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SUBJECT: Application for amend to license DPR-43, consisting of proposed amend 118, revising TS to add operability & surveillance requirements for steam generator wide range level indication instrumentation.

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**WISCONSIN PUBLIC SERVICE CORPORATION**

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February 23, 1993

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

10 CFR 50.90

Gentlemen:

Docket 50-305  
Operating License DPR-43  
Kewaunee Nuclear Power Plant  
Proposed Amendment 118 to the Kewaunee  
Nuclear Power Plant (KNPP) Technical Specifications (TS's)

- References:
- 1) Letter from M. J. Davis (NRC) to K. H. Evers (WPSC) dated September 28, 1990
  - 2) Letter from A. G. Hansen (NRC) to C. A. Schrock (WPSC) dated October 15, 1992
  - 3) Letter from K. H. Evers (WPSC) to Document Control Desk (NRC) dated March 27, 1991
  - 4) Letter from C. R. Steinhardt (WPSC) to Document Control Desk (NRC) dated September 11, 1992

This proposed amendment (PA) adds operability and surveillance requirements for the steam generator wide range level indication instrumentation. The addition of these TS requirements is to satisfy the recommendations of RG 1.97. This PA also supersedes PA 98A in its entirety.

010035

A003

Reference 1 provided a safety evaluation to Wisconsin Public Service Corporation (WPSC) regarding Kewaunee Nuclear Power Plant's (KNPP) conformance to Regulatory Guide (RG) 1.97, Revision 3. The Nuclear Regulatory Commission (NRC) found KNPP's design acceptable with respect to conformance to RG 1.97, with a few exceptions; one being that the instrumentation associated with the wide range steam generator level did not satisfy the RG 1.97 criteria for a Category 1 variable. In response to this, WPSC agreed to upgrade the steam generator wide range level instrumentation as described in Reference 3. This modification was completed in August, 1992. Following completion of this modification the steam generator wide range level instrumentation was categorized as a type A variable. Therefore, as specified in the supplemental safety evaluation (Reference 2), TS requirements for this variable are appropriate.

Reference 4 submitted proposed amendment (PA) 98A to the KNPP TS's. PA 98A added operability and surveillance requirements for the reactor vessel level indication instrumentation and the core exit thermocouples (CET's). However, WPSC had proposed to add these requirements in a format consistent with the other accident monitoring instrument channels at KNPP. As a result of discussions with the NRC, WPSC has agreed to change these requirements to be consistent with the Westinghouse Standard Technical Specifications, i.e., NUREG-0452. As was discussed in a telephone conversation with our NRC Project Manager, PA 118 replaces previously submitted PA 98A in its entirety.

Attachment 1 to this letter contains a description, a safety evaluation, a significant hazards determination, and environmental considerations for the proposed changes. Attachment 2 contains Section 3.5, Table TS 3.5-6, and Table TS 4.1-1. The affected section and tables are being submitted in their entirety due to the conversion of the TS's to the Word Perfect software. Several administrative changes consisting of the correction of typographical errors and format changes resulting from this conversion process are being submitted concurrent with the proposed technical changes. Administrative changes to Section 3.5 were previously submitted in PA's 110 and 117. Administrative changes to Table TS 4.1-1 reflected in this PA were previously submitted in PA's 110, 116 and 117. The technical changes associated with these PA's are not included with this submittal.

Document Control Desk  
February 23, 1993  
Page 3

In accordance with the requirements of 10 CFR 50.30(b), this submittal has been signed and notarized. A complete copy of this submittal has been transmitted to the State of Wisconsin as required by 10 CFR 50.91(b)(1).

Sincerely,



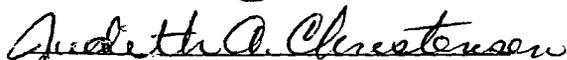
*per* Clark R. Steinhardt  
Senior Vice President - Nuclear Power

BJD/cjt

Attach.

cc - US NRC - Region III  
Mr. Patrick Castleman, US NRC  
Mr. R. S. Cullen, PSCW

Subscribed and Sworn to  
Before Me This 23rd Day  
of February 1993

  
Notary Public, State of Wisconsin

My Commission Expires:

April 25, 1993

LIC\NRC\PA118.WP

ATTACHMENT 1

To

Proposed Amendment No. 118

Letter from C. R. Steinhardt (WPSC)

