

## NORTHERN STATES POWER COMPANY

MINNEAPOLIS, MINNESOTA 55401

March 15, 1979

Elrector of Nuclear Reactor Regulation U S Nuclear Regulatory Commission Washington, DC 20555

> PRAIRIE ISLAND NUCLEAR GENERATING PLANT Docket No. 50-282 License No. DPR-42 50-306 DPR-60

Additional Information related to January 10, 1978 License Amendment Request

The subject license amendment request changed the functional test interval for the source, intermediate, and power ranges. To provide a quantitative justification for the refueling interval surveillance frequency, additional information is provided in the following areas -

- (1) Number of observations
- (2) RMS deviation observed
- (3) Maximum deviation observed for source and intermediate range setpoints
- (4) Method of measurement
- (5) Maximum credible value for drift in an 18-month cycle

Attachment A addresses each of these areas based on a review of test data through August 25, 1978.

Very truly yours,

rayer

L O Mayer, PE Manager of Nuclear Support Services

LOM/JAG/ak

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## Source Range Trip:

- Method of Observation The level adjustment potentiometer is increased, and the level amplifier output voltage is measured. The output voltage at which the bistable actuates is recorded.
- Frequency of Observation This testing is being done on a refueling outage interval. There have been ten (10) tests of source range High Level trip bistables since December 1973.
- 3. Deviations Observed On a scale of 0-10 V, the RMS deviation for this testing is 0.025 V, and the maximum deviation is 0.041 V. With the bistable setpoint at 1E5 CPS, a nonconservative RMS deviation yields 1.04E5 and a nonconservative maximum deviation yields 1.06E5 CPS. The Technical Specification setpoint is 1E6 CPS.
- 4. Additional Surveillance Additional surveillance has occurred (on a prior-to-startup basis) such that this setpoint has been checked 192 times since December 1973. This surveillance is done by testing bistable actuation vs panel meter reading. It determines whether the setpoint is within 3% of the desired value. No bistable recalibration has been necessary based on this test.

## Intermediate Range Rod Stop:

- Method of Observation The variable level potentiometer is increased, and the log current amplifier output voltage is measured. The output voltage at which the bistable actuates is recorded.
- Frequency of Observation This testing is being done on a refueling outage interval. There have been 8 tests of intermediate range Rod Stop bistable since December 1973.
- 3. Deviations Observed On a scale of O-10 V, the RMS deviation for this testing is 0.032 V, and the maximum deviation is 0.056 V. This corresponds to bistable setpoint changes of about 0.75% power and 1.6% power respectively. This setpoint is not a Technical Specification item, but the Westinghouse recommended setpoint is 20% power.
- 4. Additional Surveillance Additional surveillance has occurred (on a prior-to-startup basis) such that this setpoint has been checked 174 times since December 1973. This surveillance is done by testing bistable actuation vs panel meter reading. It determines whether the setpoint is within 1.5% of the desired value. No bistable recalibration has been necessary based on this test.

Attachment A (contd.)

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## Intermediate Range High Level Trip:

- Method and Frequency of Observation These are the same as for the intermediate range Rod Stop.
- 3. Deviations Observed On a scale of 0-10 V, the RMS deviation for this testing is 0.041 V, and the maximum deviation is 0.064 V. This corresponds to bistable setpoint changes of about 1.3% power and 2.1% power respectively. The Technical Specification setpoint was recently changed to 40% power, and the Prairie Island setpoint is being changed to about 30% power.
- 4. Additional Surveillance Additional surveillance identical to that for the intermediate range Rod Stop function has occurred. No bistable reca'ibrations have been necessary based on this test.