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10 CFR 50.4
10 CFR 50.90

February 26, 1993

Document Control Desk
U.S. NUCLEAR REGULATORY COMMISSION
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Gentlemen:

DOCKETS 50-266 AND 50-301
TECHNICAL SPECIFICATIONS CHANGE REQUEST 157
MODIFICATIONS TO SECTIONS 15.3.4 AND 15.4.8
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 Plant, Units 1 and 2 respectively, to incorporate changes to the plant Technical Specifications. The proposed revisions will revise Technical Specifications Section 15.3.4 by adding operating conditions and limiting conditions for operation for the atmospheric steam dump valves, crossover steam dump system, turbine stop and governor valves, and the various turbine over-speed protection features. This change also proposes to revise the surveillance requirements in Section 15.4.8 for the auxiliary feedwater system. The bases for Technical Specifications Sections 15.3.4 and 15.4.8 are also being revised to support this change. Marked-up Technical Specifications pages, a safety evaluation, and the no significant hazards consideration are enclosed.

DESCRIPTION OF CURRENT LICENSE CONDITION

Section 15.3.4, "Steam and Power Conversion System," describes the operating conditions and limiting conditions for operation for the main steam safety valves and the auxiliary feedwater system. This section also prescribes the limits for Iodine-131 activity on the secondary side of a steam generator.

Section 15.4.8, "Auxiliary Feedwater System," describes the surveillances required to be performed on the auxiliary feedwater pumps and associated support equipment.

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TECHNICAL SPECIFICATION CHANGE REQUEST 157
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 follows:

1. Operation of this facility under the proposed Technical Specifications change will not create a significant increase in the probability or consequences of an accident previously evaluated. This proposed change will add operating conditions and limiting conditions for operation for the atmospheric steam dump lines, crossover steam dump system, turbine stop and governor valves, and the various turbine overspeed protection features installed at Point Beach Nuclear Plant. This change will also revise the surveillance requirements for the turbine-driven auxiliary feed-water system. The change will additionally add explanatory text to the bases of the associated sections. These proposed revisions will add additional requirements to the Technical Specifications, making the document more restrictive, enhancing the overall operation of Point Beach Nuclear Plant. The only revision that will relax any existing requirements is the proposed revision of the AFW pump valve testing requirements. This proposed revision would change the requirements to require the tests to be performed quarterly instead of monthly. This surveillance interval is consistent with the testing intervals for the AFW pumps and with ASME Section XI requirements. There is no physical change to the facility, its systems, or its operation. Thus, an increased probability or consequences of an accident previously evaluated cannot occur.
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. This proposed change will add operating conditions and limiting conditions for operation for the atmospheric steam dump lines, crossover steam dump system, turbine stop and governor valves, and the various turbine overspeed protection features installed at Point Beach Nuclear Plant. This change will also revise the surveillance requirements for the turbine-driven auxiliary feed-water pumps. The change will additionally add explanatory text to the bases of the associated sections. These proposed revisions will add additional requirements to the

DESCRIPTION OF PROPOSED CHANGES

This Technical Specification Change Request proposes to modify Sections 15.3.4 and 15.4.8 to incorporate items identified during a comparison of the safety analyses in the Point Beach Nuclear Plant Final Safety Analysis Report (FSAR) and the Limiting Conditions for Operation (LCO) and surveillance sections of the current Technical Specifications. The items being added are required to be operable by the safety analyses in order to mitigate an accident, but are not currently included in the Point Beach Technical Specifications. The proposed changes are as follows:

1. A specification concerning the atmospheric steam dump valves is proposed for addition as TS 15.3.4.A.5:

"Both atmospheric steam dump lines shall be operable. If either of the atmospheric steam dump lines is determined to be inoperable, restore the inoperable line to an operable status within 24 hours. If operability cannot be restored, be in hot shutdown within 6 hours and in cold shutdown within 24 hours.

2. A specification concerning the crossover steam dump system is proposed for addition as TS 15.3.4.D:

"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."

3. A specification concerning the various turbine overspeed protection features is proposed for addition as TS 15.3.4.E:

"During power operation, at least one of the turbine overspeed protection systems that trips the turbine stop valves or shuts 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 6 hours."

