

CONTROL NO: 50 87

FILE: MSC

DESCRIPTION:
Ltr re their 4-15-74 ltr, furnishing addl info
concerning cracked studs on recirculation
pumps.....

PLANT NAME: Monticello

ENCLOSURES:

ACKNOWLEDGED
DO NOT REMOVE

FOR ACTION/INFORMATION

6-7-74 GC

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 ✓ 16 - CYS ACRS ~~XXXXXX~~ SENT TO LIC. ASST. NEWMARK/BLUME/AGBABIAN
 6-7-74 DIGGS 1-GERALD ULRIKSON...ORNL
 1-B & M SWINEBROAD, Rm E-201 GT

Regulatory Docket File

NSP

NORTHERN STATES POWER COMPANY

Minneapolis, Minnesota 55401

May 31, 1974

Mr. J. F. O'Leary, Director
Directorate of Licensing
Office of Regulation
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

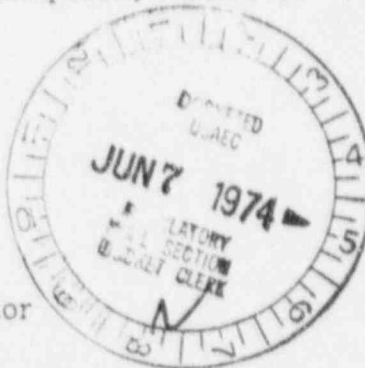
Additional Information Concerning Cracked Studs on Recirculation Pumps

In our April 15, 1974 letter it was reported that investigation into the cause of the cracked recirculation pump stuffing box holddown cover studs and possible corrective actions had not been completed. This letter reports the resolution of the problem.

Metallurgical examination revealed that the major factor contributing to the stud failure was that the studs were improperly heat treated causing them to be susceptible to stress corrosion cracking. The stress corrosion cracking mechanism was accelerated by a concentration cell effect of an elongation pin cavity and, possibly, by the presence of fluoride containing O-rings in the pump gland seal assembly.

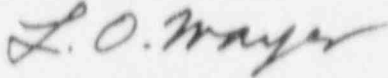
To prevent recurrence, the following steps were taken:

- a. The elongation pin cavity of the spare studs used in No. 12 Recirculation Pump was seal welded to eliminate the possibility of the cavity acting as a corrosion concentration cell.
- b. New studs used in No. 11 Recirculation Pump were purchased without the elongation pin cavity.
- c. Hardness tests were performed on the newly purchased studs to verify that they had been properly heat treated.
- d. Previously installed O-rings were replaced with halogen free 2-na-N O-rings.



The recirculation pump main studs were ultrasonically examined and found satisfactory.

Very truly yours,

A handwritten signature in cursive script, appearing to read "L. O. Mayer".

L. O. Mayer, PE
Director of Nuclear Support Services

LOM/mm

cc: J G Keppler
G Charnoff
Minnesota Pollution Control Agency
Attn: E A Pryzina