

AEC DISTRIBUTION FOR PART 50 DOCKET MATERIAL
(TEMPORARY FORM)

CONTROL NO: 8564

FILE:

| | | | | | | | |
|--|-----------------------|-------------------------------|------------------------------|---------------------------|--|------------|--------------|
| FROM: Northern States Power Co Minneapolis, MN L. O. Mayer | | DATE OF DOC 8-16-74 | DATE REC'D 8-19-74 | LTR X | TWX | RPT | OTHER |
| TO: JF O'Leary | | ORIG | CC 40 | OTHER | SENT AEC PDR XXX SENT LOCAL PDR XXX | | |
| CLASS | UNCLASS XXX | PROP INFO | INPUT | NO CYS REC'D 40 | DOCKET NO: 50-263 | | |

DESCRIPTION:

Ltr furn info re abnormal occurrence rpt # AO 263/74-22 of 8-6-74 re failure of the HPCI Turbine Stop Valve to open on 8-6-74... w/att figs....

PLANT NAME: MONTICELLO

ENCLOSURES:

**DO NOT REMOVE
ACKNOWLEDGED**

FOR ACTION/INFORMATION 8-19-74 GMC

| | | | |
|--------------------------------|------------------------------------|---|---------------------|
| BUTLER (L) W/ CYS | SCHWENCER (L) W/ CYS | <input checked="" type="checkbox"/> ZIEMANN (L) W/ 7 CYS | REGAN (E) W/ CYS |
| CLARK (L) W/ CYS | STOLZ (L) W/ CYS | DICKER (E) W/ CYS | LEAR W/ CYS |
| FAIR (L) W/ CYS | VACCALLO (L) W/ CYS | KIGHTON (E) W/ CYS | |
| KNIEL (L) W/ CYS | PURPLE (L) W/ CYS | YOUNGBLOOD (E) W/ CYS | W/ CYS |

INTERNAL DISTRIBUTION

| | | | | |
|--|---|----------------|---|---|
| <input checked="" type="checkbox"/> <u>REG FILE</u> | <u>TECH REVIEW</u> | DENTON | <u>LIC ASST</u> | <u>A/T IND</u> |
| <input checked="" type="checkbox"/> AEC PDR | <input checked="" type="checkbox"/> HENDRIE | GRIMES | <input checked="" type="checkbox"/> DIGGS (L) | BRAITMAN |
| <input checked="" type="checkbox"/> CGC | <input checked="" type="checkbox"/> SCHROEDER | GAMMILL | GEARIN (L) | SALTZMAN |
| <input checked="" type="checkbox"/> MUNTZING/STAFF | <input checked="" type="checkbox"/> MACCARY | KASTNER | GOULBOURNE (L) | B. HURT |
| <input checked="" type="checkbox"/> CASE | <input checked="" type="checkbox"/> KNIGHT | BALLARD | KREUTZER (E) | |
| GIAMBUSSO | <input checked="" type="checkbox"/> PAWLICKI | SPANGLER | LEE (L) | <u>PLANS</u> |
| BOYD | <input checked="" type="checkbox"/> SHAO | | MAIGRET (L) | MCDONALD |
| MOORE (L)(LWR-2) | <input checked="" type="checkbox"/> STELLO | <u>ENVIRO</u> | REED (E) | CHAPMAN |
| DEYOUNG (L)(LWR-1) | <input checked="" type="checkbox"/> HOUSTON | MULLER | SERVICE (L) | DUBE w/input |
| SKOVHOLT (L) | <input checked="" type="checkbox"/> NOVAK | DICKER | SHEPPARD (L) | E. COUPE |
| <input checked="" type="checkbox"/> GOLLER (L) | <input checked="" type="checkbox"/> ROSS | KNIGHTON | SLATER (E) | <input checked="" type="checkbox"/> D. THOMPSON (2) |
| P. COLLINS | <input checked="" type="checkbox"/> IPPOLITO | YOUNGBLOOD | SMITH (L) | <input checked="" type="checkbox"/> KLECKER |
| DENISE | <input checked="" type="checkbox"/> TEDESCO | REGAN | TEETS (L) | <input checked="" type="checkbox"/> EISENHUT |
| <input checked="" type="checkbox"/> <u>REG OPR</u> | <input checked="" type="checkbox"/> LONG | PROJECT MGR | WILLIAMS (E) | |
| <input checked="" type="checkbox"/> <u>FILE & REGION (3)</u> | <input checked="" type="checkbox"/> LAINAS | | WILSON (L) | |
| <input checked="" type="checkbox"/> MORRIS | <input checked="" type="checkbox"/> BENAROYA | <u>HARLESS</u> | | |
| <input checked="" type="checkbox"/> STEELE | <input checked="" type="checkbox"/> VOLLMER | | | |

