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10 CFR 50.4

NRC-92-114

10 CFR 50.90

October 6, 1992

Instrument 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 151
DOCUMENTATION OF ROD POSITION IN STEPS VICE INCHES
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 amendment 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 revision changes all references of rod position in the Technical Specifications to units of steps rather than inches. A revision to the basis for Section 15.3.10, "Control Rod and Power Distribution Limits," is also proposed to clarify the definition of "fully withdrawn" as it concerns Rod Cluster Control Assemblies. Revisions to Table 15.3.5-5, Section 15.3.10, the basis for Section 15.3.10, and Figure 15.3.10-1 are proposed to support this change. Marked-up Technical Specification pages, a safety evaluation, and the no significant hazards consideration are enclosed.

DESCRIPTION OF CURRENT LICENSE CONDITION

Currently, in Section 15.3.10, "Control Rod and Power Distribution Limits," and Table 15.3.5-5, "Instrument Operating Conditions for Indications," of the PBNP Technical Specifications, rod position is referenced in both units of steps and inches. Additionally, Figure 15.3.10-1, "Control Bank Insertion Limits Point Beach Units 1 and 2," references rod position in percent withdrawn.

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The control rod fully withdrawn position is defined as a bank demand position equal to or greater than 225 steps. This definition is applicable to both shutdown and control banks. References to the "fully withdrawn position are found in Section 15.3.10, "Control Rod and Power Distribution Limits."

DESCRIPTION OF PROPOSED CHANGES

This Technical Specification Change Request proposes several related changes. The proposed changes are as follows:

1. Revise all references of rod position in Section 15.3.10 and Table 15.3.5-5 from units of inches to units of steps. These changes ensure that references to rod position are consistent throughout the PBNP Technical Specifications.
2. Revise Figure 15.3.10-1 to reference control bank position in units of steps instead of the currently used unit of percent withdrawn.
3. In order to clarify the definition of "fully withdrawn," the second paragraph of the Basis for Section 15.3.10 is being revised to read:

"During power operation, the shutdown banks are fully withdrawn. Fully withdrawn is defined as a bank demand position equal to or greater than 225 steps. Evaluation has shown that positioning control rods at 225 steps, or greater, has a negligible effect on core power distributions and peaking factors. Due to the low reactivity worth in this region of the core and the fact that, at 225 steps, control rods are only inserted one step into the active fuel region of the core, positioning rods at this position or higher has minimal effect. This position is varied, based on a predetermined schedule, in order to minimize wear of the guide cards in the guide tubes of the RCCAs."

4. Item 2 of Section 15.3.10.A on page 15.3.10-1 is revised to reference Footnote (1). This is proposed because the footnote is applicable to both shutdown and control banks. Item 2 of Section 15.3.10.A discusses control bank position.

5. Revise Figure 15.3.10-1 by adding the following explanatory note:

"The 'fully withdrawn' parking position range can be used without violating is Figure."

BASIS AND JUSTIFICATION

Section 15.3.10, "Control Rod and Power Distribution Limits," ensures core subcriticality following a reactor trip, a limit on potential reactivity insertions from a hypothetical rod cluster control assembly ejection, and an acceptable core power distribution during power operation. The changes to this section will reference rod position in units of steps to ensure consistency throughout this section. These changes additionally will reference rod position so that it corresponds with the control room indications used by the operators.

Table 15.3.5-5, "Instrument Operating Conditions for Indications," specifies the number of available channels and the minimum number of operable channels required for various functional indicators. This table also specifies the operator action required if the minimum conditions cannot be met. The proposed revision changes the reference to rod position in the operator action column of the "Control Rod Misalignment" portion of this table.

Figure 15.3.10-1, "Control Bank Insertion Limits Point Beach Units 1 and 2," specifies control bank insertion limits that must be maintained to ensure the ability to achieve hot shutdown following a reactor trip anytime during core life. These limits assume that the control rod with the highest reactivity worth remains fully withdrawn, and include a 10% margin in reactivity worth of the applicable control rods. These limits also provide a limit on the maximum inserted rod worth in the event of a hypothetical rod ejection while still maintaining nuclear peaking factors within acceptable limits.

