LICENSE AMENDMENT REQUEST DATED November 6, 1996

Resubmittal of Cooling Water System Technical Specification Amendments

EXHIBIT B

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3.3.D. Cooling Water System

1. A reactor shall not be made or maintained critical nor shall reactor coolant system average temperature exceed 200°F, unless the following conditions are satisfied (except as specified in 3.3.D.2 below).

   a. Four of the five cooling water pumps are OPERABLE, and if one diesel driven cooling water pump is inoperable, then 121 cooling water pump shall be aligned as shown in the table below or apply 3.3.D.2.a. All changes in the valve positions shall be under direct administrative control.

Inoperable Pump	Valve Alignment	Power Supply to Bus 27 (#121 Cooling Water Pump)
#12 Cooling Water Pump	MV-32037 or MV-32036 closed; and associated Bkr Locked Off MV-32034 and MV-32035 open; and both Bkrs Locked Off	Bus 25
#22 Cooling Water Pump	MV-32034 or MV-32035 closed; and the associated Bkr Locked Off MV-32037 and MV-32036 open; and both Bkrs Locked Off	Bus 26

   b. Two safeguards traveling screens are OPERABLE.

   c. Two cooling water headers are OPERABLE.

   d. A fuel oil supply of 19,000 gallons is available for the diesel-driven cooling water pumps in the interconnected Unit 1 diesel fuel oil storage tanks. Note that the 19,000 gallon requirement is included in the 70,000 gallon total diesel fuel oil requirement of Specification 3.7.A.5 for Unit 1.

B. Component Tests

1. Pumps

a. The safety injection pumps, residual heat removal pumps and containment spray pumps shall tested pursuant to Specification 4.2. Acceptable levels of performance shall be that the pumps start and reach their required developed head on minimum recirculation flow and the control board indications and visual observations indicate that the pumps are operating properly for at least 15 minutes.

b. A test consisting of a manually-initiated start of each diesel engine, and assumption of load within one minute, shall be conducted monthly.

c. The vertical motor-driven cooling water pump shall be operated at quarterly intervals. An acceptable level of performance shall be that the pump starts and reaches its required developed head and the control board indications and visual observations indicate that the pump is operating properly for at least 15 minutes.

2. Containment Fan Motors

The Containment Fan Coil Units shall be run on low motor speed for at least 15 minutes at intervals of one month. Motor current shall be measured and compared to the nominal current expected for the test conditions.

3. Valves

a. The refueling water storage tank outlet valves shall be tested in accordance with Section 4.2.

b. The accumulator check valves will be checked for OPERABILITY during each refueling shutdown.

c. The boric acid tank valves to the Safety Injection System shall be tested in accordance with Section 4.2.

d. The spray chemical additive tank valves shall be tested in accordance with Section 4.2.

e. Actuation circuits for Cooling Water System valves that isolate non-essential equipment from the system shall be tested each refueling outage. ~~in accordance with Section 4.2.~~ Unit 1 SI actuation circuits for Train A and Train B valves shall be tested during Unit 1 refueling outages. Unit 2 SI actuation circuits for Train A and Train B valves shall be tested during Unit 2 refueling outages.

f. All motor-operated valves in the SIS, RHR, Containment Spray, Cooling Water, and Component Cooling Water System that are designed for operation during the safety injection or recirculation phase of emergency core cooling, shall be tested for OPERABILITY at each refueling shutdown.

5.0 DESIGN FEATURES

5.1 SITE LOCATION

The site for the Prairie Island Nuclear Generating Plant is located on ~~property owned by Northern States Power (NSP) Company at a site on~~ the west bank of the Mississippi River, approximately 6 miles northwest of the city of Red Wing, Minnesota. ~~The minimum distance from the center line of either reactor to T~~the site exclusion area boundary has a minimum radius of~~is~~ 715 meters from the center line of either reactor~~, and the low population zone distance is 1-1/2 miles. The nearest population center of 25,000 or more people is South Saint Paul. These site characteristics comply with definitions in 10CFR100 (Reference 1)~~.

