UNITED STATES NUCLEAR REGULATORY COMMISSION

NORTHERN STATES POWER COMPANY

MONTICELLO NUCLEAR GENERATING PLANT DOCKET NO. 50-263

REQUEST FOR AMENDMENT TO
OPERATING LICENSE DPR-22

LICENSE AMENDMENT REQUEST DATED October 22, 1991

Northern States Power Company, a Minnesota corporation, requests authorization for changes to Appendix A of the Monticello Operating License as shown on the attachments labeled Exhibits A, B and C. Exhibit A describes the proposed changes, describes the reasons for the changes, and contains a significant hazards evaluation. Exhibit B and C are copies of the Monticello Technical Specifications incorporating the proposed changes.

This letter contains no restricted or other defense information.

NORTHERN STATES POWER COMPANY

By _____
Thomas M Parker
Manager
Nuclear Support Services

On this 22nd day of October 1991 before me a notary public in and for said County, personally appeared Thomas M Parker, Manager Nuclear Support Services, and being first duly sworn acknowledged that he is authorized to execute this document on behalf of Northern States Power Company, that he knows the contents thereof, and that to the best of his knowledge, information, and belief the statements made in it are true and that it is not interposed for delay.

Marcia K LaCore

MARCIA K. LaCORE
NOTARY PUBLIC—MINNESOTA
HENNEPIN COUNTY
My Commission Expires Sept. 24, 1993

EXHIBIT A

Monticello Nuclear Generating Plant

License Amendment Request Dated October 22, 1991

Evaluation of Proposed Changes to the Technical Specifications
for Operating License DPR-22

Pursuant to 10 CFR Part 50, Section 50.59 and 50.90, the holders of Operating License DPR-22 hereby propose the following changes:

BACKGROUND

The NRC Staff found the analyses in General Electric Topical Reports NEDC-30844 and NEDC-30851P acceptable to support the determination that current on-line Reactor Protection System test intervals are consistent with the high availability required by Generic Letter 83-28, Item 4.5.3. The NRC Staff also found the use of the analyses acceptable for supporting the proposed extensions to Technical Specification test intervals and increases in allowable out-of-service times. The NRC issued its Safety Evaluation Report on July 15, 1987, along with conditions for plant-specific application for proposed Technical Specification changes and closeout of Generic Letter 83-28, Item 4.5.3.

As follow-on items, the NRC Staff found acceptable extension to Technical Specification test intervals and increases in allowable out-of-service times for isolation instrumentation, as documented in their Safety Evaluations for General Electric Topical Reports NEDC-30851P, Supplement 2, and NEDC-31677P, dated January 6, 1989 and June 18, 1990, respectively.

The General Electric methodology for changing instrument functional testing from monthly to quarterly was found to be acceptable, provided that the generic analyses are shown to be applicable to the specific plant and that instrument drift expected with the extended functional test interval is within the margins of the methodology.

PLANT SPECIFIC ANALYSIS

We have reviewed the generic analyses and concluded that the generic analyses are applicable to the Monticello Nuclear Generating Plant with the exception that Monticello does not have the Standard Technical Specification high reactor vessel water level scram function, and Monticello has a scram on low condenser vacuum that is not in the Standard Technical Specifications. Both of these differences are discussed in the generic analysis. The generic analysis concluded that the group event frequencies remain unchanged for the plants that do not have the high reactor water level scram, and the overall

reactor protection system failure frequency for plants with the low condenser vacuum scram is bounded by the generic model. The surveillance frequency for the low condenser vacuum scram instrumentation remains unchanged.

INSTRUMENT DRIFT ANALYSIS

To address the setpoint drift issue, a drift analysis was performed on each instrument channel whose surveillance interval is being extended. The analysis was done per the guidance provided by the NRC in a letter dated April 27, 1988 to the BWR Owners' Group. The NRC Staff stated that, "Licensees should examine plant and/or generic data from representative instrument channels over a sufficient period to demonstrate that the setpoint drift expected with the extended Surveillance Test Intervals (STIs) is within the margins established using their current methodology. If the drift expected with the extended STIs is not within the allowance established using their current methodology, a larger allowance should be incorporated into the setpoint calculation to account for the increased drift."

The Monticello drift analysis results show that instrument drift will remain within the existing allowance for the testing intervals proposed in this amendment request.

REACTOR PROTECTION SYSTEM

Proposed Changes

a) Extend the allowable out-of-service times for the Reactor Protection System instrumentation as shown in Exhibit B, Technical Specification 3.1.B and Table 3.1.1, pages 27 and 29.

b) Change the functional test frequency for the Reactor Protection System instrumentation as shown in Exhibit B, Technical Specification Table 4.1.1, pages 32, 33 and 34.

c) Revise the Reactor Protection System bases to reflect the extended allowable out-of-service times and revised functional test frequencies, as shown in Exhibit B, pages 35, 39, 41 and 42.

d) Delete the Group designation on Table 4.1.1, page 32, delete "and normal shutdown" from Note 3 on Table 4.1.1, page 33, and revise Group "D" and "E" to Group "A" and "B" on Table 4.1.2, page 34.

Reason for Changes

The proposed Reactor Protection System Technical Specification changes, a), b) and c), will increase safety and improve plant operation. The improvement is achieved by reducing the potential for unnecessary plant scrams, thereby reducing challenges to plant shutdown systems, and by reducing excessive cycles on equipment, thus improving plant availability and reducing wearout potential. In addition, the elimination of unnecessary testing results in potential safety gain and operation improvement by improving utilization of

personnel and resources required for testing activities, and by decreasing personnel radiation exposure.

The extension of the repair out-of-service time provides realistic times to perform testing or to make repairs without significantly affecting overall Reactor Protection System failure frequency.

