UNITED STATES NUCLEAR REGULATORY COMMISSION

NORTHERN STATES POWER COMPANY

PRAIRIE ISLAND NUCLEAR GENERATING PLANT

Docket No. 50-282
50-306

REQUEST FOR AMENDMENT TO
OPERATING LICENSE NOS. DPR-42 & DPR-60

(License Amendment Request Dated April 10, 1984)

Northern States Power Company, a Minnesota corporation, requests authorization for changes to the Technical Specifications as shown on the attachments labeled Exhibit A and Exhibit B. Exhibit A describes the proposed changes along with reasons for the change. Exhibit B is a set of Technical Specification pages incorporating the proposed changes.

This letter contains no restricted or other defense information.

NORTHERN STATES POWER COMPANY

By David Musolf
David Musolf
Manager - Nuclear Support Services

On this 10th day of April, 1984 before me a notary public in and for said County, personally appeared David Musolf, 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.

Dody A Brose

DODY A. BROSE
NOTARY PUBLIC — MINNESOTA
HENNEPIN COUNTY
My Commission Expires Dec. 26, 1989

EXHIBIT A

Prairie Island Nuclear Generating Plant

License Amendment Request - Dated April 10, 1984

Proposed Changes to the Technical Specifications
Appendix A of Operating Licenses DPR-42 and 60

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

1. Specification: Post Accident Sampling - TS 6.5

Proposed Changes

Change pages TS.6.5-2 and TS.6.5-3 as shown in Exhibit B.

Reason for Change

This change implements the requirements of NUREG-0737, Item II.B.3 and II.F.1.2 and is in response to NRC Generic Letter No. 83-37 dated November 1, 1983.

Significant Hazards Evaluation

The proposed Technical Specification change provides assurance that the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions will be maintained. This change constitutes an additional limitation, restriction and control not presently included in the Technical Specifications.

For these reasons, operation of the Prairie Island Nuclear Generating Plant in accordance with this proposed change will not:

(1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

(2) create the possibility of a new or different kind of accident from any accident previously evaluated; or

(3) involve a significant reduction in a margin of safety.

2. Specification: Control Room Habitability - TS 3.13/4.1

Proposed Changes

Change pages TS.3.13-1A and TS.3.13-2 and Table TS.4.1-1 (pg 5 of 5) as shown in Exhibit B.

Reason for Change

This change implements requirements of NUREG-0737, Item III.D.3.4 and is in response to NRC Generic Letter No. 83-37 dated November 1, 1983.

Significant Hazards Evaluation

The proposed Technical Specification changes provide assurance that control room personnel will have adequate time to take protective action in the event of an accidental off-site release of ammonia, formaldehyde or hydrochloric acid. These changes constitute additional limitations, restrictions and controls not presently included in the Technical Specifications.

Toxic gas detection systems, capable of detecting low concentrations of ammonia, formaldehyde and hydrochloric acid, were added to the control room special ventilation system in response to NUREG-0737, Item III.D.3.4. Both trains of the control room special ventilation system are equipped with monitors capable of detecting ammonia, formaldehyde and hydrochloric acid. Upon detection of a monitored gas entering the control room ventilation system, the affected monitor will actuate circuitry which automatically closes the outside air supply dampers for the monitored train of ventilation. Each monitor is only capable of isolating the ventilation train it is monitoring. The proposed Technical Specification changes are designed to assure operability of these toxic gas detection systems so that the control room personnel will be provided with sufficient time to initiate protective action following an off-site toxic gas release.