4. A specification concerning the turbine stop and governor valves is proposed for addition as TS 15.3.4.F:

"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 6 hours.
2. Isolate the turbine from the steam supply within the next 6 hours."

Technical Specifications, making the document more restrictive, enhancing the overall operation of Point Beach Nuclear Plant. The only revision that will relax any existing requirements is the proposed revision of the AFW pump valve testing requirements. This proposed revision would change the requirements to require the tests to be performed quarterly instead of monthly. This surveillance interval is consistent with the testing intervals for the AFW pumps and with ASME Section XI requirements. There is no physical change to the facility, its systems, or its operation. Thus, a new or different kind of accident cannot occur.

3. Operation of this facility under the proposed Technical Specifications change will not create a significant reduction in a margin of safety. This proposed change will add operating conditions and limiting conditions for operation for the atmospheric steam dump lines, crossover steam dump system, turbine stop and governor valves, and the various turbine overspeed protection features installed at Point Beach Nuclear Plant. This change will also revise the surveillance requirements for the turbine-driven auxiliary feedwater pumps. The change will additionally add explanatory text to the bases of the associated sections. These proposed revisions will add additional requirements to the Technical Specifications, making the document more restrictive, enhancing the overall operation of Point Beach Nuclear Plant. The only revision that will relax any existing requirement is the proposed revision of the AFW pump valve testing requirements. This proposed revision would change the requirements to require the tests to be performed quarterly instead of monthly. This surveillance interval is consistent with the testing intervals for the AFW pumps and with ASME Section XI requirements. There is no physical change to the facility, its systems, or its operation. Thus, a significant reduction in a margin of safety cannot occur. In fact, the additional requirements being proposed for addition to the Technical Specifications may result in an increased margin of safety by assuring these systems function as analyzed in the Point Beach Nuclear Plant Final Safety Analysis Report.

5. The turbine-driven auxiliary feedwater pumps are currently tested quarterly provided steam is available. In order to address the actions should the required surveillance test come due during a period when steam is unavailable, a clarifying statement is proposed for addition to the end of TS 15.4.8.1.b:

"If the test comes due when not at power operation, the test shall be performed during the subsequent startup within 24 hours of entering power operation."

6. The auxiliary feedwater pump discharge valves and suction side service water supply valves are currently required to be tested monthly. This change to TS 15.4.8.1.c proposes to revise this requirement to require these tests to be performed quarterly. This test interval would then be consistent with the existing test requirements for the motor and turbine-driven auxiliary feedwater pumps and the requirements of ASME Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components."
7. In order to clarify what features are required for auxiliary feedwater pump operability, the following text is proposed for addition to the basis for TS 15.3.4:

"Each of the AFW pumps possess a low suction pressure trip that will protect it should a loss of feedwater occur. Additionally, should a steam generator tube rupture occur, the motor-operated steam admission valves for the turbine-driven AFW pumps serve as isolation boundaries for the affected steam generator."

8. In order to support the proposed changes, the following text concerning the crossover steam dump system, the various turbine overspeed protection features, and the atmospheric steam dump valves is proposed for addition to the bases for TS 15.3.4:

"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 4 pilot-operated dump valves, with only 3 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."

"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 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 turbine 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."

"The atmospheric steam dump lines are required to be operable because they are relied upon, following a steam generator tube rupture coincident with a loss of A.C. power, to cool down the Reactor Coolant System to RHR entry conditions. An atmospheric steam dump line is considered operable if it is capable of providing the controlled relief of main steam flow necessary to perform the RCS cooldown. Isolating an atmospheric steam dump line does not render it inoperable if the line can be un-isolated and the RCS can still be cooled down to RHR entry conditions, through local or remote operation, within the time period required by the applicable FSAR accident analyses."

9. In order to ensure that the appropriate surveillance testing is being performed, the following text concerning the turbine-driven AFW pump steam admission valves is proposed for addition to the bases for TS 15.4.8:

"The ability to both open and shut the turbine-driven AFW pump motor-operated steam admission valves will be demonstrated since these valves serve as isolation boundaries should a steam generator tube rupture occur."

