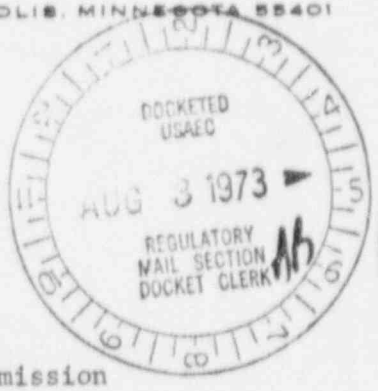
Regulatory File Cy.

PDR

NSP

NORTHERN STATES POWER COMPANY

MINNEAPOLIS, MINNESOTA 55401



August 1, 1973

Mr. J F O'Leary, Director
Directorate of Licensing
United States Atomic Energy Commission
Washington, D C 20545

Dear Mr. O'Leary:

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

Observed Relief Valve Opening Times Different
Than Those Assumed in the Transient Analysis

General Electric has informed us of results of Target Rock relief valve performance tests which show a delay in the initial opening time of about 0.8 seconds rather than the 0.2 seconds reported in the Monticello FSAR. While we have no test data capable of showing whether this time delay is characteristic of the Monticello relief valves, it is inferred that a similar delay may exist. Since a delay in relief valve opening results in an increase in peak vessel pressure during a transient, we are reporting this in accordance with the provisions of Section 6.7.B.2.a of Appendix A, Technical Specifications, of the Provisional Operating License DPR-22. Transient reanalyses using the longer time show that the most extreme transients will not exceed design conditions under our projected operating plans.

Our February 13, 1973 letter to J F O'Leary transmitted a transient reanalysis for the end of cycle 1 based on the exposure-affected scram reactivity curve. Based on a conservative extrapolation of existing calculations, our June 1, 1973 letter stated that the February 13, 1973 analyses presented the most limiting conditions expected during the first 2250 MWD/STU exposure increment of cycle 2. A similar conservative calculation, based on a 0.8 seconds initial relief valve opening time, shows the February 13, 1973 analyses to be governing for the initial 2000 MWD/T increment of cycle 2. Calculations will be done while approaching this exposure threshold, since the ability to home in accurately on the threshold value depends on the existing exposure distribution. We do not expect to reach the threshold before early October, 1973.

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The effects of the change in relief valve response do not cause allowable limits or guidelines to be exceeded during the initial 2000 MWD/T exposure increment of cycle 2. Conservative calculations predict that after 2000 MWD/T, the peak vessel pressure following a turbine trip without bypass will fall within the General Electric self-imposed 25 psi margin between peak vessel pressure and the lowest safety valve set point. While the design of the plant allows for the opening of a safety valve, this is an operational inconvenience relative to subsequent restart to be avoided. For this reason, beyond 2000 MWD/T we will impose operating limitations as discussed in our July 12, 1973 Cycle 2 Startup Report unless acceptable modifications are previously implemented.

The delay in the initial relief valve opening time has been determined to be the result of steam condensation in the area above the main operating piston which slows the action of the valve. A relief valve modification has been tested and is currently undergoing additional performance testing and evaluation. We are contemplating the implementation of such a modification to shorten the relief valve initiation time as well as plant modifications to provide other long term relief of transient limitations caused by the changing scram reactivity curve. Status of such plans will be discussed along with an analysis of operation beyond 2000 MWD/T in response to the July 2, 1973 letter from Mr. D J Skovholt.

Yours very truly,

L. O. Mayer

L O Mayer, PE
Director of Nuclear Support Services

LOM/MHV/br

cc: B H Grier
G Charnoff
Minnesota Pollution Control Agency
Attn. K Dzugan