

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

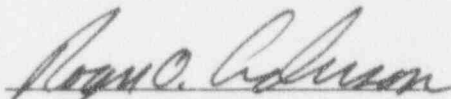
LICENSE AMENDMENT REQUEST DATED March 28, 1994

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 Safety Evaluation, a Determination of Significant Hazards Consideration and an Environmental Assessment. Exhibit B contains current Technical specification pages marked up with the proposed changes. Exhibit C is a copy of the Monticello Technical Specifications incorporating the proposed changes.

This letter contains no restricted or other defense information.

NORTHERN STATES POWER COMPANY

By



Roger O Anderson

Director

Licensing and Management Issues

On this 28 day of March 1994 before me a notary public in and for said County, personally appeared Roger O Anderson, Director Licensing and Management Issues, 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.

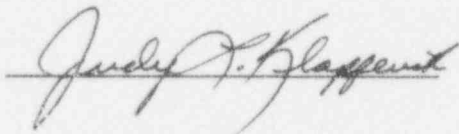


EXHIBIT A

Monticello Nuclear Generating Plant

License Amendment Request Dated March 28, 1994

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:

**Concerning the Trip Settings for Instrumentation that Initiates Reactor Building Ventilation Isolation and Standby Gas Treatment System Initiation**

Proposed Changes

Secondary Containment isolation and Standby Gas Treatment System (SGTS) initiation occur automatically as a result of:

High radiation conditions in the Reactor Building Ventilation Plenum,

High radiation in the area of the fuel pool,

High drywell pressure,

Low reactor water level.

The monitored parameters were selected as indications of both loss of coolant accidents (LOCAs) and fuel handling accidents for which the SGTS and secondary containment are required to function. Technical Specification Table 3.2.4, "Instrumentation That Initiates Reactor Building Ventilation Isolation and Standby Gas Treatment System Initiation" specifies the limiting condition for operation for the instrumentation performing the above stated functions. Technical Specification Table 4.2.1, "Minimum Test and Calibration Frequency for Core Cooling, Rod Block and Isolation Instrumentation" specifies the surveillance requirements for this instrumentation.

We propose to change the initiating parameter for Secondary Containment isolation and SGTS initiation of Low Reactor Water Level specified as function Item 1 of Table 3.2.4 to state Low Reactor Water Level with an associated trip setting of  $\geq 6'-6"$ ,  $\leq 6'-10"$ . We propose to revise the Reactor Building Ventilation section of Table 4.2.1 (page 62 of the Monticello Technical Specifications) as indicated in Exhibit B.

The bases for Monticello Technical Specification Table 3.2.4 provides allowed deviations for instrument trip settings due to inherent instrument error,

operator setting error, drift of the setpoint, etc. Page 70 of the Monticello Technical Specification specifies the allowed instrument trip setting deviations for the Reactor Building Ventilation Isolation and Standby Gas Treatment System Initiation instrumentation. We propose to change the allowed deviation specified for this instrumentation as indicated in Exhibit B to be consistent with the above proposed changes.

#### Reason for Changes

General Electric Service Information Letter (SIL) 131 issued on April 16, 1975 identified containment isolation logic changes to improve plant performance by reducing the potential for unnecessary secondary containment isolation and SGTS initiations. SIL 131 recommended to change the secondary containment isolation and SGTS initiation parameter of low reactor water level to low low reactor water level. SIL 131 noted that such a change would minimize the number of thermal transients placed on reactor building equipment due to unnecessary secondary containment isolation resulting from reactor transients which do not require such an isolation (such as reactor scram). The SIL also noted that changing to a low low reactor water level setpoint is consistent with Emergency Core Cooling System initiation parameters.

The proposed changes to Technical Specification Table 3.2.4 minimizes the potential for an unnecessary Secondary Containment isolation and SGTS initiation and the associated undesirable thermal transient on plant equipment, and establishes consistency with ECCS initiation parameters. The proposed changes to Table 4.2.1 establishes consistency between the Secondary Containment isolation and SGTS initiation parameters specified in Table 3.2.4 and the surveillance requirements specified in Table 4.2.1. The proposed changes are consistent with NUREG-1433, "Standard Technical Specifications, General Electric Plant, BWR/4".