BASIS AND JUSTIFICATION

In a letter submitted to the NRC on December 3, 1991, Wisconsin Electric committed to conduct a review of the safety analyses in the Point Beach Nuclear Plant Final Safety Analysis Report (FSAR) against the Limiting Conditions for Operation (LCO) section and surveillance section of the Point Beach Nuclear Plant Technical Specifications. This review was conducted to determine if any systems, components, or functions taken credit for in the accident

analyses should be added to the Technical Specifications. This review identified numerous items that should possess Technical Specification LCOs and surveillances.

The items identified as requiring LCOs and/or surveillances, and not covered by this change request, or a previous change request, will be addressed in future change requests. The justification for the additions included in the Description of Proposed Changes Section of this letter is located in the attached safety evaluation.

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. We, therefore, 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.

In summary, the proposed changes contained in this package will put additional controls in place that will further ensure the continued safe operation of Point Beach Nuclear Plant. For this reason, we request that you process this change at your earliest convenience.

Please contact us if there are any questions.

Sincerely,



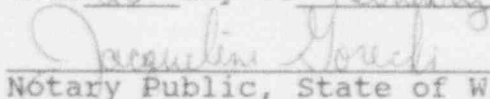
Bob Link
NRC President
Nuclear Power

FDP/jg

Enclosures

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

Subscribed and sworn before me on
this 26th day of February 1993.


Notary Public, State of Wisconsin

My commission expires 10-27-96.

TECHNICAL SPECIFICATIONS CHANGE REQUEST 157
SAFETY EVALUATION

INTRODUCTION

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. The amendments propose to add operating conditions and limiting conditions for operation for the atmospheric steam dump valves, the crossover steam dump system, the turbine stop and governor valves, and the various turbine overspeed protection features installed at Point Beach Nuclear Plant. Additionally, revisions to the surveillance requirements for the auxiliary feedwater system are proposed. The amendments also propose to add explanatory text to the bases for Sections 15.3.4 and 15.4.8.

EVALUATION

This Technical Specification change request is being submitted to incorporate items identified during a comparison of the safety analyses in the Point Beach Nuclear Plant Final Safety Analysis Report and the current Technical Specifications.

The atmospheric steam dump lines provide a controlled method for plant cooldown following a steam generator tube rupture coincident with a loss of A.C. power. The ability to cool down the plant by this method is relied upon in the Point Beach Nuclear Plant safety analyses for this event. There are two atmospheric steam dump lines per unit, one per steam generator. Therefore, if either of the lines is determined to be inoperable, operability must be restored within 24 hours or the plant must be placed in hot shutdown within 6 hours and in cold shutdown within 24 hours. Point Beach Nuclear Plant Emergency Operating Procedure (EOP) 3.3, "Post Steam Generator Tube Rupture Cooldown Using Steam Dump," directs the use of the atmospheric steam dump valves as the method to cool down the plant to reach Residual Heat Removal (RHR) entry conditions. This procedure further states that the required valve may be opened automatically or manually.

An atmospheric steam dump line is considered operable if it is capable of providing the controlled relief of main steam flow necessary to perform the required RCS cooldown. Isolating an atmospheric steam dump line would not render it inoperable if the line could be un-isolated and the RCS cooled down to RHR entry conditions, through local or remote operation of the atmospheric steam dump valve, within the time period required by the applicable PSAR accident analyses. The proposed action times are consistent with the Westinghouse Standard Technical Specifi-

cations, NUREG-1431, requirements and take into account the availability of the condenser steam dumps and main steam safety valves, and the low probability of a steam generator tube rupture event occurring during this period concurrent with a loss of A.C. power. If the operability of an atmospheric steam dump line cannot be restored, the plant should be placed in cold shutdown because a steam generator tube rupture is not considered a credible event when primary temperature is less than 200 degrees. The associated surveillance, a quarterly cycle of the atmospheric steam dump valves, is not included in this change request because it has been previously submitted in Technical Specification Change Request 154, dated December 10, 1992.

