Wisconsin Electric
POWER COMPANY

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

VPNPD-90- 397
NRC-90-92

10 CFR 50.59
10 CFR 50.90

September 7, 1990

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 142
BATTERY SERVICE AND PERFORMANCE TESTING REQUIREMENTS
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

In accordance with the requirements of 10 CFR 50.59(c) and 10 CFR 50.90, Wisconsin Electric Power Company (Licensee) requests amendments to Facility Operating Licenses DPR-24 and DPR-27 for Point Beach Nuclear Plant, Units 1 and 2 respectively. The amendments request proposes changes to Technical Specification (TS) 15.4.6, "Emergency Power System Periodic Tests", Section B, "Station Batteries", which will define and establish periodic service and performance testing requirements for safety-related station batteries. Changes to the corresponding bases for these specifications are also proposed. Technical Specification pages with the proposed changes identified by margin bars in the right-hand margin are attached.

On June 2, 1989, an Enforcement Conference was held between the Licensee and members of the NRC staff at the NRC Region III headquarters in Glen Ellyn, Illinois. The conference was called to discuss apparent violations identified in NRC Inspection Reports 50-266/89016 and 50-301/89015, as transmitted by letter dated May 31, 1989. One of the major issues discussed in this meeting was battery testing and what constitutes an effective testing program.

A letter dated July 21, 1989 transmitted the findings of the NRC staff in regard to the apparent violations discussed at the conference and also forwarded a Notice of Violation for a Severity Level IV non-conformance regarding battery testing. This letter



A001
1/1

also requested that the Licensee describe what it believes to be a satisfactory battery testing program and its justification for this position.

We responded to this request in a letter dated September 29, 1989. In our letter we indicated that, upon the NRC staff's review and concurrence with the battery testing program proposed in the attachment to the letter, we would submit a license amendment change application to incorporate the program into the Point Beach Technical Specifications.

The staff reviewed our program and responded with a letter dated May 16, 1990, offering general concurrence. It was, however, the position of the staff that battery service testing should be performed in addition to battery performance discharge tests and that this service testing should be conducted at intervals not to exceed eighteen months. This position is consistent with Regulatoy Guide (RG) 1.129, "Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Nuclear Power Plants." Wisconsin Electric, in its September 29, 1989 letter, had proposed a program involving only performance discharge tests on the basis that the performance test envelopes the worst case duty cycle (which the service test mimics) completely for batteries D105 and D106 and almost completely (except for the first minute of the sixty-minute test) for batteries D05 and D06.

In response to the NRC letter, Wisconsin Electric hereby proposes changes to the Technical Specifications to establish a battery testing program, including both service testing and performance testing, consistent with RG 1.129 and IEEE Standard 450-1987, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries." The proposed specifications regarding the tests are also consistent with NUREG-0452, Revision 4, "Standard Technical Specifications for Westinghouse Pressurized Water Reactors" (STS). These proposed changes may be described as follows:

1. TS 15.4.6, "Emergency Power System Periodic Tests", specifies periodic surveillance requirements for both diesel generators and batteries. One of the proposed changes retitles Section B as "Safety-Related Station Batteries" vice the present, more generic "Station Batteries". An identical change is proposed in the text to TS 15.4.6.B.1. This change is essentially a consideration for the future configuration of the station batteries because, at present, all four station batteries, D05, D06, D105, and D106, are safety related. However, as mentioned in our September 29, 1989 letter and in our recent response to the electrical

distribution system functional inspection dated August 3, 1990, it is our intention to install a new non-safety-related station battery for the purpose of powering several large non-safety-related loads presently carried by the station batteries, thus relieving the safety-related batteries of significant loading. We anticipate installation by the end of 1992. The proposed title change will specifically delineate the surveillances as applicable to the safety-related station batteries only.