#### Safety Evaluation

The reactor building provides a secondary containment system for the potential releases which may occur within it. This is accomplished by a low leakage building and a Standby Gas Treatment System which has a capacity greater than the building leak rate. The Standby Gas Treatment System purifies air from the reactor building and exhausts it via the offgas stack to the environs at an elevated release point, thus maintaining a negative pressure in the secondary containment and assuring that no significant exfiltration of untreated gases exist. The secondary containment and Standby Gas Treatment System perform this function to ensure that radioactive releases to the environment resulting from a loss of coolant accident or refueling accident do not exceed the limits established by 10CFR100 and that Main Control Room doses do not exceed 10CFR50, Appendix A, GDC 19 limits. The above proposed changes to the Monticello Technical Specifications have no adverse impact on the capability of these systems to perform this function.

The proposed change of standby gas treatment system initiation and secondary

containment isolation on low low reactor water level has no impact on the capability of the systems to perform as required for postulated refueling accidents, as reactor water level is not an indicator of such events. Low low reactor water level is an indicator that the capability to cool the core may be threatened and that fuel damage may result if reactor vessel level continues to decrease. Low low reactor water level for secondary containment isolation and standby gas treatment system initiation is consistent with the actuation of emergency core cooling systems (such as Core Spray, Low Pressure Coolant Injection, High Pressure Coolant Injection, and Automatic Depressurization) required to mitigate the consequences of postulated loss of coolant accidents. Isolation of the secondary containment and initiation of the standby gas treatment system on low low reactor water level supports the necessary actions to ensure that radioactive releases to the environment remain within established limits.

Two trip systems consisting of two instrument channels per trip system are available and required to be operable to ensure that no single instrument failure can preclude the performance of the required functions. The surveillance requirements proposed for this instrumentation are consistent with Monticello Technical Specification surveillance requirements for the low low reactor water level instrumentation which initiates containment isolation and the surveillance requirements for the instrumentation which provides the existing low reactor water level initiation of SGTS.

#### 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:

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

The function of the Standby Gas Treatment System and secondary containment is to mitigate the consequences of a loss of coolant accident and fuel handling accidents. The proposed changes maintain this capability. The revised Standby Gas Treatment System initiation and secondary containment isolation parameter of low low reactor water level provides the required detection of loss of coolant accidents and is consistent ECCS actuation to mitigate the consequences of this accident. The low low reactor water level instrumentation is set to trip when reactor water level is 6'6" above the top of the active fuel. This trip currently initiates closure of the Group 1 Primary containment isolation valves, activates the Emergency Core Cooling systems and starts the emergency diesel generator. This trip setting level was chosen to be low enough to prevent spurious operation but high enough to initiate Emergency Core Cooling system operation and primary system isolation so that no melting of the fuel cladding will occur, post

accident cooling can be accomplished, and the guidelines of 10 CFR 100 will not be violated. Therefore, this amendment will not cause a significant increase in the probability or consequences of an accident previously evaluated for the Monticello plant.

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

The proposed changes to Technical Specifications for the standby gas treatment system and secondary containment do not alter the function of the systems or its interrelationships with other systems. An adverse interaction which could be postulated to occur is the initiation of the Standby Gas Treatment System without a coordinated trip of the Mechanical Vacuum Pump. The Mechanical Vacuum Pump is operated during plant startups to draw a vacuum on the main condenser prior to admission of steam. The Mechanical vacuum discharges to the offgas stack and thus can create a back pressure on the Standby Gas Treatment System, reducing Standby Gas Treatment System flow below required values. The proposed initiation of Standby Gas Treatment System on low low reactor water level maintains the necessary coordination by having the Standby Gas Treatment System initiate subsequent to isolation or tripping of the Mechanical Vacuum Pump on a low reactor water level signal from the primary containment isolation logic. Therefore, this amendment will not create the possibility of a new or different kind of accident from any accident previously analyzed.

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

The proposed amendment changes the initiation of the Standby Gas Treatment System and secondary containment isolation from being concurrent with the low reactor water signal (which is indicative that the reactor core is in danger of being inadequately cooled) to being concurrent with reactor low low water level (which is also an indicator that the capability to cool the core is threatened and assures that no melting of the fuel cladding will occur, post accident cooling can be accomplished, and the guidelines of 10 CFR 100 will not be violated). A review of the accident analyses provided in Section 14 of the USAR has determined that these analyses did not specifically credit initiation of the Standby Gas Treatment System and secondary containment isolation at the accident precursor reactor water level of low level. Furthermore, this review determined that the low low reactor water level setpoint had no adverse impact on the ability of the Standby Gas Treatment System and secondary containment to perform its design basis function as credited in the accident analyses.

Environmental Assessment

Northern States Power has evaluated the proposed changes and determined that:

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

Accordingly, the proposed changes met the eligibility criterion for categorical exclusion set forth in 10 CFR Part 51, Section 51.22(b), an environmental assessment of the proposed changes is not required.