Wisconsin Electric
POWER COMPANY

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

VPNPD-94-135
NRC-94-092

10 CFR 50.4
10 CFR 50.90

December 22, 1994

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

Gentlemen:

DOCKETS 50-266 AND 50-301
TECHNICAL SPECIFICATIONS CHANGE REQUEST 178
MODIFICATION TO TECHNICAL SPECIFICATIONS FOR
ADDITION OF EMERGENCY DIESEL GENERATORS AND
LOSS OF VOLTAGE PROTECTION FUNCTION MODIFICATIONS
POINT BEACH NUCLEAR PLANTS, UNITS 1 AND 2

In accordance with the requirements of 10 CFR 50.4 and 50.90, 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 to the plant Technical Specifications. The proposed revisions will modify Technical Specification Sections 15.3.3, "Emergency Core Cooling System, Auxiliary Cooling Systems, Air Recirculation Fan Coolers, and Containment Spray;" 15.3.4, "Steam and Power Conversion System;" 15.3.5, "Instrumentation System;" 15.3.7, "Auxiliary Electrical Systems;" 15.3.14, "Fire Protection System;" and 15.4.1, "Operational Safety Review."

DESCRIPTION OF CURRENT LICENSE CONDITION

Technical Specification Section 15.3.3, "Emergency Core Cooling System, Auxiliary Cooling Systems, Air Recirculation Fan Coolers, and Containment Spray," specifies the limiting conditions for operation for the service water system. Specification 15.3.3.D.1.a states that neither reactor shall be made or maintained critical unless four service water pumps are operable.

Technical Specification Section 15.3.4, "Steam and Power Conversion System," specifies the limiting conditions for operation for the auxiliary feedwater system. Specification 15.3.4.C.2 states that for single unit operation either one of the two motor driven auxiliary feedwater pumps may be out-of-service for up to seven days.



A001

Technical Specification Section 15.3.5, "Instrumentation System," specifies the limiting conditions for operation for the plant instrumentation system. Table 15.3.5-3, Specifications 4.a.ii provide the operability requirements for the 4.16KV loss of voltage functions.

Technical Specification Section 15.3.7, "Auxiliary Electrical Systems," specifies the limiting condition for operation requirements for offsite and onsite electrical power for plant power operation and for the operation of plant auxiliaries with the following objectives: (1) provide for safe reactor operation and (2) provide for the continuing availability of engineered safeguards.

Technical Specification Section 15.3.14, "Fire Protection System," specifies the limiting condition for operation requirements associated with fire protection components which would be employed to mitigate the consequences of fires that could affect equipment required for safe plant operation.

Technical Specification Section 15.4.1, "Operational Safety Review," specifies the surveillance requirements for instrumentation and protective circuitry. Table 15.4.1-1, Specifications 36, 37.a, and 37.b provide the surveillance requirements for the degraded voltage and loss of voltage functions.

PROPOSED CHANGES

The description of proposed changes, safety evaluation, no significant hazards consideration and the edited Technical Specifications pages are provided as attachments to this letter.

It has been determined that the proposed amendments do not involve a significant hazards consideration, authorize a significant change in the types or total amounts of any effluent release, or result in any significant increase in individual or cumulative occupational exposure. Therefore, we conclude that the proposed amendments meet the requirements of 10 CFR 51.22(c)(9) and that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared.

We are performing a modification that will install two additional emergency diesel generators and reconfigure portions of the 4160 volt emergency electrical power system at our Point Beach Nuclear Plant. The first connection of the modification into the existing electrical system took place during the fall 1994 Unit 2 refueling outage. The second connection is scheduled to take place

during the spring 1995 Unit 1 refueling outage which is scheduled to begin March 11, 1995. Issuance of the requested amendments to the Point Beach Technical Specifications will be required to support the reconfiguration of the emergency electrical power distribution system at that time.

Please feel free to contact us if you have any questions.

Sincerely,

Bob Link
Vice President
Nuclear Power

Attachment

CAC/jg

cc: NRC Regional Administrator
NRC Resident Inspector
Public Service Commission of Wisconsin

Subscribed and sworn before me on
this 21st day of December 1994.

Notary Public, State of Wisconsin

My commission expires 10-27-96 .

