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NPL 2000-0025

10 CFR 50.90

January 19, 2000

Document Control Desk  
U.S. NUCLEAR REGULATORY COMMISSION  
Mail Station P1-137  
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Ladies/Gentlemen:

DOCKETS 50-266 AND 50-301  
TECHNICAL SPECIFICATIONS CHANGE REQUEST 217  
CONTAINMENT TESTS  
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

In accordance with the requirements of 10 CFR 50.4 and 10 CFR 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. The purpose of the proposed amendments is to implement changes to the Technical Specifications (TS) to better satisfy the intent of Regulatory Guide 1.35, Revision 3, for containment tendon surveillance.

TS 15.4.4-II.A specifies the requirements for selecting sample tendons for containment tendon surveillance. The proposed change to these requirements will clarify that a different tendon may be designated a control tendon providing that the new control tendon had not previously been physically changed (e.g., retensioned). Additional information on this matter is contained in Wisconsin Electric letter NPL 99-0379 to the NRC dated June 29, 1999.

Attached is a description of changes, safety evaluation, no significant hazards, and edited Technical Specifications and related bases pages supporting the requested changes.

We have determined that the proposed amendments do not involve a significant hazards consideration, do not result in a significant change in the types or total amounts of effluent release, nor result in any significant increase in individual or cumulative occupational

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radiation exposure. Therefore, we conclude that the proposed amendments meet the categorical exclusion requirements of 10 CFR 51.22(c)(9) and that an environmental impact appraisal need not be prepared.

We request approval of the proposed amendments by July 2000.

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

Sincerely,



Mark E. Reddemann  
Site Vice President  
Point Beach Nuclear Plant

JG/tja

Subscribed to and sworn before me  
on this 19<sup>th</sup> day of January, 2000

Christine K. Pozorski  
Notary Public, State of Wisconsin

My Commission expires on 8/25/2000.

cc: NRC Regional Administrator  
NRC Resident Inspector

NRC Project Manager  
PSCW

DESCRIPTION OF PROPOSED CHANGES  
TECHNICAL SPECIFICATIONS CHANGE REQUEST 217  
CONTAINMENT TESTS  
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

Introduction

In accordance with the requirements of 10 CFR 50.4 and 10 CFR 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.

This proposed amendment would revise Technical Specification 15.4.4-II.A to clarify that a different tendon may be designated a control tendon providing that the new control tendon had not previously been physically changed (e.g., retensioned).

Technical Specification 15.4.4-II.A

Technical Specification 15.4.4-II.A provides requirements for selecting tendons for containment tendon surveillance.

The following changes to this Specification are proposed.

II. TENDON SURVEILLANCE

A. Object

In order to insure containment structural integrity, selected tendons shall be periodically inspected for symptoms of material deterioration or lift-off force reduction. The tendons for inspection shall be randomly but representatively selected from each group for each inspection; however, to develop a history and to correlate the observed data, one tendon from each group shall be kept physically unchanged after initial selection. Tendons selected for inspection will consist of five hoop tendons, three vertical tendons located approximately 120° apart, and three dome tendons, one from each of the three dome tendon groups.

Basis for Change

Regulatory Guide 1.35, Revision 3 (Paragraph 2.4) states, "to develop a history and to correlate the observed data, one tendon from each group should be kept unchanged after the initial selection, and these unchanged tendons should be identified as control tendons". The observed data from the common (control) tendons is one method that establishes tolerance limits for the prestressing force and provides a correlation among the observed data. It is known that any decrease in the prestressing force of a tendon is due to the time dependent factors.

Point Beach selected common tendons from the first year inspection sample and designated these the control tendons. However, all the inspected tendons, including the control tendons, were retensioned during the 1<sup>st</sup>, 3<sup>rd</sup>, and 8<sup>th</sup> year tendon surveillances, as recommended by earlier versions of Regulatory Guide 1.35. Use of retensioned tendons as control tendons does not allow for developing a proper relaxation history and correlation of observed data with projected trends as intended by Regulatory Guide 1.35.

Since the initially selected control tendons were physically changed (detensioned and subsequently retensioned), Point Beach designated new control tendons that were not examined during the first three surveillances and therefore not retensioned. This was discussed with NRC staff as documented in Wisconsin Electric letter NPL 99-0379 to the NRC dated June 29, 1999. Designation of new control tendons will assure that data obtained from future surveillances will allow for development of a proper relaxation history and correlation of observed data with projected trends. The designation of new control tendons was evaluated in accordance with the requirements of 10 CFR 50.59 and determined that no unreviewed safety question was involved.

