Wisconsin Electric
POWER COMPANY

Point Beach Nuclear Plant
6610 Nuclear Rd., Two Rivers, WI 54241

(414) 755-2321

PBL 97-0052

10CFR50.4
10CFR50.90

February 12, 1997

Document Control Desk
US NUCLEAR REGULATORY COMMISSION
Mail Station P1-137
Washington, DC 20555

Ladies/Gentlemen:

DOCKETS 50-266 AND 50-301
TECHNICAL SPECIFICATIONS CHANGE REQUEST 196
RELOCATION OF TURBINE OVERSPEED PROTECTION
TECHNICAL SPECIFICATIONS TO FSAR
POINT BEACH NUCLEAR PLANT, 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 (PBNP) Plant, Units 1 and 2, respectively, to incorporate changes to the plant Technical Specifications. The proposed changes relocate turbine overspeed protection surveillances, limiting conditions for operation (LCOs), and bases from the Technical Specifications to the PBNP Final Safety Analysis Report (FSAR) in accordance with NRC Generic Letter 95-10, "Relocation of Selected Technical Specifications Requirements Related to Instrumentation," dated December 15, 1995. A description of current license condition/proposed changes, a safety evaluation, an assessment of no significant hazards, and marked-up Technical Specifications pages indicating the proposed changes are attached.

This submittal satisfies part of Unit 2 Start-Up Commitment 81, "Submit the following requests for license amendments resulting from the review of existing Technical Specifications interpretations...Revise the maximum acceptable power level when the crossover steam dumps are inoperable (TS 15.3.4.E)." The proposed changes also support the Unit 1 and Unit 2 low pressure turbine upgrade project which is scheduled to commence May 9, 1997.

We have 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 radiation exposure. Therefore, we conclude that the proposed amendments meet the categorical exclusion requirements of 10 CFR 50.22 (c) (9) and that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared.

A001

Please contact us if you have any questions or require additional information.

Sincerely,

for Douglas F. Johnson
Manager-Regulatory Services
and Licensing

Subscribed and sworn to before me
this 12th day of February, 1997.

Notary Public, State of Wisconsin

My commission expires 10/26/2000

DAW
Enclosures

190063

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

Attachment 1
Description of Current License Condition/Proposed Changes
Technical Specifications Change Request 196
Relocation of Turbine Overspeed Protection Technical Specifications to FSAR
Point Beach Nuclear Plant, Units 1 and 2

DESCRIPTION OF CURRENT LICENSE CONDITION

Technical Specifications Section 15.3.4, "Steam and Power Conversion System," defines conditions of the steam and power conversion system steam-relieving capacity.

Technical Specifications Section 15.4.1, "Operational Safety Review," specifies surveillances for items directly related to safety limits and limiting conditions for operation (LCOs).

DESCRIPTION OF PROPOSED CHANGES

The following Specifications and associated Bases will be removed from the PBNP Technical Specifications:

1. TS 15.3.4.E - The crossover steam dump system shall be operable. If the crossover steam dump system is determined to be inoperable, reduce power to less than 480 MWe (gross) within 3 hours.

2. TS 15.3.4.E Basis - The crossover steam dump system is designed to prevent the turbine from exceeding 132% of rated speed following a unit trip. The system is armed at approximately 430 MWe. The system receives input from, and is actuated when the turbine auxiliary governor and/or the Independent Overspeed Protection System (IOPS) senses an overspeed condition. The system consists of four pilot-operated dump valves, with only three valves being necessary to achieve the required overspeed protection. However, in order to meet single failure criteria, the crossover steam dump system shall be declared inoperable if any one of the four dump valves is declared inoperable.

3. TS 15.3.4.F - During power operation, at least one of the turbine overspeed protection systems that trip the turbine stop valves or shut the turbine governor valves shall be operable. If all three systems are determined to be inoperable, isolate the turbine from the steam supply within the next six hours.

4. TS 15.3.4.F Basis - In addition to the crossover steam dump system, there are three other systems that protect the turbine from an overspeed condition. The first feature is the mechanical overspeed trip mechanism which consists of an eccentric weight located in the turbine rotor extension shaft. The
5. second feature uses the turbine auxiliary governor to sense turbine overspeed using the auxiliary speed tachometer. The third feature is IOPS. This system monitors turbine speed electrically and consists of three independent speed channels. The actuation of two of three channels will generate a trip signal. The mechanical overspeed trip mechanism and IOPS cause the turbine stop valves to trip and the turbine governor valves to shut, while the auxiliary governor causes only the governor valves to shut. A turbine stop valve shall be declared inoperable if it does not trip shut following a valid overspeed signal. A turbine governor valve shall be declared inoperable if it does not respond properly following a valid overspeed signal

6. TS 15.3.4.G - Should one of the turbine stop valves or governor valves be declared inoperable, restore the inoperable valve to an operable status within 72 hours. If operability cannot be restored, perform one of the following actions:

    1. Shut the affected valve within the next six hours.
    2. Isolate the turbine from the steam supply within the next six hours.

7. TS Table 15.4.1-1, Item 42 - Calibration (refueling frequency) and test (monthly frequency) for turbine overspeed trips.

8. TS Table 15.4.1-2, Item 18 - Turbine stop and governor valves annual test.

9. TS Table 15.4.1-2, Item 19 - Low pressure turbine rotor five-year visual and magnetic particle or liquid penetrant inspection.

10. TS Table 15.4.1-2, Item 29 - Crossover steam dump system quarterly steam dump valve operability verification.

All of the above Specifications and associated Bases will be transferred as written to FSAR Section 10.4, "Tests and Inspections," except for Item 1. The maximum allowable power level with the crossover steam dump system inoperable will be conservatively reduced from 480 MWe to 437 MWe. This change has previously been justified via 10 CFR 50.59 Safety Evaluation 95-058-01. Any subsequent changes to the above provisions will be performed in accordance with 10 CFR 50.59.