# TECHNICAL SPECIFICATION CHANGE REQUEST 178
# DESCRIPTION OF PROPOSED CHANGES

We are performing a modification that will install two additional emergency diesel generators and reconfigure portions of the 4160 volt emergency electrical power system at our Point Beach Nuclear Plant. We are also modifying the loss of voltage protection function, which causes opening of the normal safeguards power supply breaker, starting of the associated emergency diesel generator, and provides a permissive for restoration of power to the affected bus via the emergency diesel generator, from 1-out-of-2 protection logic to 2-out-of-3 protection logic. The following proposed changes incorporate the necessary Technical Specifications for these modifications.

Technical Specification Section 15.3.3

The footnote associated with Technical Specification 15.3.3.D.1.a states:

> "* During the Unit 2, 1994 refueling outage, one Train B service water pump operating with power supplied by the Alternate Shutdown System, B08/B09 480 volt buses, may be considered operable from a normal (offsite) power supply, under the provisions of Technical Specification 15.3.0.C."

Change this footnote to state:

> "* During the Unit 1, 1995 refueling outage, one Train A service water pump operating with power supplied by the Alternate Shutdown System, B08/B09 480 volt buses, may be considered operable from a normal (offsite) power supply, under the provisions of Technical Specification 15.3.0.C."

This change is necessary because, during the reconfiguration of the electrical distribution system for the installation of two additional diesel generators, the Unit 1, A05, Train A safeguards bus is being extended to include the existing Unit 1, A06, Train B safeguards bus. The Unit 1 A05 bus will be out-of-service for approximately four days to accommodate this modification.

Some shared equipment that supports Unit 2 operation is powered from the Unit 1 A05 bus. The shared equipment that supports Unit 2 operation includes two service water pumps. The applicable limiting condition for operation for Unit 2 would be 24 hours as required by Technical Specification 15.3.3.D.2.a.

Therefore, to allow sufficient time to complete this modification, one service water pump that is normally powered from Unit 1 A05 will be operating with power supplied by the Alternate Shutdown System. This pump will be considered operable from a normal (offsite) power supply, under the provisions of Technical Specification 15.3.0.C.

Technical Specification Section 15.3.4

Delete the footnote associated with Specification 15.3.4.C.2 that states, "During the Unit 2, 1994 refueling outage, P-38B, the Train B motor driven auxiliary feedwater pumps may be out-of-service for up to 12 days."

This change removes a one-time exception from the Technical Specifications that is no longer applicable.

Technical Specification Section 15.3.5

Change Table 15.3.5-3, Specification 4.a.ii to include requirements for 2-out-of-3 logic for the loss of voltage function. This is being done by specifying the following for the 2-out-of-3 logic row:

| | | |
|---|---|---|
| Column 1 | No. of Channels | 3/bus |
| Column 2 | No. of Channels to trip | 2/bus |
| Column 3 | Min. Operable Channels | 2/bus |
| Column 4 | Permissible Bypass Conditions | None |
| Operator Action if Conditions of Col. 3 cannot met | | *** |

Add a new note associated with "*****" for the loss of voltage relay protection function as follows:

"***** - Use the 3/bus specification for each A05 or A06 bus that has been modified to the 2-out-of-3 logic for the loss of voltage protection function."

These changes are necessary to accommodate the modification of the logic for the A05 and A06 buses in both units. We are planning to perform these modifications during the upcoming Unit 1 and Unit 2, 1995, refueling outages. The new note associated with the loss of voltage protection function requires the appropriate row for 1-out-of-2 and 2-out-of-3 protection logic to be used for determining if an LCO should be entered.

Change the note associated with "***" as follows:

"*** - Declare the standby emergency power supply inoperable for the affected bus. The applicable Limiting Condition for Operation (LCO) shall be entered. Separate LCOs may be entered for the Degraded Voltage and Loss of Voltage functions."

This change is necessary to incorporate the revised nomenclature for emergency diesel generators which is "standby emergency power supply."

Technical Specification Section 15.3.7

Delete Specification 15.3.7.A.1.d, that states, "Both units' A05/A06 bus tie-breakers are removed from their cubicles." Also, delete the references to the A05 and A06 tie breakers in Specifications 15.3.7.B.1.d and e.

This change is necessary because the modification to install additional emergency diesel generators eliminates the A05/A06 tie breaker capability.

Delete the footnote associated with Specification 15.3.7.B.1.h that states, "During the Unit 2, 1994 refueling outage, standby emergency power to Unit 1 A06/B04 and Unit 2 A06/B04 may be out-of-service for up to 12 days."

This change removes a one-time exception from the Technical Specifications that is no longer applicable.

