FROM:
Northern States Power Company
Minneapolis, Minn. 55401
R.W. Bunsenson, Jr.

DATE OF DOCUMENT	DATE RECEIVED	NO.:
Nov. 23, 1971	Nov. 26, 1971	1

LTR.	MEMO:	REPORT:	OTHER:
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TO:
Dr. Peter A. Morris

ORIG.: 1 signed CC: OTHER:

ACTION NECESSARY	☐	CONCURRENCE	☐	DATE ANSWERED:
NO ACTION NECESSARY	☐	COMMENT	☐	BY:

CLASSIF: U

POST OFFICE

REG. NO:

FILE CODE: 50-263 Grised

DESCRIPTION: (Must Be Unclassified)
Ltr reporting problem on Nov. 11 & 12 1971 involving three of the sixteen sensors were found to be of high friction on their mechanisms....

ENCLOSURES:

REMARKS:

REFERRED TO	DATE	RECEIVED BY	DATE
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U.S. ATOMIC ENERGY COMMISSION

MAIL CONTROL FORM FORM AEC-326S (6-60)

☆ U.S. GOVERNMENT PRINTING OFFICE: 1970-406-979

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NORTHERN STATES POWER COMPANY
Minneapolis, Minnesota 55401

November 23, 1971

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RECEIVED NOV 26 1971 U.S. ATOMIC ENERGY COMMISSION Regulatory Mail Section

Dr. Peter A. Morris
Division of Reactor Licensing
United States Atomic Energy Commission
Washington D.C. 20545

Dear Dr. Morris:

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

Main Steam Line High Flow Instrument Problems

A condition has occurred recently at the Monticello Nuclear Generating Plant which we interpret to be reportable in accordance with Section 6.6.B of the Technical Specifications. The Region III Compliance office has been notified of this occurrence.

On November 11 and 12, 1971, while performing a regularly scheduled surveillance test on the steam line high flow isolation sensors, three of the sixteen sensors were found to exhibit signs of high friction or binding in their mechanisms. Another sensor was found to exhibit a non-repeatable trip setting. The four defective instruments were immediately replaced, the remaining twelve instruments were replaced on November 13, 1971. These instruments had been in service since September 1, 1971, and were used to replace those originally installed. The original instruments had a range of 0-200 psid, and were replaced because the previously reported steam flow measurement problems caused the high flow trip setpoint to be a lower value than expected (about 15% of the original instrument range). The new instruments had a range of 0-70 psid, and used a snap action switch instead of a mercury bulb. The snap action switch made the instrument less susceptible to tripping when the instrument rack was bumped. The instruments were found to trip as follows:

Instrument No.	As Found Setting, % of Rated Flow
116B	109-127%
117C	137%
117D	137%
118C	123%

Instruments 117C and 117D monitor "B" steam line, instrument 116B monitors "A" steamline, and instrument 118C monitors "C" steam line. The isolation logic for steam line high flow is arranged in a manner that the remaining instruments would have caused closure of the MSIV's at 113% flow.

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A defective switch has been returned to the factory for inspection. The cause of the increased friction found in three of the switches has been identified as a contamination of the jewel bearing in the torque tube assembly. The trip setting of instrument 116B was found to be non-repeatable. The cause of this problem appears to be in the snap-action switch.

Presently, the original instruments are in service. During thirteen months of service there have been no failures of these or similar instruments. The manufacturer has stated that contamination of the jewel bearings results in early failures as experienced. This problem remains unique to the sixteen instruments installed on September 1, 1971.

The investigation of these problems is not complete. A follow-up report will be prepared when the investigation is complete. Any additional information will be made available to the Region III Compliance Inspector as soon as possible.

Yours very truly,

R.O. Duncanson, Jr., P.E.
Manager of Power Production
Chairman-Monticello Safety Audit Committee

ROD/GHJ/caf