The crossover steam dump system is designed to prevent the turbine from exceeding 132% of rated speed following a unit trip. The system consists of four pilot-operated dump valves, but only three valves are required 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. If the crossover steam dump system is determined to be inoperable, the proposed specification would require power to be reduced to less than 480 MWe (gross) within 3 hours. Below 480 MWe (gross), a unit trip would not cause the turbine to exceed 132% of rated speed, even if the crossover steam dump system was not available. The 3-hour time frame will allow an orderly and controlled power reduction to take place without challenging any plant systems. This proposed specification is consistent with current Point Beach practices. A quarterly surveillance requirement for the crossover steam dump valves was previously proposed in Technical Specification Change Request 154, dated December 10, 1992.

In addition to the crossover steam dump system, there are three different turbine overspeed protection systems. These are the mechanical overspeed trip mechanism, the turbine auxiliary governor, and the Independent Overspeed Protection System (IOPS). These three systems cause a turbine trip by tripping the turbine stop valves and/or by shutting the turbine governor valves. The proposed specification would require at least one of these three systems to be operable. If all three of these systems were determined to be inoperable, the turbine would be isolated from the steam supply within the next 6 hours. This proposed specification is consistent with Standard Technical Specification requirements.

The overspeed protection features trip the turbine stop valves and shut the turbine governor valves in order to protect the turbine. The proposed specification, should one of the turbine stop or governor valves be declared inoperable, would allow 72 hours to restore the valve to an operable status. Otherwise the valve must be shut or the turbine isolated from the steam supply within the next 6 hours. A turbine stop valve will be

declared inoperable if it does not trip shut following a valid overspeed signal. A turbine governor valve will be declared inoperable if it does not properly respond to a valid overspeed signal. This proposed specification is consistent with Standard Technical Specification requirements. Surveillances on the turbine stop and governor valves already exist in the current Point Beach Technical Specifications.

Point Beach Technical Specifications Section 15.3.4.A states that when the reactor coolant is heated above 350°, the reactor shall not be taken critical unless the turbine-driven auxiliary feedwater (AFW) pump, together with its associated flowpath and essential instrumentation, is operable. Presently, the turbine-driven AFW pump operability test is not performed until after the reactor is critical. This is because establishing a steam generator pressure of at least 350 psig is required to perform the test. This steam pressure cannot be reached without exceeding 350°, although it is possible to reach this pressure prior to reactor criticality. The test, however, is not performed prior to reactor criticality because the reactor coolant pumps are not capable of maintaining reactor coolant temperature if core heat generation is not occurring.

For this reason, an addition is proposed to the existing surveillance requirement for the turbine-driven AFW pump. This addition would state, "If the test comes due when not at power operation, the test shall be performed during the subsequent startup within 24 hours of entering power operation." This addition would allow the appropriate test conditions to be reached, while ensuring that the test is performed in a timely manner once these conditions are met. This proposed addition is consistent with NUREG-1431 surveillance requirements.

Technical Specification 15.4.8.1.c currently requires a monthly full stroke and position indication test of the auxiliary feedwater pump discharge valves and suction side service water supply valves. We propose to revise this surveillance requirement to require a quarterly surveillance. This change would require that the valves are tested at the same frequency as the motor and turbine-driven pumps. This proposed test interval is also consistent with the requirements of ASME Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components."

The remaining additions are to the bases of Sections 15.3.4 and 15.4.8. These additions simply provide explanatory text concerning the atmospheric steam dump lines, crossover steam dump system, and the various turbine overspeed protection features. Another addition to the bases describes the function of the low suction pressure trip and motor-operated steam admission valves for the auxiliary feedwater pumps. These statements are being added because it has been determined that the low suction

pressure trip and functionality of the motor-operated steam admission valves are required for auxiliary feedwater pump operability.

CONCLUSIONS

In summary, all of the proposed changes to the Technical Specifications are being made in an attempt to make the document more complete. No existing requirement is being removed and several requirements are being added. The time intervals specified for these additional items are consistent with Westinghouse Standard Technical Specification, NUREG-1431, requirements, or with current Point Beach Nuclear Plant practices. Therefore, the addition of these new requirements will ensure and enhance the continued safe operation of Point Beach Nuclear Plant.