Technical Specification Section 15.3.7 Basis

Add the new emergency diesel (G-03 and G-04) ventilation system limitations to the basis of Section 15.3.7. This addition states, "OR for G-03 and G-04, only the large capacity fan (W-183C for G-03, W-184B for G-04) is operable and outside air temperature is <84°F or only the small capacity fan (W-183B for G-03, W-184C for G-04) is operable and outside air temperature is ≤36°F." This change provides appropriate limitations for operability of the new emergency diesel generators with either the large capacity or small capacity fan out-of-service.

Technical Specification Section 15.3.14

Add Line Item 21 to Table 15.3.14-1 to include the G01/G02 fuel oil transfer pump room in the new diesel generator building in the safe shutdown area fire protection table. This change is necessary because the fuel oil transfer system for the G01 and G02 emergency diesel generators is being changed to use the new fuel oil transfer system as part of the modification to install additional emergency diesel generators.

Technical Specification 15.4.1

Change Table 15.4.1-1, Number 13, to remove the "(1)" from the monthly test requirements. This change is necessary because the "(1)" footnote allows discontinuing testing of these protection functions during periods of refueling shutdown. This exception is considered to be inappropriate because this testing is necessary for verifying operability of shared equipment powered from a unit in refueling shutdown.

TECHNICAL SPECIFICATION CHANGE REQUEST 178
SAFETY EVALUATION

**Introduction**

Wisconsin Electric Power Company (Licensee) has applied for amendments to Facility Operating Licenses DPR-24 and DPR-27 for Point Beach Nuclear Plant, Units 1 and 2. These amendments propose to revise Technical Specifications to incorporate appropriate Limiting Conditions for Operation and Surveillances for modifications that are being performed at Point Beach Nuclear Plant. Additionally, these amendments propose to revise Technical Specifications to remove some exceptions that are no longer necessary or appropriate.

**Scope of Activities**

As part of the ongoing modification to install additional emergency diesel generators, the following activities will be performed during the Unit 1 spring 1995 refueling outage that affect the Technical Specifications:

1. Neither unit at Point Beach will have A05/A06 tie breaker capability, after the Unit 1 spring 1995 refueling outage. Therefore, the provisions in the LCOs for the use of these tie breakers are being removed from the Technical Specifications.

2. During the next two refueling outages, Unit 1 spring 1995 and Unit 2 fall 1995, we are planning to perform modifications that will change the 4160 volt safeguards bus loss of voltage protection logic from 1-out-of-2 to 2-out-of-3. Therefore, the Technical Specifications are being modified to account for this new capability. If a problem occurs such that these mod fications cannot be completed during these outages as planned, the specification is being stated in such a manner that will allow completion in future outages.

3. The buses that previously served as the Train B 4160 volt safeguards buses (A06 buses), that are being replaced by the new A06 buses, are being converted to extensions of the existing Train A 4160 volt safeguards buses (A05 buses). During the next Unit 1 refueling outage, this conversion will affect some shared safeguards equipment that supports the operation of Unit 2. Therefore, the Technical Specifications are being modified to allow a service water pump operating on Alternate Shutdown to be considered operable from a normal power supply.

**Bus Tie-Breakers**

The original design of PBNP included bus tie-breakers that allowed the connection of the Train A and Train B 4160 volt and 480 volt safeguards buses. The modification to install additional emergency diesel generators will eliminate the 4160 volt A05/A06 bus tie-breaker capability.

The specifications for the 4160 volt safeguards buses, A05 and A06, direct an independent lineup of power distribution, specifically stating that a normal lineup must be achieved (all safeguards buses associated with a unit are powered through their normal supply breaker with all safeguards bus tie-breakers open) prior to taking a unit critical and during subsequent power operation.

There are no design, operation, or safety analyses for PBNP that establish requirements for the A05/A06 bus tie capability. The use of the bus ties are restricted to periods of cold or refueling shutdown. The main purpose of the A05/A06 bus tie capability at PBNP was for maintaining electrical power to either safeguards bus while the normal power supply for that bus was out-of-service for maintenance. The bus tie capability in the 480 volt safeguards buses remains and is sufficient for maintaining continuity of electrical service to the desired loads during periods when electrical power to either safeguards bus is out-of-service for maintenance.

Therefore, the removal of the bus tie capability for the 4160 volt safeguards buses and the associated proposed Technical Specifications changes are appropriate.

**Loss of Voltage Protection Function**

The loss of voltage protection function causes the following:

1. A trip signal to the associated normal safeguards buses power supply breakers.

2. A start signal for the associated emergency diesel generators.

3. A permissive for the closure to the emergency diesel generator output breakers to repower the buses that have lost voltage.