The proposed Group renumbering in Technical Specification change d) reflects the deletion of the Groups A, B and C in Table 4.1.1 and discussion of Table 4.1.1 Groups in the Bases. Note 3 testing requirements are only applicable during startup.

Safety Evaluation and Determination of Significant Hazards Considerations

The proposed change to the Operating License has been evaluated to determine whether it constitutes a significant hazards consideration as required by 10 CFR Part 50, Section 50.91 using standards provided in Section 50.92. This analysis is provided below:

1. The proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.

   General Electric Topical Report NEDC-30851P, concluded that the core damage frequency is decreased by one percent, and the plant capacity factor is increased by 0.1%. Therefore, this amendment will not cause an increase in the probability or consequences of an accident previously evaluated for the Monticello plant.

2. The proposed amendment will not create the possibility of a new or different kind of accident from any accident previously analyzed.

   These changes only affect the instrument functional testing frequency and allowable out-of-service times. No change is being made to the reactor protection system function. Therefore, the proposed amendment will not create the possibility of a new or different kind of accident.

3. The proposed amendment will not involve a significant reduction in the margin of safety.

   These changes will improve the performance of equipment and are intended to reduce the potential for equipment failures due to unnecessary testing. The safety limits and the limiting safety system setpoints will not be affected by these changes. No safety margins are affected.

Based on this guidance and the reasons discussed above, we have concluded that the proposed changes do not involve a significant hazards consideration.

ISOLATION INSTRUMENTATION - GROUPS 1, 2 and 3

Proposed Changes

a) Extend the allowable out-of-service times for the isolation instrumentation as shown in Exhibit B, Technical Specification Table 3.2.1, page 51.

b) Extend the functional test frequency for the Group 1, Group 2 and Group 3 isolation instrumentation as shown in Exhibit B, Technical Specification Table 4.2.1, pages 61 and 62.

c) Add the reactor low low water level surveillance requirements to the Group I, Main Steam Line Isolation, as shown in Exhibit B, Technical Specification Table 4.2.1, page 62.

d) Revise the isolation instrumentation bases to reflect the extended allowable out-of-service times and minimum function test frequencies, as shown in Exhibit B, pages 64, and 72.

e) Change "3.5.D" to "3.5" in Required condition F of Technical Specification Table 3.2.1, as shown in Exhibit B, page 51.

Reason for Changes

The proposed Technical Specification changes a), b) and d) to the first three isolation groups of the isolation instrumentation will increase safety and improve plant operation. General Electric Topical Report NEDC-30851P, Supplement 2, is applicable to isolation instrumentation common to the reactor protection system. For Monticello, the reactor protection instruments that also provide isolation function are the steam line high radiation, reactor water low level, and drywell high pressure instruments. General Electric Topical Report NEDC-31677P, "Technical Specification Improvement Analysis for BWR Isolation Actuation Instrumentation," is applicable to the steam line high flow and low pressure isolation functions.

The improvement is achieved by reducing the potential for unnecessary plant scrams by reducing challenges to plant shutdown systems and by reducing excessive cycles on equipment, thus improving plant availability and reducing wearout potential. In addition, there are potential safety gains and operation improvement by improving utilization of personnel and resources for testing activities, and by decreasing personnel radiation exposure.

The extension of the repair out-of-service time provides more realistic times to perform testing or to make repairs without significantly affecting overall isolation instrumentation failure frequency.

Technical Specification change c) has always been a main steam isolation function and has been tested accordingly, but has never been included in the Technical Specifications. This is an addition and a correction to the Technical Specifications.

Technical Specification change e) is a correction to a Technical Specification reference and is considered an administrative change. Specifications in Section 3.5 were rewritten in their entirety with the issuance of License Amendment No. 79 dated April 9, 1991.

Safety Evaluation and Determination of Significant Hazards Considerations

The proposed change to the Operating License has been evaluated to determine whether it constitutes a significant hazards consideration as required by 10 CFR Part 50, Section 50.91 using standards provided in Section 50.92. This analysis is provided below:

1. The proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.

   General Electric Topical Report NEDC-30851P, Supplement 2, concluded that changing the test interval for instrumentation common to the reactor protection system and the isolation instrumentation would change the overall initiation failure probability slightly, but the overall effect on frequency of failure to isolate would be negligible. General Electric Topical Report NEDC-31677P, concluded that the main steam line isolation failure frequency is reduced by 1.1E-08/year when the instrument test interval and allowed out-of-service times are extended. Therefore, this amendment will not cause an increase in the probability or consequences of an accident previously evaluated for the Monticello plant.

2. The proposed amendment will not create the possibility of a new or different kind of accident from any accident previously analyzed.

   These changes only affect the instrument functional testing frequency and allowable out-of-service times, therefore, the proposed amendment will not create the possibility of a new or different kind of accident.

3. The proposed amendment will not involve a significant reduction in the margin of safety.

   These changes will improve the performance of equipment and are intended to reduce the potential for equipment failures due to unnecessary testing. No safety margins are affected.

Based on this guidance and the reasons discussed above, we have concluded that the proposed changes do not involve a significant hazards consideration.

Environmental Assessment

This license amendment request does not change effluent types or total effluent amounts nor does it involve an increase in power level. The changes are administrative in nature. Therefore, this amendment will not result in any significant environmental impact.

Exhibit B

Monticello Nuclear Generating Plant

License Amendment Request dated October 22, 1991

Proposed Changes Marked Up on Existing
Technical Specification Pages

Exhibit B consists of the existing Technical Specification pages with the proposed changes marked up on those pages. Existing pages affected by this change are listed below:

Page
27
29
32
33
34
35
39
41
42
51
61
62
64
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