These proposed amendments change the reference of control bank position on the figure from percent withdrawn to steps withdrawn. This change will reference control bank position to correspond to the actual control room indications. Additionally, a note will be added to the bottom of the figure to indicate the "fully withdrawn" parking position as it relates to control bank insertion limits.

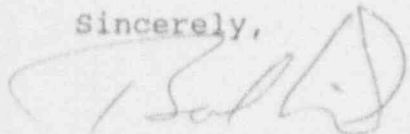
In summary, all of these changes are being proposed in response to a request from the plant operators. These changes will update the PBNP Technical Specifications so that rod position is referenced in

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the Technical Specifications using the same units as indicated in the control room. These changes are not safety significant, but will enhance the ability of the operators to safely operate the plant. Please process this change in a timely manner.

Please contact us if there are any questions.

Sincerely,



Bob Link
Vice President
Nuclear Power

FDP/jg

Enclosures

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

Subscribed and sworn before me on
this 6th day of October 1992.

Gloria J. Monson
Notary Public, State of Wisconsin

My Commission expires 6-2-96.

TECHNICAL SPECIFICATION CHANGE REQUEST 151
SAFETY EVALUATION

INTRODUCTION:

Wisconsin Electric Power Company (Licensee) has applied for amendments for Facility Operating Licenses DPR-24 and DPR-27 for Point Beach Nuclear Plant, Units 1 and 2. These amendments propose to change all references of rod position in the PBNP Technical Specifications to units of steps. These proposed amendments additionally clarify the definition of "fully withdrawn" as it refers to Rod Cluster Control Assemblies.

EVALUATION:

Presently, in Section 15.3.10, "Control Rod and Power Distribution Limits" and Table 15.3.5-5, "Instrument Operating Conditions for Indications" of the Technical Specifications, rod position is referenced in both units of inches and steps. The unit of steps is the preferred reference because it corresponds to indications used by the operators at Point Beach Nuclear Plant. One step equals 5/8 inch of rod motion. Since there is a direct correlation between steps and inches, this revision is simply a change in format to ensure that the Technical Specifications are consistent with respect to rod position.

Figure 15.3.10-1, "Control Bank Insertion Limits Point Beach Units 1 and 2" references control bank position in percent withdrawn. In this figure, control bank position is based on 228 steps being equal to 100% withdrawn. Since there is a direct correlation between steps and the percent withdrawn position, this proposed revision is simply a change in format that will make the figure easier for the operators to use. Currently, the three insertion limits for banks B, C, and D intersect the y-axis of the figure at 77, 22, and 81 percent withdrawn, respectively. When converting these three intercept points to units of steps, the values will be rounded up, in the conservative direction, to the next whole step value. This will result in the three intercept points being listed in the figure as 176, 51, and 185 steps, respectively.

Additionally, in order to clarify the definition of "fully withdrawn," the basis for Section 15.3.10 is being updated. The definition of "fully withdrawn" was most recently changed by Amendments 88 and 93 to Facility Operating Licenses DPR-24 and DPR-27 respectively. These amendments approved a change to the control rod fully withdrawn position from 228 steps to a bank demand position equal to or greater than 225 steps. This definition is applicable to both shutdown and control banks. An evaluation performed by Westinghouse in 1984, allowed the

licensee to lower the fully withdrawn parking position of shutdown and control banks from 228 steps to 225 steps. At 225 steps, the rods are only 0.3 inches into the active fuel region, and at 228 steps, the rods are above the active fuel region. Because of the low reactivity worth in this region of the core, the evaluation concluded that the effects on power distributions and core peaking factors would be minimal, and that these new power distributions and core peaking factors were still well within the required safety margins. This lower allowed parking position was implemented in order to minimize wear of the guide cards in the guide tubes of the Rod Cluster Control Assemblies.

Based upon a predetermined schedule, the parking position for different operating cycles will vary from 225 steps to 228 steps. This parking position is the same for both shutdown and control banks. Each core's reload safety evaluation will determine the adequacy of this parking position.