The existing design of this protection function for PBNP was based on two channels per bus with the trip of one channel causing the protection actions listed above. This design is being changed for PBNP to use three channels per bus with the trip of two channels causing the protection actions listed above. This change to the design is an improvement over the original design, because with the new design an inadvertent trip of a single channel will not cause the protection action. When any

single channel is taken out of service for testing, maintenance, or calibration it can be placed in the trip condition to allow actuation of the protection function by the trip of either of the remaining operable channels.

The 2-out-of-3 loss of voltage protection function meets or exceeds the original design requirements for this protection function for PBNP as defined by the applicable General Design Criteria for this protection feature in the PBNP FSAR.

The proposed Technical Specifications changes for this protection function will require that at least two channels are operable. If less than two channels are operable, the applicable limiting condition for operation for the standby emergency power supply for that bus shall be entered. These requirements are appropriate for this protection logic and consistent with Technical Specification requirements for 2-out-of-3 protection logic.

**Service Water Pump Operability**

During the reconfiguration of the electrical distribution system for the installation of two additional diesel generators, the Unit 1 A05, Train A safeguards bus, is being extended to include the existing Unit 1 A06, Train B safeguards bus. The Unit 1 A05 bus will be out-of-service for approximately four days to accommodate this modification.

Some shared equipment that supports Unit 2 operation is powered from Unit 1 A05/B03 buses. The shared equipment that supports Unit 2 operation includes service water pumps, P-32A and P-32B. The applicable limiting condition for operation allowed outage time for Unit 2 would be 24 hours as required by Technical Specification 15.3.3.D.2.a. Therefore, to allow sufficient time to complete this modification, one service water pump that is normally powered from Unit 1 A05/B03, will be operating with power supplied by the alternate shutdown system. This pump will be considered operable from a normal (offsite) power supply, under the provisions of Technical Specification 15.3.0.C.

The operating pump powered from alternate shutdown is able to perform its safety function from the alternate shutdown power source. The alternate shutdown system is powered via offsite power or from the onsite gas turbine generator and is being considered a normal power supply for the service water pump.

The alternate shutdown system was installed to provide an alternate means of providing power to service water pumps, component cooling water pumps, and residual heat removal pumps for certain 10 CFR 50 Appendix R fire scenarios in which the normal power supplies for this equipment become inoperable. As such, the alternate shutdown system is a qualified alternate source of power for the selected service water pump (P-32A or P-32B).

Therefore, the service water LCO which states that neither reactor shall be made or maintained critical unless four service water pumps are operable will not be entered because five service water pumps will be operable, three from Train B, one from Train A, and one Train A pump from the alternate shutdown system.

**Removal of Obsolete Specifications**

The single-use, 12-day allowed outage times for the electric auxiliary feedwater pump P-38B (TS 15.3.4.C.2) and standby emergency power to Unit 1 A06/B04 and Unit 2 A06/B04 buses (TS 15.3.7.B.1.h), that were used during the Unit 2, 1994 refueling outage, are no longer applicable and can be removed from the Technical Specifications. The removal of these obsolete specifications has no impact on the safe operation of PBNP because these specifications are no longer applicable.

Technical Specification Table 15.4.1-1 currently allows the exception from performing required testing of the degraded voltage and loss of voltage protection features during periods of refueling shutdown. This exception is not considered to be appropriate, because this testing should be continued to verify operability of shared equipment that supports operation of the operating unit. The removal of these exceptions is an improvement in the safe operation of PBNP because it will provide the appropriate requirements for testing of these shared protection features.

**Conclusion**

These proposed changes provide appropriate limiting conditions for operation, action statements, allowable outage times, surveillances and bases for the Point Beach Nuclear Plant Technical Specifications for the scope of activities described above. The Technical Specification exception that will allow a Train A service water pump to be considered operable if it is running powered from the alternate shutdown system is similar to the exception used previously for a Train B service water pump during the Unit 2 refueling outage and provides for the continued safe operation of Unit 2 during reconfiguration of the Unit 1 electrical distribution system. The removal of obsolete specifications are improvements to the Technical Specifications and are justified as described above. Therefore, continued safe operation of PBNP is assured by these proposed Technical Specification changes.

TECHNICAL SPECIFICATION CHANGE REQUEST 178
"NO SIGNIFICANT HAZARDS CONSIDERATION"

In accordance with the requirements of 10 CFR 50.91(a), Wisconsin Electric Power Company (Licensee) has evaluated the proposed changes against the standards of 10 CFR 50.92 and has determined that the operation of Point Beach Nuclear Plant, Units 1 and 2, in accordance with the proposed amendments does not present a significant hazards consideration. The analysis of the requirements of 10 CFR 50.92 and the basis for this conclusion are as follows:

1. Operation of this facility under the proposed Technical Specifications will not create a significant increase in the probability or consequences of an accident previously evaluated.

