Wisconsin Electric
POWER COMPANY

231 W Michigan, PO Box 2046, Milwaukee, WI 53201 (414) 221-2345

VPNPD-91- 082
NRC-91- 022

10 CFR 50.59
10 CFR 50.90
10 CFR 50.4

March 1, 1991

U. S. NUCLEAR REGULATORY COMMISSION
Document Control Desk
Mail Station P1-137
Washington, D. C. 20555

Gentlemen:

DOCKETS 50-266 AND 50-301
TECHNICAL SPECIFICATION CHANGE REQUEST 143
AUXILIARY FEEDWATER PUMP TESTING
POINT BEACH NUCLEAR PLANTS, UNITS 1 AND 2

In accordance with the requirements of 10 CFR 50.59 (c), 50.90, and 50.4, Wisconsin Electric Power Company (Licensee) hereby requests amendments to Facility Operating Licenses DPR-24 and DPR-27 for Point Beach Nuclear Plant, Units 1 and 2 respectively, to incorporate changes in the plant Technical Specifications. The proposed changes will revise Specifications 15.4.8.1.a and 15.4.8.1.b to require each auxiliary feedwater pump to be started quarterly. The basis for Technical Specification Section 15.4.8 will be revised to define the quarterly start of each steam turbine-driven auxiliary feedwater pump as a fast start without prior warm-up. Marked-up Technical Specification pages with the proposed changes included are attached.

Technical Specification 15.4.8.1.a requires that each motor-driven auxiliary feedwater pump be started monthly. We have been performing these monthly tests since the units began operation in 1970 and 1972 for Point Beach Units 1 and 2 respectively. In all of these tests, as well as starts resulting from automatic system actuations, we have not experienced any failures of the pumps to start on demand, thus demonstrating a high degree of reliability. We, therefore, believe that monthly testing of the motor-driven auxiliary feedwater pumps is unnecessary and that quarterly testing is adequate to ensure operability.

Technical Specification 15.4.8.1.b requires that each steam turbine-driven auxiliary feedwater pump be started monthly, provided steam is available. This monthly test is conducted by first blowing down the steam supply lines to remove accumulated



A001
1/1

water and then slowly bringing the pump to full speed over a two-minute period. While the test demonstrates that the pump is operable, it does not test the pump under the conditions and configurations expected during an actual demand, i.e., it does not demonstrate cold, fast start capability.

We evaluated the issue of performing a cold, fast start of the turbine-driven auxiliary feedwater pump as part of our review of INPO Significant Operating Event Report (SOER) 86-01, "Reliability of Auxiliary Feedwater Systems." Recommendation 3 of that SOER suggests Terry turbine systems, such as are installed in the steam turbine-driven auxiliary feedwater pump at Point Beach Nuclear Plant, be subjected to periodic cold, fast start tests. Our evaluation concurred and, commencing in early 1990, the monthly test required by Technical Specification 15.4.8.1.b is conducted once each quarter as a fast start test without prior warm-up of the steam supply piping and the pump. To date we have conducted four cold, fast starts on each of the steam turbine-driven auxiliary feedwater pumps for each unit. All tests have been successful. Prior to 1990 and twice each quarter in 1990, we conducted the normal monthly tests. Throughout all those tests, as well as automatic starts resulting from actual system demands, we have experienced no failures of the pumps to start. The steam turbine-driven pumps have been demonstrated to be very reliable. As a result, we believe monthly testing of these pumps is unnecessary and that the quarterly fast start test without prior warm-up is adequate to demonstrate operability.

We have also reviewed the ASME Section XI requirements in regard to the frequency of inservice testing of these pumps. IWP - 3400 of Section XI requires a test of each pump nominally every three months during normal operation. In 1977 for Unit 1 and in 1978 for Unit 2, we requested a Technical Specification change to incorporate quarterly testing of these pumps as part of our Inservice Testing Program. Those requests were denied in April 1989 following the issuance of Generic Letter 89-04, "Guidance on Developing Acceptable Inservice Testing Programs," pending changes to our Inservice Testing Program. We now believe this change should be resubmitted. Accordingly, we propose to modify Technical Specification 15.4.8.1.a to read, "Each motor-driven auxiliary feedwater pump will be started quarterly," and Technical Specification 15.4.8.1.b to read, "Each steam turbine-driven auxiliary feedwater pump will be started quarterly provided steam is available." We also propose to modify the "Basis" for Technical Specification Section 15.4.8 to be consistent with these specifications and to explain that the quarterly steam turbine-driven auxiliary feedwater pump test will be a fast start test without prior warm-up.

In accordance with the requirements of 10 CFR 50.91 (a), we have evaluated these changes against the standards in 10 CFR 50.92 and have determined that operation of the Point Beach Nuclear Plant units in accordance with the proposed amendments does not present a significant hazards consideration. Previously analyzed accidents considered in our assessment include Steam Generator Tube Rupture, Loss of External Electrical Load, Loss of Power to the Station Auxiliaries, and Loss of Normal Feedwater.

Criterion 1

Operation of a facility will not result in a significant hazards consideration if it would not involve a significant increase in the probability or consequences of an accident previously evaluated. This change modifies the frequency of required starting of the auxiliary feedwater pumps and, in the case of the steam turbine-driven pump, requires this start at conditions more representative of those expected during an actual demand to start. Since only the testing frequency and conditions will be changed, there will be no physical change to the facility, its systems, or its operating procedures. Based on pump testing history, decreasing the pump test frequency from monthly to quarterly will have no effect on accident probabilities using accepted Probabilistic Risk Assessment criteria. The previously analyzed accidents are, therefore, not affected. An increased probability or consequences of an accident previously evaluated cannot result.

Criterion 2

Operation of a facility in accordance with a proposed amendment does not result in a significant hazards consideration if it cannot create the possibility of a new or different kind of accident from any previously evaluated. The proposed change modifies the frequency of a pump test and, in the case of the turbine-driven auxiliary feedwater pumps, requires this test to be at conditions more indicative of those expected during an actual demand start. No physical change to the facility or its operation results. We have been performing AFW pump testing since we began operation. Potential accidents that may be associated with this testing were previously considered. Therefore, a new or different kind of accident from any previously evaluated cannot result.

Criterion 3

Operation of a facility in accordance with a proposed amendment will not result in a significant hazards consideration if it does not involve a significant reduction in a margin of safety. Testing at quarterly intervals could result in a pump being non-operational for a longer period of time prior to detection than the presently prescribed monthly start, thus resulting in a possible reduction in a margin of safety. However, the present monthly testing has never indicated a pump failure, and the pumps have never failed to start in response to an actual demand, indicating a high degree of reliability. Based on this testing history, decreasing the test frequency from monthly to quarterly has no effect on accident probabilities using accepted probabilistic risk assessment criteria. Fast start testing without prior warm-up of the turbine-driven auxiliary feedwater pumps is more rigorous than the present slow, warm-up test, providing added assurance that the steam turbine-driven pumps will start on demand. In addition, the quarterly interval is based on ASME Section XI requirements which provide adequate assurance of pump operability. Therefore, a margin of safety is, at most, only minimally reduced from present levels.

Please contact us if you have any questions.

Very truly yours,

C. W. Fay
Vice President
Nuclear Power

Attachments

Copies to NRC Regional Administrator, Region III
NRC Resident Inspector

Subscribed and sworn to before me
this 4th day of March, 1991.

Notary Public, State of Wisconsin

My Commission expires 5-22-94.