

HAZARDS ANALYSIS BY THE RESEARCH AND POWER REACTOR SAFETY BRANCH

DIVISION OF LICENSING AND REGULATION

IN THE MATTER OF

NORTHERN STATES POWER COMPANY

PROPOSED CHANGE NO. 1

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Introduction

The Northern States Power Company has applied for a provisional operating license to operate the Pathfinder Atomic Power Plant. The final preoperational inspection by the Division of Compliance, reported in its TWX dated March 10, 1964, discloses that the operational range of the stack gas monitor and the maximum rate of change of recirculation flow rate are at variance with the proposed Technical Specifications.

Evaluation

The indicator of the stack gas monitor system is graduated over a range of five decades. Accordingly, this range was included in the Technical Specifications as an operational requirement on this system. However, as a result of the preoperational test of this system it was determined that the instrument is sensitive over a range of only four decades. In our opinion, an operational range of four decades is sufficient and the Technical Specifications should be amended to reflect the actual range of this instrument.

The maximum rate of change of recirculation flow rate allowed by the Technical Specifications is 455 gpm/second. The preoperational tests indicate that this limit is exceeded during pump startup. The recirculation flow rate limits reactivity changes associated with operation of the butterfly valves. Since the butterfly valves will not be operated at power levels up to 1 Mw(t), the limit can be safely exceeded during pump startup for the operations authorized by the present license. The motor operator on the valves will be modified to reduce the flow change below the limit before the plant is operated above 1 Mw(t).

Technical Specifications

In view of the above, we recommend that the Technical Specifications of License No. DPR-11 be changed as follows:

1. The range of the stack gas monitor, specified as 5 decades in Table 7, page 6-25 of the Technical Specifications is changed to "4 decades".
2. An asterisk is added after the third sentence of Section 4.2.1.2, page 4-4, and a footnote is added at the bottom of this page as follows: "This value may be exceeded during pump startup when the reactor is operating at 1 Mw(t) or below".

Conclusion

We believe that the above changes in the Technical Specifications do not involve significant hazards considerations not described or implicit in the hazards summary report and that there is reasonable assurance that the health and safety of the public will not be endangered.

Accordingly, we believe that the Technical Specifications of License No. DPR-11 should be revised as indicated above.

Original signed
by Robert H. Bryan

Robert H. Bryan, Chief
Research & Power Reactor Safety Branch
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Date: MAR 12 1964