The selection of physically unchanged tendons as new control tendons meets the intent of Technical Specification 15.4.4-II.A "...to develop a history and to correlate the observed data, one tendon from each group shall be kept unchanged after initial selection". However, the Technical Specification phrase, "after initial selection", could be interpreted to imply that the originally designated control tendons must remain as the control tendons (designation may not be changed). Since the originally designated control tendons were physically changed, their continued use as control tendons would negate the intent of Technical Specifications and Regulatory Guide 1.35, Revision 3. Use of the initially selected control tendons would be preferable only if they had never been physically altered. The Regulatory Guide addressed this condition by stating, "the NRC staff recognized that in some older plants (plants operating before the initial issuance of Regulatory Guide 1.35 in 1974), adopting all provisions of this revised guide may not be feasible".

To address this condition, the proposed change to Technical Specification 15.4.4-II.A will remove the reference regarding the originally selected control tendons and require that current control tendons for each group be kept physically unchanged (i.e., unaltered from initial installation and never retensioned). The use of control tendons that have never been physically altered since initial installation will allow the proper development of tendon relaxation history and correlation of observed data from future surveillances, as intended by the Technical Specifications and Regulatory Guide 1.35, Revision 3.

It is our intent that the newly selected control tendons will not be changed and will henceforth remain the designated control tendons. However, if a control tendon is found to need retensioning, another nearby tendon will be selected and designated as a control tendon.

SAFETY EVALUATION  
TECHNICAL SPECIFICATION CHANGE REQUEST 217  
CONTAINMENT TESTS  
POINT BEACH NUCLEAR PLANT UNITS 1 AND 2

Introduction

In accordance with the requirements of 10 CFR 50.4 and 10 CFR 50.90, Wisconsin Electric Power Company (WE) is requesting amendments to Facility Operating Licenses DPR-24 and DPR-27 for Point Beach Nuclear Plant, Units 1 and 2, respectively. The purpose of the proposed amendments is to clarify that a new tendon may be designated a control tendon providing that the new tendon had not previously been physically changed (e.g., retensioned).

The proposed change affects surveillance of the containment structure designed to mitigate the consequences of a loss-of-coolant accident (LOCA). The function of the containment is to maintain structural integrity during and following the peak transient pressures and temperatures which result from a LOCA. The containment is designed to limit fission product leakage following the design basis LOCA. Because the proposed change does not alter the plant design, only the selection of the common tendons used for trending, the proposed change does not directly change containment integrity.

System Description

The function of the ungrouted, post tensioned tendons is to ensure that containment structural integrity is maintained during and following the peak transient pressures and temperatures that result from a LOCA. The containment is designed to limit fission product leakage following the design basis LOCA.

Safety Evaluation

The proposed change relates to the structural integrity of the containment structure designed to mitigate the consequences of a loss-of-coolant accident (LOCA). Periodic inspection of the containment tendons is the method used to determine loss of load carrying capability due to wire breakage or deterioration. Any abnormal conditions are subjected to an engineering evaluation to determine whether the condition could result in a significant adverse impact on containment structural integrity. The specified acceptance criteria are such as to alert attention to the situation well before the tendon load carrying capability would deteriorate to a point that failure during a design basis accident might be possible. The proposed change does not alter the plant design; only the selection of control tendons used for evaluating surveillance data is being changed. A physically unchanged tendon will be used to evaluate surveillance data, the acceptance criteria are

not being changed, and the safety design bases for containment structural integrity are not changed.

The proposed change will not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the FSAR; it will not create the possibility for an accident or malfunction of a different type than any evaluated previously in the FSAR; and the margin of safety as defined in the technical specification bases is not reduced, as discussed below:

1. Neither the tendons nor the containment tendon testing process are accident initiators and therefore cannot increase the probability of occurrence of an accident previously evaluated in the Final Safety Analysis Report (FSAR).
2. Selecting new physically unchanged control tendons, that better meet the intent of Regulatory Guide 1.35, improves the development of a tendon relaxation history and correlation of observed test data, thus ensuring that any degradation is promptly identified and corrective action taken. Improvements in the evaluation of surveillance data cannot increase the consequences of an accident previously evaluated in the FSAR.
3. Since control tendons only serve as a basis for evaluating surveillance data and the selection criteria ensure an appropriate tendon is chosen, selecting new control tendons cannot increase the probability of occurrence of a malfunction of equipment important to safety as previously evaluated in the FSAR.
4. The proposed amendment cannot increase the consequences of a malfunction of equipment important to safety previously evaluated in the FSAR. Designating new control tendons does not impact the physical characteristics of any tendon or potential degradation mechanisms.
5. The proposed amendment cannot create the possibility of an accident of a different type than any previously evaluated in the FSAR. The containment system is not an accident initiator. The design and design bases are not being altered. Selecting new control tendons cannot initiate a credible accident.
6. The proposed amendment cannot create the possibility of a malfunction of equipment important to safety of a different type other than any previously evaluated in the FSAR. The surveillances continue to ensure potential degradation is promptly detected and corrected as necessary. No new degradation mechanisms are introduced such that a malfunction of a different type cannot result.
7. The margin of safety as defined in the Basis for Technical Specification 15.4.4 is not adversely affected as a result of this proposed amendment. The underlying basis and intent of the Specification is not being changed.