EXTERNAL DISTRIBUTION

| | | |
|---|-------------------------------|---------------------------------------|
| <input checked="" type="checkbox"/> 1 - LOCAL PDR MINNEAPOLIS, MN | (1)(2)(10)-NATIONAL LABS | 1-PDR-SAN/LA/NY |
| <input checked="" type="checkbox"/> 1 - TIC (ABERNATHY) | 1-ASLBP(E/W Bldg, Rm 529) | 1-BROOKHAVEN NAT LAB |
| <input checked="" type="checkbox"/> 1 - NSIC (BUCHANAN) | 1-W. PENNINGTON, Rm E-201 GT | 1-G. ULRIKSON, ORNL |
| 1 - ASLB | 1-B&M SWINEBROAD, Rm E-201 GT | 1-AGMED (RUTH GUSSMAN) Rm B-127-GT |
| <input checked="" type="checkbox"/> 1 - P. R. DAVIS | 1-CONSULTANTS | 1-RD. MUELLER, Rm F-300 GT |
| <input checked="" type="checkbox"/> 5 - ACRS SENT TO LIC ASST DIGGS 8-19-74 | NEWMARK/BLUME/AGRABIAN | |

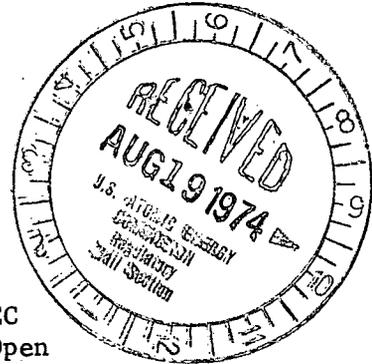
NSP

NORTHERN STATES POWER COMPANY

MINNEAPOLIS, MINNESOTA 55401

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

50-263



ABNORMAL OCCURRENCE REPORT TO THE AEC
Failure of HPCI Turbine Stop Valve to Open

1. Report Number: AO 263/74-22
- 2a. Report Date: August 16, 1974
- 2b. Occurrence Date: August 6, 1974
3. Facility: Monticello Nuclear Generating Plant
Monticello, Minnesota 55362
4. Identification of Occurrence:

REGULATORY DOCKET FILE COPY

This report concerns the failure of the HPCI Turbine Stop Valve to open on August 6, 1974.

5. Conditions Prior to the Occurrence:

Steady State Power - The plant was operating at 83.9% rated power.

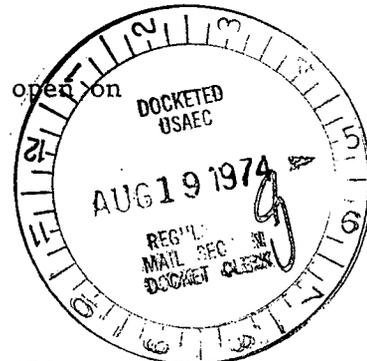
6. Description of Occurrence:

At 2300, August 6, 1974, during the daily surveillance test of the HPCI Auxiliary Oil Pump, the HPCI Turbine Stop Valve was observed to partially open and then close. After repeated attempts the valve functioned normally.