The proposed Technical Specification Limiting Conditions for Operation are based on the following premises:

a. The two toxic gas detection systems can be considered as redundant because both control room special ventilation trains are 100% systems and only one train is normally operated.

b. Operation of the control room special ventilation system with one train isolated from outside air does not significantly affect the control room environment. Action should be taken to isolate a single ventilation train if its associated toxic gas detection system becomes inoperable.

c. Operation of the control room special ventilation system with both trains isolated from outside air is not desirable when no toxic gases exist in the vicinity of the plant. Operation of this system in the recirculation mode increases the ventilation system noise in the control room and extended operation in the recirculation mode could lead to an eventual degradation of the control room air quality. The increased noise and potential for stale air in the control room are minor affects and would be considered insignificant during accident conditions. However, the slight chance of a toxic gas release affecting the control room does not justify subjecting the control room personnel to these conditions for extended periods if both toxic gas detection systems are inoperable.

d. In the event that the toxic gas monitors for both ventilation trains are inoperable, manual isolation of the ventilation system is still an available option. Control room personnel could manually isolate the control room upon notification of a release in the plant vicinity or if toxic gases are sensed in the control room.

e. Sufficient quantities of ammonia, formaldehyde and hydrochloric acid are transported in the vicinity of the plant to warrant the toxic gas detection systems under the requirements of NUREG-0737, Item III.D.3.4. However, the probability of a toxic gas release in the plant vicinity combined with the probability of worst case weather conditions occurring at the same time results in a very low probability of a toxic gas release affecting the plant control room.

The proposed Limiting Conditions for Operation and required actions provide adequate assurance that the plant will continue to be operated in a safe manner in the event of a toxic gas release near the plant.

The proposed toxic gas detection system Technical Specification Surveillance Requirements are based on the following premises:

1. The toxic gas monitors are equipped with a sophisticated self-diagnostic system which will alarm to the control room if problems develop with the monitors. Because of this self-diagnostic capability, a weekly check of the toxic gas monitors should be adequate to assure toxic gas detection system operability.

2. The monthly functional test of the toxic gas monitors only needs to verify the ability of the monitors to send an isolation signal to the control room special ventilation system. It is not necessary to verify the isolation functions of the control room special ventilation system during this functional test. Isolation of the control room special ventilation system is functionally tested monthly by other surveillance tests.

The proposed Technical Specification surveillance requirements provide adequate assurance that the toxic gas detection system is operable and able to perform its intended function.

Based on the above discussion, operation of the plant in accordance with these proposed Technical Specification changes will not:

(1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

(2) create the possibility of a new or different kind of accident from any accident previously evaluated; or

(3) involve a significant reduction in a margin of safety.

3. <u>Specification: Radiation Environmental Monitoring Program - TS 4.10</u>

<u>Proposed Change</u>

Change the maximum LLD given in Table TS.4.10-2 for cesium 134 and 137 in food products from 80pCi/Kg to 60 pCi/Kg.

Reason for Change

As a result of a typographical error in a previous license amendment request, the maximum LLD given in Table TS.4.10-2 for cesium 134 and 137 in food products is in disagreement with the value specified in Table 4.12-1 of the Radiological Effluent Technical Specifications for PWR's - July, 1979.

Significant Hazards Evaluation

The proposed Technical Specification change is intended to correct a typographical error in Table TS.4.10-2. It is a purely administrative change which results in a more restrictive limit than is presently included in the Technical Specifications. For these reasons operation of the plant in accordance with the proposed Technical Specification change will not:

(1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

(2) create the possibility of a new or different kind of accident from any accident previously evaluated; or

(3) involve a significant reduction in a margin of safety.

4. Specification: Radiation Environmental Monitoring Program - TS 4.10

Proposed Change

Delete Figures TS.4.10-1 and TS.4.10-2.

Reason for Change

The Prairie Island Appendix I License Amendment Request dated June 1, 1979 and revised August 13, 1979 requested that Figures TS.4.10-1 and TS.4.10-2 be deleted from the Technical Specifications. However, when the Appendix I License Amendment was issued by the NRC on October 21, 1982 these figures were inadvertently omitted from the pages to be deleted. These figures serve no purpose in the present Technical Specifications and should be deleted.

Significant Hazards Evaluation

The proposed Technical Specification change is intended to correct an error in a previous license amendment and is thus a purely administrative change. For these reasons operation of the plant in accordance with the proposed Technical Specification change will not:

(1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

(2) create the possibility of a new or different kind of accident from any accident previously evaluated; or

(3) involve a significant reduction in a margin of safety.