To

Document Control Desk (NRC)

Dated

February 23, 1993

Description of the Proposed Changes

Safety Evaluation

Significant Hazards Determination

Environmental Considerations

**Description of Proposed Change to TS Section 3.5 "Instrumentation System"**

A change is being proposed to TS 3.5.e to clarify the mode applicability and required actions with inoperable accident monitoring instrumentation channels. Specifically:

- 1) The first sentence of TS 3.5.e is being revised from "The instrumentation in Table 3.5-6 shall be operable" to "The accident monitoring instrumentation in Table TS 3.5-6 shall be operable whenever the plant is above HOT SHUTDOWN." Additionally, the sentence "A change in operational MODES or conditions is acceptable with an inoperable accident monitoring instrumentation channel." is being added to the specification, and
- 2) Administrative changes are being made to convert TS section 3.5 to the WordPerfect software and correct minor typographical errors and format inconsistencies.

**Safety Evaluation for Proposed Change to TS 3.5.e**

Revising the first sentence of TS 3.5.e clarifies the purpose and mode applicabilities of the Limiting Conditions for Operations (LCO) consistent with that provided in Table TS 3.5-6. This is an administrative change to enhance the consistency within the specifications. The proposed change does not alter the intent nor the interpretation of the specification; therefore, this will not adversely affect the health and safety of the public.

The sentence "A change in operational MODES or conditions is acceptable with inoperable accident monitoring instrumentation channels" is also being added to enhance the consistency of the TS's and to provide guidance in the event of inoperable channels. The "Standard Technical Specifications for Westinghouse Pressurized Water Reactors", NUREG-0452 (STS), TS 3.3.3.6, on accident monitoring instrumentation channel operability has the action statement

"The provisions of Specification 3.0.4 do not apply". Since the Kewaunee TS's do not have a 3.0 section similar to that of the STS, wording that would permit changes in operational modes or conditions is being proposed. The proposed statement provides clarification that does not currently exist in the TS's. This is an enhancement to the specifications and will not adversely affect the health and safety of the public. Moreover the proposed provision is consistent with Westinghouse STS 3.3.3.6 which has previously been approved by the NRC staff.

Significant Hazards Determination for Proposed Change to TS 3.5.e

The proposed change was revised in accordance with the provision of 10 CFR 50.92 to show no significant hazards exist. The proposed change will not:

- 1) involve a significant increase in the probability or consequences of an accident previously evaluated.

The purpose of TS 3.5.e is to provide the operability, LCO and required actions for the accident monitoring instrumentation by reference to Table TS 3.5-6. The proposed revisions are to clarify the purpose and mode applicability of the LCO, and to add the provision that mode changes are permissible with inoperable instrumentation channels. These changes are administrative in nature and are intended to enhance the consistency within the specifications and provide clarification of allowed operating conditions with inoperable instrumentation channels. Therefore, the proposed change will not significantly increase the probability or consequences of an accident previously evaluated.

- 2) create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed change does not involve a physical change to the plant, or affect operating parameters, setpoints or assumptions made in the Kewaunee Updated Safety Analysis Report (USAR). Therefore, it does not create the possibility of new or different kind of accident.

- 3) involve a significant reduction in the margin of safety.

The proposed change is intended to clarify TS 3.5.e. The mode applicability and channel description is consistent with that of Table TS 3.5-6. The addition of allowing mode changes with inoperable channels is intended to provide additional guidance within the specification consistent with that previously approved by the NRC in the Westinghouse STSS. TS 3.5.e will allow the plant operators to make mode changes; however, plant operation above hot shutdown is still limited by the total allowed outage time. Therefore, the margin of safety is not reduced.

#### Safety Evaluation for Proposed Administrative Changes to Section TS 3.5

A number of formatting changes and corrections of minor typographical errors are being included with this proposed change to TS Section 3.5. These changes are being proposed in conjunction with converting the TS document over to the WordPerfect software now being used at WPSC for word processing. These changes have been reviewed to ensure that they do not alter the intent or interpretation of the specifications; therefore, there is no affect on public health or safety.

#### Significant Hazards Determination for Proposed Administrative Changes to Section TS 3.5

The proposed change was reviewed in accordance with the provisions of 10 CFR 50.92 to show no significant hazards exist. The proposed change will not:

- 1) involve a significant increase in the probability or consequences of an accident previously evaluated, or
- 2) create the possibility of a new or different kind of accident from any accident previously evaluated, or
- 3) involve a significant reduction in the margin of safety.