Attachment 2

Safety Evaluation

Technical Specifications Change Request 196

Relocation of Turbine Overspeed Protection Technical Specifications to FSAR

Point Beach Nuclear Plant, Units 1 and 2

Wisconsin Electric Power Company (licensee) is applying for amendments to Facility Operating Licenses DPR-24 and DPR-27 for Point Beach Nuclear Plant, Units 1 and 2, respectively. The requested amendments relocate turbine overspeed protection surveillances, limiting conditions for operation (LCOs), and bases from the Technical Specifications to the PBNP Final Safety Analysis Report (FSAR) in accordance with NRC Generic Letter 95-10, "Relocation of Selected Technical Specifications Requirements Related to Instrumentation."

The potential for turbine missiles is evaluated in the PBNP FSAR. The evaluation concludes that since the probability of turbine missile generation is essentially zero due to the overspeed protection provided, it is not necessary to evaluate the affects of turbine overspeed.

Point Beach probabilistic safety assessments (PSA) and operating experience have demonstrated that proper maintenance of the turbine stop and governor valves is important to minimize the potential for overspeed events and turbine damage. Westinghouse WCAP-11525, "Probabilistic Evaluation of Reduction in Turbine Valve Test Frequency," dated June 1987, calculated the annual probability of a turbine overspeed and subsequent missile ejection to be 1.08E-06 for Unit 1 and 1.92E-06 for Unit 2. However that experience has also demonstrated that there is low likelihood of significant risk to health and safety because of turbine overspeed events. Further, the potential for, and consequences of turbine overspeed events are diminished by the PBNP inservice inspection program, which complies with 10 CFR 50.55a, and an annual surveillance program for the turbine stop and governor valves which is based on the manufacturers recommendations. Although both PBNP turbine generators are unfavorably oriented tangentially to both containment structures, the probability of a turbine missile impacting a safety-related system, structure, or component is very small. In fact, the only credible scenario in which a turbine missile impacts safety-related equipment is a turbine missile which is ejected through the turbine building roof and descending into the spent fuel pool. The probability of this sequence is 7.5E-11.

In addition, the original keyway/shrunk-on disk designed low pressure turbine rotors are scheduled to be replaced with monoblock (fully integral) designed rotors during the 1997 Unit 1 and Unit 2 refueling outages. The monoblock design is less susceptible to turbine burst; and therefore, the risk due to potential turbine missiles will be reduced even further. The PBNP FSAR will be updated to reflect the rotor change and the lower failure probability associated with the new monoblock rotor design.

The above changes are administrative in nature. The proposed changes will allow the PBNP Technical Specifications to be consistent with the guidance in NUREG-1431, Revision 1, "Standard Technical Specifications, Westinghouse Plants," dated April 1995. NUREG-1431 does not provide Specifications requiring the operability of a turbine overspeed system, and the limiting conditions for operation and surveillance requirements for turbine overspeed protection were removed from the Standard Technical Specifications. The identified provisions will be relocated to the PBNP FSAR in their entirety with the exception of the conservative reduction of the turbine load limit with the crossover steam dump system inoperable which has been justified via 10 CFR 50.59. Submittal of the updated FSAR to the NRC will continue to be performed in accordance with 10 CFR 50.71(e). Changes to the relocated provisions will be controlled in accordance with 10 CFR 50.59. Control of the relocated provisions in accordance with 10 CFR 50.59 will ensure that NRC review and approval will be conducted for any changes exceeding the stated regulatory threshold. Therefore, the proposed change does not involve an unreviewed safety question.

Attachment 4
"No Significant Hazards Determination"
Technical Specifications Change Requests 196
Relocation of Turbine Overspeed Protection Technical Specifications to FSAR
Point Beach Nuclear Plant, Units 1 and 2

In accordance with the requirements of 10 CFR 50.91 (a), Wisconsin Electric Power Company (licensee), has evaluated the proposed amendments against the standards in 10 CFR 50.92 and has determined that the operation of Point Beach Nuclear Plant in accordance with the proposed amendments, does not result in a significant hazards consideration as follows:

1. **Operation of Point Beach Nuclear Plant in accordance with the proposed amendments will not result in a significant increase in the probability or consequences of an accident previously evaluated.**

The proposed amendments administratively relocate turbine overspeed protection Specifications to the Point Beach Final Safety Analysis Report (FSAR). The Specifications will be transferred verbatim, except for the turbine load limit with the crossover steam dump system inoperable, which has already been evaluated under 10 CFR 50.59 and will be conservatively reduced. In addition, the regulatory requirements of 10 CFR 50.55a, "Codes and Standards," will still apply to the relocated Specifications. Therefore, operation of Point Beach Nuclear Plant in accordance with the proposed amendments cannot create an increase in the probability or consequences of an accident previously evaluated

2. **Operation of Point Beach Nuclear Plant in accordance with the proposed amendments will not create the possibility of a new or different kind of accident from any accident previously evaluated.**

The proposed amendments administratively relocate Specifications to the FSAR and in one case result in a more conservative operating limit. Therefore, operation of Point Beach Nuclear Plant in accordance with the proposed amendments cannot create a new or different kind of accident from any accident previously evaluated.

3. **Operation of Point Beach Nuclear Plant in accordance with the proposed amendments will not create a significant reduction in a margin of safety.**

The proposed changes are administrative in nature. There is no physical change to the facility, its systems, or its operation, except for the conservative reduction of the turbine load limit with the crossover steam dump system inoperable which has already been justified via 10 CFR 50.59. Therefore, operation of PBNP in accordance with the proposed amendments cannot result in a significant reduction in a margin of safety.