7. Designation of Apparent Cause of Occurrence:

Component Failure - Because of the intermittent nature of the problem it was not possible to determine a definite cause. However, it is postulated that the turbine overspeed trip reset spring (see Figure One) relaxed so that slight pressure surges in the oil system were sufficient to lift the trip piston and vent control oil pressure. It is believed that air trapped in the oil system contributed to propagation of pressure surges into the overspeed trip mechanism. The above conclusions were based on the following considerations:

1. An inspection of the oil system (including the overspeed trip mechanism) revealed that internal surfaces and orifices did not contain significant deposits of dirt and scale. As a preventive measure, the control oil system was flushed. During subsequent testing the



8564

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stop valve failed to open on two occasions. It is therefore unlikely that deposits of dirt caused the initial failure of the stop valve to open.

2. Inspection revealed that the condition of the pilot valve (see Figure Two) plug, seat, piston rings and cylinder surface was satisfactory. The possibility of a defective pilot valve was therefore ruled out.
3. Discussions with a representative of the General Electric Company revealed that a similar HPCI Stop Valve failure had occurred at an overseas BWR facility. The cause of that failure was attributed to a relaxed trip reset spring and trapped air in the oil system.

8. Analysis of Occurrence:

Although failure of the stop valve to open caused the HPCI system to become inoperable, operability of LPCI, RCIS and Core Spray was demonstrated as required by the Technical Specifications.

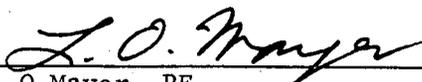
9. Corrective Action:

The tension of the overspeed trip piston spring was increased and the oil system was vented. Leaking pipe fittings were located and tightened. Until it is determined that the problem has been satisfactorily resolved, surveillance of the auxiliary oil pump will be performed at times when operation of the stop valve and associated oil system controls can be closely observed.

It is planned to replace or retension the trip reset spring on a regular basis in the future.

10. Failure Data:

The failure of the HPCI Turbine Stop Valve to open is the first such occurrence at the Monticello Nuclear Generating Plant. The stop valve is a 10-inch Schutte and Koerting, M67 05774-V, Serial N67438. The overspeed trip mechanism is manufactured by the Terry Steam Turbine Company.



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

attachments

| PARTS LIST | | | | | |
|------------|---------------------|-----|--------------------|-----|-----------------------|
| No. | PART | No. | PART | No. | PART |
| 1 | FLAT SETSCREW | 16 | STUD | 31 | BENT PIPE |
| 2 | SOCKET PIPE PLUG | 17 | HEX NUT | 32 | HEX NUT |
| 3 | HOLLOW LOCK SCREW | 18 | RELAY VALVE PISTON | 33 | HEX NUT |
| 4 | STRAINER BASKET | 19 | RELAY VALVE BODY | 34 | CAPSCREW |
| 5 | BODY | 20 | PIPE | 35 | HEX NUT |
| 6 | NIPPLE | 21 | FLANGE | 36 | SPLIT COUPLING |
| 7 | NIPPLE | 22 | COMPR SPRING | 37 | YOKE |
| 8 | STUD | 23 | PISTON RING | 38 | LEAK-OFF BUSHING |
| 9 | HEX NUT | 24 | RELAY VALVE COVER | 39 | STUD |
| 10 | BOTTOM STUFFING BOX | 25 | CAPSCREW | 40 | HEX NUT |
| 11 | SWITCH | 26 | FLANGE | 41 | DISTANCE WASHER |
| 12 | SWITCH BRACKET | 27 | PIPE | 42 | NIPPLE |
| 13 | FLANGE | 28 | NEEDLE VALVE | 43 | BENT NIPPLE |
| 14 | PIPE | 29 | PIPE | 44 | FLEXITALLIC GASKET |
| 15 | HYDR. CYLINDER | 30 | UNION | 45 | PILOT VALVE WITH STEM |
| | | | | 46 | SEAT |
| | | | | 47 | DISC |
| | | | | 48 | DISC FLANGE |
| | | | | 49 | SOCKET HD CAPSCHEW |
| | | | | 50 | FLEXITALLIC GASKET |
| | | | | 51 | STLD |
| | | | | 52 | HEX NUT |
| | | | | 53 | COVER WITH CYLINDER |
| | | | | 54 | ADJUSTING ROD |
| | | | | 55 | DISC |
| | | | | 56 | LOCK NUT |
| | | | | 57 | COMPR SPRING |
| | | | | 58 | SPRING CASE |
| | | | | 59 | CAP |

