

UNITED STATES NUCLEAR REGULATORY COMMISSION

NORTHERN STATES POWER COMPANY

PRAIRIE ISLAND NUCLEAR GENERATING PLANT

DOCKET NO. 50-282
50-306

License Amendment Request Dated September 4, 1998
Reactor Coolant Vent System

Northern States Power Company, a Minnesota corporation, with this letter is submitting information to support a requested license amendment.

This letter contains no restricted or other defense information.

NORTHERN STATES POWER COMPANY

BY Joel P. Sorensen
Joel P. Sorensen
Plant Manager
Prairie Island Nuclear Generating Plant

On this 4 day of September 1998 before me a notary public in and for said County, personally appeared Joel P. Sorensen, Plant Manager, Prairie Island Nuclear Generating Plant; 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.

Rachel Kaitala



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PDR ADOCK 05000282
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EXHIBIT A

PRAIRIE ISLAND NUCLEAR GENERATING STATION

License Amendment Request dated September 4, 1998

Evaluation of Proposed Changes to the Technical Specification Appendix A of Operation License DPR-42 and DPR-60

Pursuant to 10 CFR Part 50, Sections 50.59 and 50.90, the holders of Operating Licenses DPR-42 and DPR-60 hereby propose the following changes to the Technical Specifications contained in Appendix A of the Facility Operating Licenses:

BACKGROUND

The reactor coolant vent system was installed in Prairie Island using the guidance of NUREG-0737, Item II.B.1, to meet the design requirements of 10CFR50.44(c)(3)(iii). A Safety Evaluation approving the design was issued on September 13, 1983. Guidance on the Technical Specifications required for the reactor coolant vent system were provided in Generic Letter 83-37. Proposed Technical Specifications for the reactor coolant vent system were submitted in a License Amendment Request dated January 13, 1984. A Safety Evaluation approving this amendment was issued on March 27, 1984.

PROPOSED CHANGE AND REASONS FOR CHANGE

TS 3.1.A.3 Reactor Coolant Vent System

For each solenoid operated vent and block valve LCO, append the associated vent path segment for applicability.

TS 4.18**Reactor Coolant Vent System Paths**

Regroup the specifications into a single requirement with three items. Change the testing frequency from "after each refueling" to "once each refueling cycle interval".

Basis 4.18**Reactor Coolant Vent System Paths**

The bases for Specifications 4.18 are revised in accordance with the changes made in the specification as stated above. The changes to the bases are shown in Exhibit B.

SAFETY EVALUATION**Revised LCO for Solenoid Operated Valves to Include Associated Vent Path Segments**

Inoperability of a reactor coolant vent path due to the loss of function in a segment of vent piping is little different from inoperability of the same vent path due to a loss of function in the vent path valve(s) along that piping segment. Vent path inoperability due to a loss of function (inoperability) of a vent pipe segment should receive the same opportunity (time limit) to restore function (operability) as the case where vent path inoperability is due to the loss of function in solenoid operated vent valves.

The current technical specifications do not provide actions for the condition where the loss of function in a reactor coolant vent system piping segment makes a single vent path inoperable. This would force entry into Technical Specification 3.0.C, which may put the plant through an unnecessary shutdown transient, stressing plant equipment and challenging equipment performance. By avoiding unnecessary entry into TS 3.0.C, applying the limiting conditions of operation in TS 3.1.A.3 to the piping segments associated with each grouping of vent valves will enhance the overall safety of the plant.

Revised Surveillance Frequency for Manual Isolation Valves

There are four manual isolation valves in the reactor coolant vent system. Each of these valves is verified to be blocked open and tagged at the completion of reactor coolant vent system surveillance test. Three of these valves are again verified to be blocked open and tagged in the reactor coolant system checklist which is performed prior to filling and venting the reactor coolant system. After the performance of the fill and vent procedure the fourth manual isolation valve is verified to be blocked open and tagged in the unit startup procedure.

Performing for Technical Specification purposes a verification at the beginning of the outage that the manual isolation valves are blocked open and tagged is consistent with the model technical specifications provided in Generic Letter 83-37.

