Lifetime
Nonpermanent ____ yrs.

NPC-27881

Wisconsin Electric POWER COMPANY
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July 8, 1980

Mr. H. R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. NUCLEAR REGULATORY COMMISSION
Washington, D. C. 20555

Attention: Mr. Robert A. Clark, Chief
Operating Reactors Branch #3

Gentlemen:

DOCKET NOS. 50-266 AND 50-301
ADDITIONAL INFORMATION AUXILIARY FEEDWATER SYSTEM
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

Your letter dated May 16, 1980 requested certain clarification and additional information concerning our previous responses to your letter of September 21, 1979 relating to the NRC requirements for the auxiliary feedwater system. We are providing herein our responses to your May 16 letter. These responses are labeled in accordance with that letter.

1. Recommendation GS-1 (Technical Specifications)

Attached are revised Technical Specifications for the auxiliary feedwater system for your review. You will note that we have included your requirements for operability prior to taking one or both units critical. We have altered the suggested requirement for permissible operation with one or more pumps inoperable to reflect that only one unit need be shut down if a motor-driven auxiliary feedwater pump is out-of-service for more than 72 hours. Continued operation of one unit is reasonable under this condition since two diverse sources of auxiliary feedwater remain available to the operating unit, namely the turbine-driven pump and the other motor-driven pump.

2. Recommendation GS-5 (Total Loss of AC)

The interim or short-term action for this item appears to have been misinterpreted by the NRC in our previous response. We have already issued a Special Order requiring the auxiliary feedwater pump (turbine-driven)

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to be continuously manned in the event of a total loss of AC power and the appropriate emergency operating procedures will be changed to include this requirement until such time as a modification is properly installed and operable which ensures cooling to these bearings on a complete loss of AC power to the facility.

The operator manning these pumps has at his disposal a portable battery-powered radio with two-way, two-channel direct communication with the control room and "emergency" battery-powered lanterns strategically located around the plant and in the near vicinity of the auxiliary feedwater pumps.

3. Recommendation GS-6 (Redundant Verification)

The valve lineup checklists for the auxiliary feedwater system have been modified such that a second independent operator verification is required on all critical valves. Critical valves are those in the major flow paths and the isolation valves for the motor-driven auxiliary feedwater pump pressure transmitter which regulates pump discharge pressure. These checklists are performed following major maintenance and periodic testing.

4. Additional Short-Term Recommendations

a. B.2 (72-Hour Endurance Tests)

These tests were completed prior to December 30, 1979 in accordance with our previous response. To provide for review of these tests and the results, as requested, we have attached copies of these tests (WMTP 11.21 for Unit 1 and 2 turbine-driven pumps and WMTP 11.22 for each of the electric-driven feed pumps [P38A and B]).

b. B.5 (Unusual Event PNO III 80-25)

To prevent future occurrences of this event, the isolation valves for the motor-driven auxiliary feedwater pump pressure transmitter have been locked open and are included in the valve checklists which require a second independent operator verification.

5. Recommendation GL-3 (Auxiliary Feedwater Pump Bearing Cooling)

We believe that the NRC review of our prior response may have been misunderstood. In that response we proposed to supply the steam-driven auxiliary feedwater pump bearing coolers with service water during normal conditions and by the diesel-driven fire water pump during loss of all AC power. This will be accomplished through the use of a passive design concept, i.e., as service water pressure decays from loss of all AC, the bearing cooler will be automatically supplied by the fire water header through a system pressure-controlled regulator valve; the subsequent pressure decrease in the fire water header will in turn automatically start the diesel-driven fire water pump. Our proposed modification will require no operator action to accomplish the above events.

6. Recommendation GL-4 (Auxiliary Feedwater Supply)

Our position that automatic switchover for the auxiliary feed pump suction is not necessary is unchanged. The NRC has not justified its position that automatic switchover is necessary to assure auxiliary feedwater pump protection or that such switchover will not create more problems with redundant low suction indicators and the attendant circuitry. We, therefore, do not propose to make any commitment to changes in this regard.