### Proposed Technical Specifications Changes

The changes proposed to Technical Specification 15.4.4-II.A are consistent with the above assumptions.

Technical Specification 15.4.4-II.A presently requires that one tendon from each group shall be kept unchanged after initial selection. The Specification, as proposed, would clarify that one tendon from each group shall be kept physically unchanged.

### Conclusion

The results of these evaluations and the Basis for Change in Attachment 1 demonstrate that all systems necessary to respond to and mitigate the consequences of a design basis accident continue to perform their functions as described in the FSAR, subject to the limitations of the analysis assumptions.

NO SIGNIFICANT HAZARDS CONSIDERATION  
TECHNICAL SPECIFICATIONS CHANGE REQUEST 217  
CONTAINMENT TESTS  
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Wisconsin Electric has evaluated the proposed amendments in accordance with 10 CFR 50.91 against the standards in 10 CFR 50.92 and has determined that the operation of the Point Beach Nuclear Plant in accordance with the proposed amendments presents no significant hazards. Our evaluation against each of the criteria in 10 CFR 50.92 follows.

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

The proposed change does not involve a change to structures, systems, or components which would affect the probability or consequences of an accident previously evaluated in the PBNP Final Safety Analyses Report (FSAR). The containment tendons are components integral to maintaining the containment pressure boundary under post accident conditions. Neither the tendons nor the containment tendon testing process are accident initiators. The proposed change simply clarifies the Technical Specifications regarding the selection of control tendons used to develop a tendon relaxation history and correlate observed test data. The proposed change does not affect reactor operations or accident analysis and has no significant radiological consequences. Therefore, this change will not create a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed change does not involve a change to the plant design or operation. As a result, the proposed change does not affect any of the parameters or conditions that contribute to initiation of any accidents. This change clarifies the Technical Specifications regarding the selection of control tendons used to develop a history

and correlate observed test data. Except for the method of selecting the control tendon, the methods for performing the actual tendon surveillances are not changed. No new accident modes are created by selecting the control tendons. No safety-related equipment or safety functions are altered as a result of this change. Selecting a control tendon has no influence on, nor does it contribute to, the possibility of a new or different kind of accident or malfunction from those previously analyzed. Therefore, the proposed change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

The proposed change affects only the selection of control tendons used to develop a history and correlate observed test data. Except for the method of selecting the control tendons, the methods for performing the actual tests are not changed. The proposed change is based on NRC accepted provisions contained in Regulatory Guide 1.35, Revision 3. Furthermore, the proposed change will not reduce the availability of systems associated with containment integrity when they are required to mitigate accident conditions. Therefore, the proposed change will not create a significant reduction in a margin of safety.

Conclusion

Operation of the Point Beach Nuclear Plant in accordance with the proposed amendments will not result in a significant increase in the probability or consequences of any accident previously analyzed; will not result in a new or different kind of accident from any accident previously analyzed; and, does not result in a reduction in any margin of safety. Therefore, operation of PBNP in accordance with the proposed amendments does not result in a significant hazards determination.

TECHNICAL SPECIFICATION PAGE MARKUPS  
TECHNICAL SPECIFICATIONS CHANGE REQUEST 217  
CONTAINMENT TESTS  
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

#### 15.4.4 CONTAINMENT TESTS

##### Applicability

Applies to containment leakage and structural integrity.

##### Objective

To verify that potential leakage from the containment and the pre-stressing tendon loads are maintained within acceptable values.

##### Specification

I. Perform required visual examinations and leakage rate testing in accordance with the Containment Leakage Rate Testing Program.

##### II. TENDON SURVEILLANCE

###### A. Object

In order to insure containment structural integrity, selected tendons shall be periodically inspected for symptoms of material deterioration or lift-off force reduction. The tendons for inspection shall be randomly but representatively selected from each group for each inspection; however, to develop a history and to correlate the observed data, one tendon from each group shall be ~~kept physically unchanged after initial selection~~. Tendons selected for inspection will consist of five hoop tendons, three vertical tendons located approximately 120° apart, and three dome tendons, one from each of the three dome tendon groups.

###### B. Frequency

Tendon surveillance shall be conducted at five-year intervals in accordance with the following schedule:\*

<u>Unit</u>	<u>Year</u>	<u>Surveillance Required</u>
1	1984	Physical
2	1984	Visual
1	1989	Visual
2	1989	Physical

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\*Subsequent five-year interval inspections repeat this pattern.

INCORPORATION OF PROPOSED CHANGES  
TECHNICAL SPECIFICATIONS CHANGE REQUEST 217  
CONTAINMENT TESTS  
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