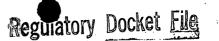
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#### NORTHERN STATES POWER COMPANY

MINNEAPOLIS, MINNESOTA 55401

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May 7, 1976

Mr D L Ziemann, Chief Operating Reactors Branch #2 Division of Operating Reactors U S Nuclear Regulatory Commission Washington, DC 20555

Dear Mr Ziemann:

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

# Feedwater Nozzle Inspection

This letter is in response to your April 6, 1976 request for information on feedwater nozzle inspections. The requests are repeated below with our responses:

## NRC Request # 1

Provide date of next planned inspection.

### Response:

An in-service inspection program including the feedwater nozzle internal surfaces using an underwater television camera is planned for the next refueling outage which is currently scheduled for the Fall of 1977.

### NRC Request # 2

Provide the number of startup/shutdown cycles to the date of inspection already accomplished, and the number of cycles since such inspection. Provide the estimated number of cycles at the next plant inspection date. A startup/shutdown cycle is defined as a power increase from zero and subsequent return to zero.

#### Response:

Two cold startup/shutdown cycles have occurred in addition to the 95 cycles reported in the first ten Monticello Semi-Annual Operating Reports for a total of 97 cycles to date. Two of these occurred since

D L Ziemann

May 7, 1976

the November, 1975 feedwater nozzle inspection; 95 preceeded the inspection. Based on past experience, we estimate three additional cycles between now and the subsequent inspection for accumulated total of 100 cycles at the time of the next inspection.

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## NRC Request # 3

Describe actions taken or planned to minimize cold, intermittent feedwater flow to the reactor pressure vessel. Include changes in operating procedures and any redesign of feedwater heaters, pumps, flow control valves, piping, etc.

#### Response:

Three changes have been made which minimize cold, intermittent feedwater flow to the reactor vessel. First, system improvements have been made which improve feedwater flow control and reactor water level control during transient and low power operation. Such improvements include the installation of the lead-lag compensation network in the three element controller (feedwater flow/steam flow/reactor vessel level) and the addition of an automatic controller on the feedwater low flow regulating valve as discussed in Monticello Semi-Annual Operating Report Numbers 6 and 7. Second, the original feedwater spargers have been replaced with a new design having an interference fit with the vessel feedwater nozzle so as to minimize cold feedwater flow over the nozzle blend radius. Third, plant operation is much more stable at this time in history, reducing the number of cold startup/shutdown cycles drastically. (In the past two years, there have been eight cold startup/shutdown cycles, including three refueling outages, for an average of  $2\frac{1}{2}$  unplanned cycles per year compared to 20 per year for the preceeding years.)

## NRC Request # 4

Describe the reactor pressure vessel pressure-temperature limits for operating conditions and especially for the inservice hydrostatic and leak tests.

#### Response:

The reactor vessel temperature-pressure limitations are found in Monticello Technical Specification 3.6.B.

Yours very truly,

L O Mayer, PE Manager, Nuclear Support Services

# LOM/deb

cc: J G Keppler G Charnoff MPCA--Attn: J W Ferman