, that this report is based on a reference exposure threshold of 2400 MWD/STU. This exposure threshold was determined as a refinement of the 2250 MWD/STU figure reported in our June 1, 1973 letter. Concomitant with the preparation of the attached analysis, information was obtained indicating that the assumed relief valve delay time may not be conservative. A new figure of 2000 MWD/STU based on a longer delay in initial valve opening time was reported in an August 1, 1973 letter. Subsequently, in lieu of more refined calculations verifying that figure, conservative estimating techniques have identified an even lower exposure threshold of 1640 MWD/

STU. Rod patterns have been fixed at Monticello, as of September 13, 1973 at a conservative exposure level of 1540 MWD/STU in the manner discussed in our August 21, 1973 letter. This 1640 MWD/STU threshold is currently being used as a basis for operating limitations. The exposure threshold is increased by the change in safety valve set points discussed herein and a reanalysis to determine the revised threshold is currently in preparation. This updated analysis will account for the planned modifications to the relief valves to reduce the delay time and the new safety valve set points, and will be submitted in support of operation to the end of cycle 2. (The reanalysis is expected to justify extension of the limiting exposure threshold to about 2680 MWD/STU.) It should be recognized that plant operations at Monticello are being conducted conservatively in response to new information relating to end-of-cycle transients. Information received subsequent to the attached report has not altered the validity of the report with respect to the bases for changes in the safety valve set points.

A second aspect requiring clarification relates to the safety valve sizing transients and associated safety valve margins. Safety valves were initially sized assuming no credit for scram. After the Code was changed to allow indirect scram, reanalysis indicated that only two safety valves were required. NSP arbitrarily elected that four, of the originally planned twelve, safety valves be retained. At that time, it was considered prudent to retain some of the margin gained through the Code change. However, no attempts were made to take credit for the additional valves since there was no obligiation to provide margins beyond that required by the Code. It should be noted that the reported allowable end of cycle power level of 91% of rated power is based on the relief valve capacity. Calculations to verify sufficient capacity of the four safety valves show extensive margin for a main steamline isolation transient occurring at rated power. Should credit for the safety valves be limited to present requirements, this sizing transient would not be controlling with respect to power level.

Yours very truly,

L. O. Mayer

L O Mayer, PE
Director of Nuclear Support Services

LOM/DWJ/br

cc: J G Keppler
G Charnoff
Minnesota Pollution Control Agency
Attn K Dzugan