2. The present TS 15.4.6.B.4 describes the performance testing requirements for the station batteries. We are proposing that this TS be replaced by a new TS 15.4.6.B.4 which defines a more restrictive, more definitive, and conservative testing program consistent with the NRC response to our program submittal.

   a. The new TS 15.4.6.B.4.a defines the eighteen-month required service test, and the wording presented essentially duplicates the STS except for the requirement that the test be conducted during shutdown. We believe this restriction is unnecessary for a battery whose loads are not unit-specific. At Point Beach, all four safety-related batteries carry loads which are common to both units. The stipulation that the battery test be conducted while shut down would direct, for Point Beach Nuclear Plant, that both units be shut down to conduct a battery test.

      It is our intention to install, by the end of 1992, a fully qualified, seismically mounted "swing" safety-related battery, capable of performing the safety-related functions of any of the four present station batteries. (The battery, presently designated spare battery D205, is on site and was utilized during the replacement of D05 and D06 in 1989.) With the full installation of this battery as a swing component, any of the station batteries may be taken off line for testing, regardless of the reactor condition. Thus, the battery service test need not take place only during shutdown.

   b. The proposed new TS 15.4.6.B.4.b defines the 60-month required performance test which serves to measure battery capacity and, thus, indicate long-term degradation due to aging effects. Our proposed specification is virtually identical to the STS with two exceptions:

1) As with the service test, we are taking exception to the requirement that the test be conducted while shut down, for the same reasons discussed above.

2) We have revised the definition of degradation to be consistent with IEEE Standard 450-1987.

This standard uses the "previous performance test" as the basis from which degradation is measured vice the "average on previous performance tests" used in the STS. A review of earlier revisions of the IEEE Standard revealed that the "average on previous performance tests" concept was previously specified by the standard, but was changed with the 1987 revision.

3. We have added a footnote to 15.4.6.4.a and b which specifies that service and performance testing will begin subsequent to installation of the swing safety-related battery. TS 15.3.7.B.1.f and g provide Limiting Conditions for Operation (LCO's) for batteries D05/D06 and D105/D106, respectively, and define an allowable period of inoperability for D05/D06 as 24 hours, and D105/D106 as 72 hours. If these batteries remained inoperable beyond this time period, per TS 15.3.0.A, any affected unit would be required to be placed in hot shutdown within 3 hours. Under the present TS 15.4.6.B.4, the load test specified to be completed on a 5-year periodicity could be completed within the 24-hour window for batteries D05 and D06. The test verifies that the major loads, as listed in FSAR Table 8.2-3 ("Major Battery Loads Following Loss of Outside Power") can be supplied by the battery for the time period specified. This test was conducted with the battery on line supplying the actual loads. No disconnection of the battery was necessary.

Our revised testing program, as specified by the proposed new TS 15.4.6.B.4, will subject the batteries to a more conservative and demanding loading cycle. This more extensive testing program will involve manual disconnection of the battery and reconnection of the battery to a resistor bank. Following testing and subsequent recharging of the battery, manual reconnection of the battery to its bus will complete the evolution. Based on our experience with testing of batteries D105 and D106 in 1989 (72-hour inoperability LCO's), we know that testing of this nature cannot be completed within the allowable 24-hour LCO

currently specified for batteries D05 and D06. The additional time required for battery disconnection and reconnection, as well as the additional time required to recover and recharge the battery, preclude these tests from being completed in 24 hours.

As previously discussed, we expect to complete installation of a swing safety-related battery by the end of 1992. The installation of this battery will allow replacing any of the four safety-related batteries (D05, D06, D105, D106) and thus permit testing off-line without affecting plant operation and without the time limitation of the existing LCO's. Accordingly, the new testing specifications must be qualified with the proposed footnote.