   The probabilities of accidents previously evaluated are based on the probability of initiating events for these accidents. Initiating events for accidents previously evaluated for Point Beach include: control rod withdrawal and drop, CVCS malfunction (Boron Dilution), startup of an inactive reactor coolant loop, reduction in feedwater enthalpy, excessive load increase, losses of reactor coolant flow, loss of external electrical load, loss of normal feedwater, loss of all AC power to the auxiliaries, turbine overspeed, fuel handling accidents, accidental releases of waste liquid or gas, steam generator tube rupture, steam pipe rupture, control rod ejection, and primary coolant system ruptures.

   This license amendment request proposes to remove the specifications associated with the 4160 volt safeguards bus tie, add and modify specifications associated with the degraded and loss of voltage protection functions, and remove specifications and surveillance exceptions that are obsolete. The modifications being performed and the changes proposed by this license amendment request have been reviewed and we conclude that these changes do not increase the probability of any initiating event for accidents previously analyzed for Point Beach Nuclear Plant.

   The consequences of the accidents previously evaluated in the PBNP FSAR are determined by the results of analyses that are based on initial conditions of the plant, the type of accident, transient response of the plant, and the operation and failure of equipment and systems. The changes proposed in this license amendment request provide appropriate limiting conditions for operation, action statements, allowable outage times, surveillances and bases for the Point Beach Nuclear Plant Technical Specifications.

The proposed specification that allows a Train A service water pump powered from the alternate shutdown system to be considered operable under the provisions of Technical Specification 15.3.0.C is appropriate to maintain operability of the service water system for the continued safe operation of Unit 2 under the applicable standby emergency power limiting condition for operation.

The modifications that are being performed have been designed and will be installed in accordance with the applicable design and installation requirements for Point Beach Nuclear Plant.

Therefore, this proposed license amendment does not affect the consequences of any accident previously evaluated in the Point Beach Nuclear Plant FSAR because the factors that are used to determine the consequences of accidents are not being changed.

2. Operation of this facility under the proposed Technical Specifications change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

New or different kinds of accidents can only be created by new or different accident initiators or sequences. New and different types of accidents (different from those that were originally analyzed for Point Beach) have been evaluated and incorporated into the licensing basis for Point Beach Nuclear Plant. Examples of different accidents that have been incorporated into the Point Beach Licensing basis include anticipated transients without scram and station blackout.

The modifications being performed and the changes proposed by this license amendment request have been reviewed and we conclude that these changes do not create any new or different accident initiators or sequences. Therefore, these modifications and proposed Technical Specification changes do not create the possibility of an accident of a different type than any previously evaluated in the Point Beach FSAR.

3. Operation of this facility under the proposed Technical Specifications change will not create a significant reduction in a margin of safety.

The margins of safety for Point Beach are based on the design and operation of the reactor and containment and the safety systems that provide their protection. The modifications that are being performed have been designed and will be installed in accordance with the applicable design and installation requirements for Point Beach Nuclear Plant.

The modification to change the loss of voltage protection function from 1-out-of-2 logic on each bus to 1-out-of-2 logic on each bus is an improvement over the original design, because with the new design an inadvertent trip of a single channel will not cause the protection actions. Also, when any single channel is taken out-of-service for testing, maintenance, or calibration it can be placed in the trip condition to allow actuation of the protection function by the trip of either of the remaining operable channels.

The Technical Specification change to allow an operating pump powered from alternate shutdown to be considered operable is justified because the pump is able to perform its safety function powered from the alternate shutdown power source. The alternate shutdown system is powered via offsite power or from the onsite gas turbine generator and is being considered a normal power supply for the service water pump.

The alternate shutdown system was installed to provide an alternate means of providing power to service water pumps, component cooling water pumps, and residual heat removal pumps for certain 10 CFR 50 Appendix R fire scenarios in which the normal power supplies for this equipment become inoperable. As such, the alternate shutdown system is a qualified alternate source of power for the service water pump.

Therefore, the margins of safety for Point Beach are not being reduced because the design and operation of the reactor and containment are not being changed and the safety systems that provide their protection that are being changed are being modified in accordance with the applicable design and installation requirements for the Point Beach Nuclear Plant.