

NSP

Regulatory

File 92

NORTHERN STATES POWER COMPANY

MINNEAPOLIS, MINN. 55401

May 25, 1972

Mr. A Giambusso
Deputy Director for Reactor Projects
Directorate of Licensing
United States Atomic Energy Commission
Washington, D C 20545

Dear Mr. Giambusso

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22
Reporting of Low APRM Gain Setting

A condition occurred at the Monticello Nuclear Generating Plant recently which we are reporting to your office in accordance with provisions of Section 6.6.B.3 of Appendix A, Technical Specifications, of the Provisional Operating License DPR-22. The Region III Compliance Office has been notified of the occurrence.

At 0840 on May 14, 1972 during a startup of the Monticello reactor, the reactor was maintained at equilibrium conditions to perform the heat balance which indicated core thermal power to be 50% of rated. The APRM channels were adjusted accordingly. The power level was later increased to about 70%. At 0840 the following morning another heat balance revealed that the core thermal power was 68% of rated. The average of the six APRM channels was found to be 4% below this value. However, the detectors indicating the highest values in each of the two reactor protection channels were 2% and 3% below the power level indicated by the heat balance. The APRM channels were immediately calibrated and procedural steps taken to prevent a similar occurrence.

With the core flow conditions which existed at 0840 on May 15, 1972 the safety limit required by Technical Specification 2.1.A was 99% of rated reactor thermal power; the limiting safety system setting required by Specification 2.3.A.1 was 90% of rated average neutron flux. For APRM gain and core flow conditions which existed at that time, the effective safety system setting was 94%; therefore, the effective trip setting remained sufficiently below the safety limit.

Each APRM system averages the input signals from 24 incore detectors to represent core thermal power. Changes in the core power shape during reactor startups due to xenon transients and extensive changes in the control rod pattern tend to decalibrate the APRM channels. During the 12 hours between the referenced heat balances (and the accompanying APRM calibrations) the power tended to shift away from locations where incore detectors are located. During previous startups the statistical nature of local power changes was such that some channels increased while others decreased. The decalibration of all channels in one direction, and in the magnitude observed in the recent startup, is believed to represent an extreme statistical condition.

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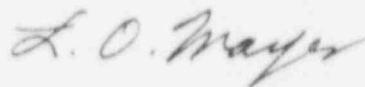
Mr. A Giambusso

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Additional surveillance procedures have been initiated to prevent a similar occurrence. An Abnormal Occurrence Report will be available at the site for the Compliance Inspectors.

Yours very truly,

A handwritten signature in cursive script, reading "L. O. Mayer".

L O Mayer, P.E.
Director-Nuclear Support Services

LOM/MHV/br

cc: B H Grier

AEC DISTRIBUTION FOR PART 50 DOCKET MATERIAL
(TEMPORARY FORM)

CONTROL NO: 2898

FROM: Northern States Power Company Minneapolis, Minn. 55401 L.O. Mayer	DATE OF DOC: 5-25-72	DATE REC'D 5-30-72	LTR X	MEMO	RPT	OTHER
TO: Mr. A. Giambusso	ORIG 1	CC	OTHER	SENT AEC PDR ✓ SENT LOCAL PDR ✓		
CLASS: <u>U</u> PROP INFO	INPUT	NO CYS REC'D 1	DOCKET NO: 50-263			

DESCRIPTION: Lt r rpt on 5-14-72 of
a condition involving low APRM Gain
Setting at Monticello Plant.....

ENCLOSURES:

**DO NOT REMOVE
ACKNOWLEDGED**

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