5. Specification: Organization - TS 6.1

Proposed Change

Change "Senior Nuclear Engineering" to "Supt. Nuclear Engineering" in Technical Specification Figure TS.6.1-2.

Reason for Change

Technical Specification Figure TS.6.1-2 is not in agreement with the present plant organization.

Significant Hazards Evaluation

The proposed change only changes Figure TS.6.1-2 to reflect the existing plant organization and is thus a purely administrative change. For these reasons operation of the plant in accordance with this proposed change will not:

(1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

(2) create the possibility of a new or different kind of accident from any accident previously evaluated; or

(3) involve a significant reduction in a margin of safety.

6. Specification: Instrument Operating Conditions for Isolation Functions - TABLE TS.3.5-4

Proposed Change

Change Table TS.3.5-4 as shown in Exhibit B.

Reason for Change

The present operator action specified in Column 4 of Table TS.3.5-4 for Containment Ventilation Isolation is unclear. The present wording implies that the purge and inservice purge valves on both ventilation trains should be closed when one train of the containment ventilation isolation system is taken out of service for maintenance during a refueling outage. Closing the purge and inservice purge valves on both ventilation trains during a refueling outage is undesirable because containment ventilation, which provides fresh air to the containment, is isolated when these valves are closed. Failure to provide fresh air to the containment will lead to an eventual degradation of the containment atmosphere which would be unacceptable during a refueling outage.

Technical Specification 3.9 (Table TS.3.9-2) requires only one train of the Containment Ventilation Isolation system to be operable during containment purging and that is all that should be necessary during cold shutdown or a refueling shutdown when there is no fuel handling in the containment.

The Containment Ventilation Isolation system is not required to be operable during cold or refueling shutdowns (with no fuel handling in the containment) if the containment is not being purged.

Significant Hazards Evaluation

The proposed change is intended to provide clarification on when both trains of the Containment Ventilation Isolation system are required and on the relationship between Table TS.3.5-4 and Table TS.3.9-2. The change is administrative in nature and operation of the plant in accordance with this proposed Technical Specification Change will not:

(1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

(2) create the possibility of a new or different kind of accident from any accident previously evaluated; or

(3) involve a significant reduction in a margin of safety.

7. Typographical Corrections

Proposed Changes

a. Correct typo on page TS-iv line 6.1-1 by changing "On-site" to "On-Site".

b. Correct typo in TS 3.1.A.4.c by changing "that" to "than".

c. Correct typo in TS 3.1.A.4.g by changing "blocks" to "block",

d. Correct typo in second paragraph on page TS.3.5-3 by changing "exhause" to "exhaust".

e. Correct typo in TS 3.14.F by changing "Hydant" to Hydrant".

f. Correct typo in TS 3.14.F.1.e by changing "house" to "House".

g. Correct typo in Table TS.4.2-1 by changing "ASME B & PB" to "ASME B & PV".

h. Correct typo in note at the bottom of Table TS.4.4-1 (pg 4 of 5) by changing "refuleing" to "refueling".

i. Correct typo's on page TS.4.5-4 by changing "Deviaitons" to "Deviations", "throughtout" to "throughout", "presure" to "pressure" and "perfformance" to "performance".

j. Correct typo in TS 6.5.B.3 by changing "March 13, 1979" to "March 13, 1980".

k. Correct typo in TS 6.7.A.5 by changing "Table 4.16.1" to "Table 4.10-1".

Reason for Change

Correct typographical errors.

Significant Hazards Evaluation

The proposed changes are all typographical corrections and are thus purely administrative changes. Therefore operation of the plant in accordance with these proposed changes will not:

(1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

(2) create the possibility of a new or different kind of accident from any accident previously evaluated; or

(3) involve a significant reduction in a margin of safety.

EXHIBIT B

Prairie Island Nuclear Generating Plant

License Amendment Request - Dated April 10, 1984

Proposed changes to the Technical Specifications
Appendix A of Operating Licenses DPR-42 and 60.