We intend to enter our proposed battery testing cycle, including the 18-month service tests, following installation of the swing safety-related battery. This creates a period of three years in which no testing will take place for batteries D105 and D106 (these batteries were installed in 1984 and completed their 5-year required performance test in fall 1989) and three and one-half years for batteries D05, D06, and D205, all of which were installed new in 1989. We believe this testing delay is acceptable because of the relative newness of these batteries whose design service life is 20 years and their satisfactory performance thus far. These batteries are presently at their expected peak capacity. Furthermore, and as mentioned above, the physical limitations imposed by testing under the present electrical system configuration preclude completion of testing within the 24-hour LCO specified for batteries D05 and D06, and experience has shown that the 72-hour LCO for D105 and D106 is extremely limiting. Thus a testing program cannot be initiated until Technical Specification changes are approved, and this approval is predicated on our installation of an additional, swing safety-related battery.

We will begin the new test cycle by testing all five safety-related batteries during the two refueling outages subsequent to the installation of the swing safety-related battery. Although we are requesting a Technical Specification for battery testing which does not require a unit shutdown, we intend to do the initial testing during unit outages due to consideration for risk minimization following installation of the new safety-related swing battery and its supporting switchgear. We believe it is prudent to conduct the initial tests while one of the Point Beach units is shut down.

We have evaluated the changes proposed in this amendment application in accordance with the requirements of 10 CFR 50.91(a) using the standards in 10 CFR 50.92 and have determined that the changes do not result in a significant hazards consideration. A proposed amendment does not result in a significant hazards consideration if operation of the facility in accordance with the proposed amendment does not (1) involve a significant increase in the probability or consequences or an accident previously evaluated, (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.

These proposed changes to TS 15.4.6.B impose more stringent and more frequent test requirements for the batteries than present requirements. Additionally, the tests are performed with the tested battery off line and replaced by a swing safety-related battery. There can, therefore, be no effect on previously evaluated accidents nor is any new accident created.

By the same reasoning, there is no significant reduction in the margin of safety. In fact, the more stringent surveillance requirements should result in an increase in margin of safety by providing better and more frequent assurances of operability.

We note also that the addition of this specification is similar to an "example of amendments not likely to involve significant hazards considerations" set forth by the staff at 51 FR 7751. Example ii reads, "A change that constitutes an additional limitation, restriction, or control not presently included in the technical specifications, e.g., a more stringent surveillance requirement."

On a separate matter, Wisconsin Electric submitted Technical Specification Change Request 132, "LCO's for Power Distribution on Safeguards Buses" to you on September 22, 1989. It is our understanding through Mr. Warren Swenson, our Project Manager prior to July 1, 1990, that the staff has nearly completed their review of this change request. Mr. Swenson further informed us that one of the reviewers requested we consider removing the phrase "...including Black Plant startup..." from TS 15.3.7.A.2 which begins with the following sentence: "A.2 Under abnormal conditions, including Black Plant startup, one reactor may be made critical providing the following conditions are met..." The reviewer's concerns are that the term "Black Plant" is undefined; the STS do not contain this term; and, to his knowledge, no other plant has this phrase in its specifications.

We have considered this matter, and we concur with the proposed deletion of the words "including Black Plant startup" from the first sentence of TS 15.3.7.A.2. We have attached a revised TS Page 15.3.7-2, which incorporates the change.

We have evaluated this proposed change in accordance with the standards specified in 10 CFR 50.92 and have determined that this proposed change involves no significant nazards considerations. "Black Plant startup" itself is an abnormal condition and, therefore, its removal does nothing to change the meaning or intent of the specification. This change is thus purely administrative in nature and represents an example of an amendment that is not likely to involve a significant hazards consideration as listed at example i of 51 FR 7751.

Please contact us if you have any questions concerning this request.

Very truly yours,

C. W. Fay
Vice President
Nuclear Power

Copies to NRC Regional Administrator, Region III
NRC Resident Inspector

Subscribed and sworn to before me
this 7th day of Sept., 1990.

Gloria J. Monsoor
Notary Public, State of Wisconsin

My Commission expires 6-7-92.