Revised Surveillance Frequency for Solenoid Operated Vent and Block Valves

The solenoid operated vent valves have on several occasions experienced seat leakage after surveillance testing and required repairs. If the surveillance testing is performed at the end of the outage this situation has the potential to delay a unit's return to service. Technically it is feasible to test the system at any time while the unit is in either cold shutdown or refueling shutdown and such testing is consistent with the model technical specifications provided in Generic Letter 83-37.

Revised Surveillance Frequency for Reactor Coolant System Vent Paths

Verification of flow through the reactor coolant vent system used to be provided by the performance of the fill and vent procedure prior to unit startup. On occasion this activity has resulted in leakage past the seats of the solenoid operated valves in the reactor coolant vent system. To reduce the opportunity for valve seat leakage to develop the reactor coolant vent system was modified to permit filling and venting of the reactor coolant system without opening of the reactor coolant vent system solenoid operated valves.

Tap lines¹ were installed in the reactor coolant vent system piping upstream and downstream of the solenoid operated vent valves. These taps permit filling and venting of the reactor coolant system without passing flow through the solenoid operated vent valves, but the fill and vent procedure no longer provides vent system flow verification. These taps however, will permit vent system flow verification to be performed in a piece-wise manner. The vent system segments from the pressurizer and the reactor vessel up to the solenoid operated vent valves will still receive flow verification during the fill and vent procedure, but the vent path segments through the solenoid operated vent valves and the segments from the vent valves to the pressurizer relief tank and containment atmosphere will receive a flow verification earlier in refueling outage. This manner of testing will verify flow through the entire length of all reactor coolant vent system flow paths and is consistent with the model technical specifications provided in Generic Letter 83-37.

Revised Surveillance Frequency for Operability of the Reactor Coolant Vent System

The current Technical Specifications require that the reactor coolant vent system be demonstrated to be operable at the end of each refueling outage by prescribed surveillance testing. This requirement combines activities that do not need to be performed together. First, it performs testing on a frequency set by the length of each refueling outage. Second, it provides for configuration management of the vent system by waiting until the last available time period to verify operation of the system and its components. Currently Prairie Island incorporates the practice of configuration management in its operating, maintenance, and surveillance procedures and programs. It is not useful and may be counter productive to have prescriptive configuration management requirements in the Technical Specifications.

Allowing surveillance testing of the reactor coolant vent system on a refueling cycle interval basis without further prescribing when that testing is to take place will have no impact on the overall safety of the plant.

¹ These tap lines are short piping segments, each of which has a manual isolation valve, is socket welded to the reactor vent piping, and is terminated with a Swagelock fitting and cap.

DETERMINATION OF SIGNIFICANT HAZARDS CONSIDERATIONS

1. The proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.
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The proposed changes do not affect any system that is a contributor to initiating events for previously evaluated anticipated operational occurrences and design basis accidents. Neither do the changes significantly affect any system that is used to mitigate any previously evaluated anticipated operational occurrences and design basis accidents. Therefore, the proposed change does not involve a significant increase in the probability or consequence of an accident previously evaluated.

2. The proposed amendment will not create the possibility of a new or different kind of accident from any accident previously analyzed.
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The proposed changes do not alter the design, function, or operation of any plant component and does not install any new or different equipment, therefore the possibility of a new or different kind of accident from those previously analyzed has not been created.

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

The proposed changes do not alter the initial conditions assumed in deterministic analyses associated with either the RCS boundary or fuel cladding, therefore these changes do not involve a significant reduction in the margins of safety.

Considering the above evaluation and pursuant to 10CFR50.91, Northern States Power Company has determined that operation of the Prairie Island Nuclear Generating Plant in accordance with the proposed license amendment request does not involve a significant hazards consideration as defined by Nuclear Regulatory Commission regulations in 10CFR50.92.

ENVIRONMENTAL ASSESSMENT

Northern States Power Company has evaluated the proposed change and determined that:

1. The change does not involve a significant hazards consideration,
2. The change does not involve a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, and
3. The change does not involve a significant increase in individual or cumulative occupational radiation exposure.

Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10CFR51.22(c)(9). Therefore, pursuant to 10CFR51.22(b), an environmental assessment of the proposed changes is not required.

EXHIBIT B

PRAIRIE ISLAND NUCLEAR GENERATING STATION

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Appendix A, Technical Specification Pages

Marked Up Pages

(shaded material to be added, strikethrough material to be removed)

TS.3.1-5

TS.4.18-1

B.4.18-1