Exhibit B consists of revised pages of Appendix A Technical Specifications as listed below:

Pages

TS-iv
TS.3.1-2
TS.3.5-3
TABLE TS.3.5-4
TS.3.13-1A
TS.3.13-2
TS.3.14-4
TABLE TS.4.1-1 (page 5 of 5)
TABLE TS.4.2-1
TABLE TS.4.4-1 (page 4 of 5)
TS.4.5-4
TABLE TS.4.10-2 (page 1 of 2)
Figure TS.6.1-2
TS.6.5-2
TS.6.5-3
TS.6.7-3

Figures TS.4.10-1 and TS.4.10-2
are deleted by these proposed changes

APPENDIX A TECHNICAL SPECIFICATIONS

LIST OF FIGURES

4. Pressurizer

a. Whenever average reactor coolant system temperature is above 350°F or the reactor is critical, the pressurizer shall be operable with:

1. Steam bubble

2. Pressurizer heater groups "A" and "B" and their associated safeguards power supplies operable

3. At least one operable spray

b. With the pressurizer inoperable due to an inoperable heater group restore the equipment to operable status within 72 hours or place the reactor in at least Hot Shutdown within the following 18 hours.

c. With the pressurizer inoperable for any other reason than (b) above, the reactor shall be placed in at least Hot Shutdown within the following 12 hours.

d. At least one pressurizer safety valve shall be operable whenever the head is on the reactor vessel, except during hydrostatic tests. Both pressurizer safety valves shall be operable whenever average reactor coolant system temperature is above 350°F or the reactor is critical. Pressurizer safety valve lift setting shall be 2485 psig $\pm$ 1%.

e. Except as specified in (f) and (g) below, two power operated relief valves (PORV's) and their associated block valves shall be operable whenever average reactor coolant system temperature is above 350°F or the reactor is critical.

f. With one or more PORV's inoperable, within one hour either restore the PORV(s) to operable status or close the associated block valve(s). If this cannot be done, place the reactor in the Cold Shutdown condition within the following 36 hours.

g. With one or more block valves inoperable, within one hour either restore the block valve(s) to operable status or close the valve. If this cannot be done, place the reactor in the Cold Shutdown condition within the following 36 hours.

Steam Line Isolation

In the event of a steam line break, the steam line stop valve of the affected line is automatically isolated to prevent continuous, uncontrolled steam release from more than one steam generator. The steam lines are isolated on high containment pressure (Hi-Hi) or high steam line flow in coincidence with low T_{avg} and safety injection or high steam flow (Hi-Hi) in coincidence with safety injection. Adequate protection is afforded for breaks inside or outside the containment even when it is assumed that the steam line check valves do not function properly.

Containment Ventilation Isolation

Valves in the containment purge and inservice purge systems automatically close on receipt of a Safety Injection signal or a high radiation signal. Gaseous and particulate monitors in the exhaust stream or a gaseous monitor in the exhaust stack provide the high radiation signal.

Ventilation System Isolation

In the event of a high energy line rupture outside of containment, redundant isolation dampers in certain ventilation ducts are closed.[4]

Safeguards Bus Voltage

Relays are provided on buses 15, 16, 25, and 26 to detect loss of voltage and degraded voltage (the voltage level at which safety related equipment may not operate properly). On loss of voltage, the automatic voltage restoring scheme is initiated immediately. When degraded voltage is sensed, the voltage restoring scheme is initiated if acceptable voltage is not restored within a short time period. This time delay prevents initiation of the voltage restoring scheme when large loads are started and bus voltage momentarily dips below the degraded voltage setpoint.

Auxiliary Feedwater System Actuation

The following signals automatically start the pumps and open the steam admission control valve to the turbine driven pump of the affected unit:

1. Low-low water level in either steam generator
2. Trip of both main feedwater pumps
3. Safety Injection signal
4. Undervoltage on both 4.16 KV normal buses (turbine driven pump only)

Manual control from both the control room and the Hot Shutdown Panel are also available. The design provides assurance that water can be supplied to the steam generators for decay heat removal when the normal feedwater system is not available.