

# NSP

NORTHERN STATES POWER COMPANY

MINNEAPOLIS, MINNESOTA 55401

September 6, 1974

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

Following submittal of our May 31, 1974 letter, additional information became available concerning reactor recirculation pump stuffing box holddown cover studs. This information was subsequently reviewed by Regulatory Operations inspectors during an inspection conducted on July 16-18, 1974. At that time it was agreed to submit the information to your office.

The following information is submitted in accordance with that agreement:

1. Abnormal sensitivity to stress corrosion can result if the stud material, ASTM A 193, Grade B6 Type 410 martensitic stainless steel, is improperly heat treated or tempered. Characteristic data from material suppliers indicate that the hardness for hardened and tempered (1100°F) 410 martensitic stainless steel should range from Rockwell C20 to C28. The hardness readings for the failed studs were in the range of Rockwell C31 to C32.
2. Two sets of stuffing box holddown cover studs have been ordered from the manufacturer having the following specifications:
  - a. Maximum hardness Rockwell C25.
  - b. Rolled threads.
  - c. 110 Kpsi minimum tensile strength.
  - d. No elongation hole.
  - e. Material heat number to be indicated on the end of each stud.

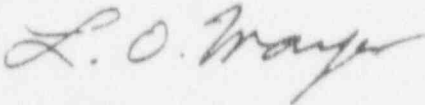
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3. Hardness value of each stud will be verified by NSP upon receipt.
4. It is planned to replace the existing studs during the Fall 1975 refueling outage. It is also planned at that time to subject the existing studs to non-destructive examination to detect any deterioration.

Yours very truly,



L O Mayer, PE  
Director of Nuclear Support Services

LOM/kn

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

AEC DISTRIBUTION FOR PART 50 DOCKET MATERIAL  
(TEMPORARY FORM)

CONTROL NO: 9313

FILE:

<b>FROM:</b> Northern States Power Co Minneapolis, Minn 55401 L O Mayer		<b>DATE OF DOC</b> 9-6-74	<b>DATE REC'D</b> 9-10-74	<b>LTR</b> XX	<b>IWX</b>	<b>RPT</b>	<b>OTHER</b>
<b>TO:</b> Mr. O'Leary		<b>ORIG</b> 1 signed	<b>CC</b>	<b>OTHER</b>	<b>SENT AEC PDR XXXX</b> <b>SENT LOCAL PDR XXX</b>		
<b>CLASS</b>	<b>UNCLASS</b> XXXXXX	<b>PROP INFO</b>	<b>INPUT</b>	<b>NO CYS REC'D</b> 1	<b>DOCKET NO:</b> 50-263		

**DESCRIPTION:**  
Ltr re Abnormal Occurrence submitted on 5-31-74 re additional information concerning cracked studs on recirculation pumps.

**ENCLOSURES:**

**ACKNOWLEDGED**

**DO NOT REMOVE**

**PLANT NAME:** Monticello

FOR ACTION/INFORMATION 9-10-74 enf

- |                      |                         |                          |                     |
|----------------------|-------------------------|--------------------------|---------------------|
| BUTLER (L)<br>W/ CYS | SCHWENCER (L)<br>W/ CYS | ✓ZIEMANN (L)<br>W/4 CYS  | REGAN (E)<br>W/ CYS |
| CLARK (L)<br>W/ CYS  | STOLZ (L)<br>W/ CYS     | DICKER (E)<br>W/ CYS     | LEAR<br>W/ CYS      |
| FARE (L)<br>W/ CYS   | VASCALLO (L)<br>W/ CYS  | KNIGHTON (E)<br>W/ CYS   | W/ CYS              |
| KNIEL (L)<br>W/ CYS  | PURPLE (L)<br>W/ CYS    | YOUNGBLOOD (E)<br>W/ CYS | W/ CYS              |

INTERNAL DISTRIBUTION

- |                    |                    |                |                 |                  |
|--------------------|--------------------|----------------|-----------------|------------------|
| <u>REG FILE</u>    | <u>TECH REVIEW</u> | <u>DENTON</u>  | <u>LIC ASST</u> | <u>A/T IND</u>   |
| AEC PDR            | ✓SCHROEDER         | GRIMES         | ✓DIGGS (L)      | BRAITMAN         |
| OGC                | ✓MACCARY           | GAMMILL        | GEARIN (L)      | SALTZMAN         |
| MUNTZING/STAFF     | ✓KNIGHT            | KASTNER        | GOULBOURNE (L)  | B. HURT          |
| CASE               | ✓PAWLICKI          | BALLARD        | KREUTZER (E)    |                  |
| GIAMBUSSO          | ✓SHAO              | SPANGLER       | LEE (L)         | <u>PLANS</u>     |
| BOYD               | ✓STELLO            |                | MAIGRET (L)     | MCDONALD         |
| MOORE (L)(LWR-2)   | ✓HOUSTON           | <u>ENVIRO</u>  | REED (E)        | CHAPMAN          |
| DEYOUNG (L)(LWR-1) | ✓NOVAK             | MULLER         | SERVICE (L)     | DUBE w/input     |
| SKOVHOLT (L)       | ✓ROSS              | DICKER         | SHEPPARD (L)    | E. COUPE         |
| GOLLER (L)         | ✓IPPOLITO          | KNIGHTON       | SLATER (E)      |                  |
| P. COLLINS         | ✓TEDESCO           | YOUNGBLOOD     | SMITH (L)       | ✓D. THOMPSON (E) |
| DENISE             | ✓LONG              | REGAN          | TEETS (L)       | ✓KLECKER         |
| <u>REG OPR</u>     | ✓LAINAS            | PROJECT MGR    | WILLIAMS (E)    | ✓EISENHUT        |
| FILE & REGION (2)  | ✓BENAROYA          |                | WILSON (L)      |                  |
| MORRIS             | ✓VOLLNER           | <u>HARLESS</u> |                 |                  |
| STEELE             |                    |                |                 |                  |

EXTERNAL DISTRIBUTION

- |                                  |                               |  |                       |
|----------------------------------|-------------------------------|--|-----------------------|
| 1 - LOCAL PDR Minneapolis, MN    |                               |  |                       |
| 1 - TIC (ASBURNARY)              | (1)(2)(10)-NATIONAL LABS      |  | 1-PDR-SAMPLING        |
| 1 - NSIC (BUCHANAN)              | 1-ASLBP (E/W Bldg, Rm 529)    |  | 1-BROOKHAVEN NAT LAB  |
| 1 - ASLB                         | 1-W. PENNINGTON, Rm E-201 GT  |  | 1-G. ULRICKSON, ORNL  |
| 1 - Newton Anderson              | 1-B&M SWINEBROAD, Rm E-201 GT |  | 1-AGMED (RUTH SUSOMA) |
| 5 - ACRS SENT TO LIC ASST Office |                               |  |                       |