This definition of parking position could, however, cause some confusion during the use of Figure 15.3.10-1, "Control Bank Insertion Limits Point Beach Units 1 and 2" during certain operating cycles. The amendments proposed by this Technical Specification change request propose to reference control bank position in steps. This figure is based on the 100% withdrawn position being equal to 228 steps. Therefore, during the operating conditions when the parking position is set below 228 steps, it would appear as if a violation of banks B and C would potentially exist. To prevent any confusion, a note is being added to this figure that will explain that a "fully withdrawn" position range of 225 to 228 steps can be used without violating this figure.

CONCLUSIONS:

In summary, changing the reference of rod position to units of steps instead of inches will make the Technical Specifications consistent with respect to rod position. This change will also reference rod position in units that are identical to the operator's control room indications. Additionally, in order to clarify the definition of "fully withdrawn," an explanatory paragraph will be added to the basis for Section 15.3.10 to describe the background and reasons for this defined position. This update to the basis will not change the way that Point Beach Nuclear Plant is operated.

TECHNICAL SPECIFICATION CHANGE REQUEST 151
"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 have determined that the operation of Point Beach Nuclear Power 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 is as follows:

1. Operation of this facility under the proposed Technical Specification change will not create a significant increase in the probability or consequences of an accident previously evaluated. This proposed change simply revises all references of rod position in the Technical Specifications, to units of steps. There is a direct correlation between steps, inches, and percent withdrawn. Therefore, this is only a format change, making all references to rod position consistent throughout the Technical Specifications and with control board indications. Additionally, updating the basis of Section 15.3.10 is proposed to clarify the definition of "fully withdrawn" as it concerns Rod Cluster Control Assemblies. This basis change will not change the way that the plant is operated because the parking position of the shutdown and control banks will still be based upon a predetermined schedule that varies parking position, on a cycle-to-cycle basis, as appropriate, to minimize RCCA wear. Each core's reload safety evaluation is also used to ensure that this parking position is adequate. There is no physical change to the facility, its systems, or its operation. Therefore, an increased probability or consequences of an accident previously evaluated cannot occur.

2. Operation of this facility under this proposed Technical Specification change will not create the possibility of a new or different kind of accident from any accident previously evaluated. This proposed change simply revises all references of rod position in the Technical Specifications, to units of steps. There is a direct correlation between steps, inches, and percent withdrawn. Therefore, this is only a format change, making all references to rod position consistent throughout the Technical Specifications and with control board indications. Additionally, updating the basis of Section 15.3.10 is proposed to clarify the definition of "fully withdrawn" as it concerns Rod

Cluster Control Assemblies. This basis change will not change the way that the plant is operated because the parking position of the shutdown and control banks will still be based upon a predetermined schedule that varies parking position, on a cycle-to-cycle basis, as appropriate, to minimize RCCA wear. Each core's reload safety evaluation is also used to ensure that this parking position is adequate. There is no physical change to the facility, its systems, or its operation. Therefore, a new or different kind of accident cannot occur.

3. Operation of this facility under this proposed Technical Specification change will not create a significant reduction in a margin of safety. This proposed change simply revises all references of rod position in the Technical Specifications, to units of steps. There is a direct correlation between steps, inches, and percent withdrawn. Therefore, this is only a format change, making all references to rod position consistent throughout the Technical Specifications and with control board indications. Additionally, updating the basis of Section 15.3.10 is proposed to clarify the definition of "fully withdrawn" as it concerns Rod Cluster Control Assemblies. This basis change will not change the way that the plant is operated because the parking position of the shutdown and control banks will still be based upon a predetermined schedule that varies parking position, on a cycle-to-cycle basis, as appropriate, to minimize RCCA wear. Each core's reload safety evaluation is also used to ensure that this parking position is adequate. There is no physical change to the facility, its systems, or its operation. In fact, this change enhances the ability of the operators to safely operate the plant by presenting the operators with Technical Specification information for rod position in units consistent with existing plant instrumentation. A margin of safety may therefore increase. Therefore, a significant reduction in a margin of safety cannot occur.