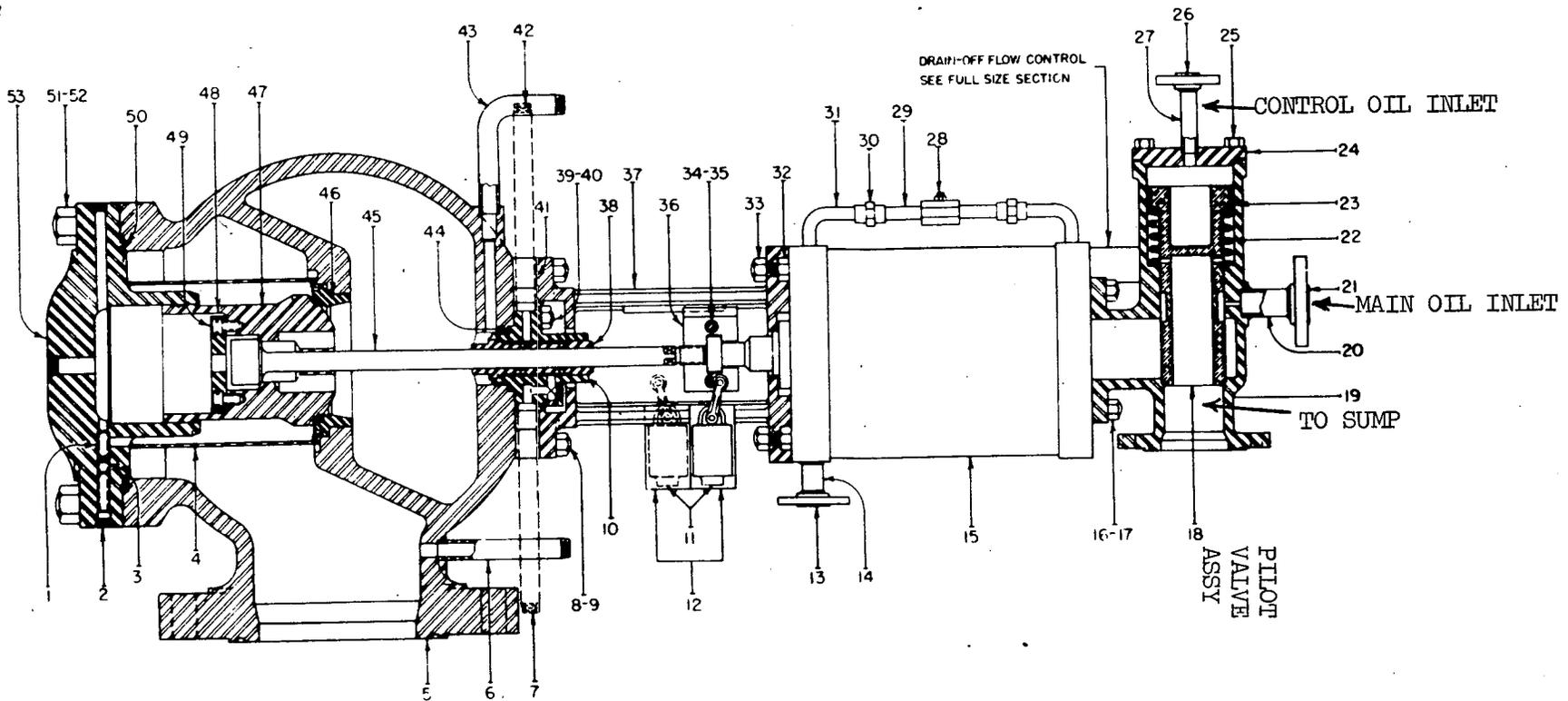


FIGURE 2. HPCI TURBINE STOP VALVE ASSEMBLY.

FIGURE 1. OVER-SPEED TRIP MECHANISM