~~The U.S. Army Corp of Engineers controls the land within the exclusion area that is not owned by NSP. The Corps has made an agreement wi~~ SP ~~to prevent residential construction on this land for the life of t~~ ~~plant (Reference 2).~~

~~These specifications use atmospheric diffusion factors based on the NRC staff evaluations. Its evaluation of accidental airborne releases is based on a relative concentration of 9.8×10^{-4} seconds per cubic meter at the site boundary. Its evaluation of routine releases is based on a relative concentration of 1.5×10^{-5} seconds per cubic meter (Reference 3).~~

~~The flood of record in 1965 produced a water surface elevation of +688 feet MSL at the site. The calculated probable maximum flood (PMF) level is +703.6 feet mean sea level (MSL), and the estimated wave runup could reach +706.7 feet MSL. (See Section 2.4.2 of this report.) Plant grade level is +695 feet MSL.~~

~~Flood protection structures have been provided. The two turbine support facilities, the common auxiliary building, and the two shield buildings have been physically connected by a concrete flood wall, most of the length of which constitutes the concrete foundation walls for the various buildings. The top of this wall supports the metal siding for the buildings at about elevation +705 feet MSL. Fourteen doors through the flood wall, or into the various buildings (including the separate screen house), are provided with receivers for the erection of flood protection panels to prevent flood water from reaching safety related facilities.~~

~~The cooling water pumps in the screenhouse are designed to operate up to a flood level of +695 feet MSL without flood protection measures, and up to a level of +707 feet MSL with the erection of flood protection panels. The main transformer foundation is at +695 feet MSL. The transformer will function to a flood level of+698 feet MSL.~~

~~The Technical Specification 6.5 A.7, requires an emergency procedure that will necessitate plant shutdown for flood water levels above +692 feet MSL at the plant site. The emergency procedure will assure the proper~~

erection of flood protection panels and assure an orderly shutdown of the plant and protection of safety related facilities. This procedure will provide for progressive action levels to prevent the possibility of unsafe plant operation and will include requirements for periodic inspection of flood protection measures.

The plant is designed for a design basis earthquake having a horizontal ground acceleration of 0.12g and an operational basis earthquake having a horizontal ground acceleration of 0.06g. An emergency procedure will be prepared in accordance with Specification 6.5.A.7 to define actions required for earthquakes, including plant shutdown and inspection if an operational basis earthquake is measured at the site.

References

1. USAR, Section 2.2.1
2. USAR, Section 3.4.5
3. SER, Sections 2.3.4 and 2.3.5

5.4 ENGINEERED SAFETY FEATURES

The engineered safety features include the containment system described in Specification 5.2, the emergency core cooling system, the containment air cooling system, the containment spray system, the post accident combustible gas control system, emergency power supplies, component cooling water system, and the cooling water system. These systems are designed to applicable industry codes, the NRC General Design Criteria in Appendix A to 10CFR50, and NRC Safety Guides. Particular features for the Prairie Island plant include the following:

1. Several of the features are shared between the two units, including the onsite diesel generators, the cooling water system, and the motor-driven pumps of the auxiliary feedwater system. Shared systems are designed to mitigate the effects of an accident in one unit and simultaneously provide for a hot shutdown in the other unit (Reference 1).

2. The emergency cooling water pumps are driven by diesel engines. These diesel engines are designed and will be tested to the same reliability criteria as those for the diesel generators that supply emergency electrical power (Reference 2).

3. The cooling water system is automatically divided into two (2) redundant loops by motor-operated valves which are actuated by a safety injection signal. Branches serving non-safety related equipment in the turbine rooms are isolated from the class I cooling water loops by motor-operated valves. Line breaks in these branches are sensed and the motor-operated valves are actuated by instruments which monitor coincident high flow and low pressure in the class I cooling water loops.

Reference

1. FSAR, Table 1.2-2
2. USAR, Section 10.4

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