The NRC has proposed that as an alternative to automatic switchover, licensees could upgrade the primary water supply to meet seismic Category 1 requirements and tornado protection. The condensate storage tanks were designed for a ground acceleration of 0.06 g in any direction horizontally and 0.04 g vertically occurring simultaneously and in conjunction with other loads, without exceeding code allowable stresses. This design, therefore, already meets, in part, the Class I seismic criteria as specified in Appendix A of the plant's Final Facility Description and Safety Analysis Report (FFDSAR).

7. Basis for AFW System Flow Requirements

Information concerning the requirement, basis, and assumptions for AFW system flow is available in the Point Beach Nuclear Plant FFDSAR. Specific reference to these items may be found in the following FFDSAR Sections: 10.2.2 (Design Features, Auxiliary Feedwater System); 14.1.1 (Loss of Normal Feedwater); 14.1.12 (Loss of All AC Power); 14.2.4 (Steam Generator Tube Rupture); and 14.2.5 (Rupture of a Steam Pipe). By

letter dated April 25, 1980 we also recently submitted to the NRC additional information concerning the analysis of a steam line break with continued feedwater addition.

If your review of this material indicates that you have continued questions in these areas, perhaps a meeting could be arranged to discuss these items further. If you concur with the Technical Specification changes proposed in ~~this~~ response, we will submit suitable license amendment requests to incorporate these changes into the licenses.

Very truly yours,

C. W. Fay

C. W. Fay, Director
Nuclear Power Department

Attachments

Copy to NRC Resident Inspector
Point Beach Nuclear Plant

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Blind copies (without attachments) to C. S. McNeer
Sol Burstein
R. H. Gorske/A. W. Finke
D. K. Porter
G. A. Reed
Gerald Charnoff

15.3.4 STEAM AND POWER CONVERSION SYSTEM

Applicability

Applies to the operating status of steam and power conversion system.

Objective

To define conditions of the steam and power conversion system steam-relieving capacity. Auxiliary Feedwater System and Service Water System operation is necessary to ensure the capability to remove decay heat from the core.

Specification

A. When the reactor coolant is heated above 350°F the reactor shall not be taken critical unless the following conditions are met:

(1) A minimum steam-relieving capability of eight (8) main steam safety valves available, except for low power physics testing.

(2)a. Two Unit Operation - All four auxiliary feedwater pumps together with their associated flow paths and essential instrumentation shall be operable.

b. Single Unit Operation - Both motor driven auxiliary feedwater pumps and the turbine driven auxiliary feedwater pump associated with that unit together with their associated flow paths and essential instrumentation shall be operable.

(3) A minimum of 10,000 gallons of water per operating unit in the condensate storage tanks and an unlimited water supply from the lake via either leg of the plant Service Water System.

(4) System piping and valves required to function during accident conditions directly associated with the above components operable.

B. The iodine-131 activity on the secondary side of the steam generator shall not exceed 1.2 μCi/cc.

C. During power operation the requirements of 15.3.4.A.2.a and b may be modified to allow the following components to be inoperable for a specified time. If the system is not restored to meet the requirements of 15.3.4.A.2.a and b within the time period specified, the specified action must be taken. If the requirements of 15.3.4.A.2.a and b are not satisfied within an additional 48 hours, the appropriate reactor(s) shall be cooled down to less than 350°F.

1. Two Unit Operation - One of the four operable auxiliary feedwater pumps may be out-of-service for up to 72 hours. If the inoperable auxiliary feedwater pump is a turbine driven pump and it cannot be restored to service within the time period the associated reactor shall be shutdown and in hot shutdown within the next 12 hours. If the inoperable auxiliary feedwater pump is one of the motor-driven pumps and it cannot be restored to service within the time period one of the reactors shall be shutdown and in hot shutdown within the next 12 hours.

2. Single Unit Operation - The turbine driven auxiliary feedwater pump may be out-of-service for up to 72 hours. If the turbine driven auxiliary feedwater pump cannot be restored to service within that time period, the reactor shall be shutdown and in hot shutdown within the next 12 hours. Either one of the two motor driven auxiliary

feedwater pumps may be out-of-service for an extended period of time, however, every effort shall be made to restore that motor driven auxiliary feedwater pump to service as soon as possible.