The proposed changes are administrative in nature and do not alter the intent or interpretation of the TS. Therefore, no significant hazards exist.

Additionally, the proposed change is similar to example C.2.e(i) in 51 FR 7751. Example C.2.e(i) states that changes which are purely administrative in nature; i.e. to achieve consistency throughout the technical specifications, correct an error, or change in nomenclature, are not likely to involve a significant hazard.

#### **Description of Proposed Changes to Table TS 3.5-6 and Table TS 4.1-1**

Changes to Table TS 3.5-6 "Instrumentation Operating Conditions For Indication" and Table TS 4.1-1 "Minimum Frequencies For Checks, Calibrations and Test of Instrument Channels" are being proposed to add operability and surveillance requirements for the reactor vessel level indication instrumentation, the core exit thermocouples, and the steam generator wide range level indication instrumentation. Specifically the changes are as follows:

- 1) Item No. 9 "Reactor Vessel Level Indication" is being added to Table TS 3.5-6 to provide operability requirements for the reactor vessel level indication instrumentation,

- 2) Item No. 10 "Core Exit Thermocouples" is being added to Table TS 3.5-6 to provide operability requirements for the core exit thermocouples,
- 3) Item No. 11 "Steam Generator Level Indication (Wide Range)" is being added to Table TS 3.5-6 to provide operability requirements for the steam generator wide range level indication instrumentation.
- 4) The phrase "1/steam generator" is being deleted from Column 2 of Table TS 3.5-6.
- 5) The addition of items No. 9, 10, and 11 to Table TS 3.5-6 required carrying the table over to a second page and renumbering the footnotes accordingly,
- 6) Footnotes (1), (2), and (3) on Page 1 of 2, and Footnote (4) on Page 2 of 2 are being revised to use the standard shutdown sequence terminology,
- 7) Footnote (5) on Page 2 of 2 is being added to specify an allowable outage time for the reactor vessel level indication, the core exit thermocouples, and the steam generator wide range level indication of 7 days, using the standard shutdown sequence terminology,
- 8) Footnote No. 6 is being added to reference TS 3.11.c and TS 3.11.d which also specify operability requirements for the core exit thermocouples,
- 9) Footnote No. 7 is being added to clarify that for the purposes of accident monitoring instrumentation, the thermocouples on the axis may be included in either adjacent quadrant to satisfy the minimum channels operable requirement.

- 10) Item No. 40 "Reactor Vessel Level Indication" is being added to Table TS 4.1-1 to provide surveillance testing requirements for the reactor vessel level indication instrumentation,
- 11) Item No. 41 "Core Exit Thermocouples" is being added to Table TS 4.1-1 to provide surveillance testing requirements for the core exit thermocouples,
- 12) Item No. 42 "Steam Generator Level Indication (Wide Range)" is being added to Table TS 4.1-1 to provide surveillance testing requirements for steam generator level indication, and
- 13) Administrative changes are being made to convert Tables TS 3.5-6 and TS 4.1-1 to the WordPerfect software and correct minor typographical errors and format inconsistencies.

Safety Evaluation for Proposed Changes to Table TS 3.5-6 and Table TS 4.1-1

The reactor vessel level indication instrumentation and core exit thermocouples are a part of the Inadequate Core Cooling Monitoring System (ICCMS) which was installed in 1987 to fulfill the requirements of TMI Action Plan, NUREG-0737 item II.F.2, "Instrumentation for Detection of Inadequate Core Cooling". The NRC staff has reviewed and accepted KNPP's ICCMS design as documented in a safety evaluation report (SER) from T. R. Quay (NRC) to D.C. Hintz (WPSC) dated June 10, 1987. Proposed changes to Table TS 3.5-6 and Table TS 4.1-1 to add requirements for the reactor vessel level indication instrumentation and core exit thermocouples is in accordance with the NRC SER. Specifically, the conditions and action statements for one and two instrumentation channels inoperable are being added to Table TS 3.5-6 "Instrumentation Operating Conditions for Indication". The proposed format is consistent with the Westinghouse Standard Technical Specifications, i.e., NUREG-0452.

Redundant steam generator wide range level indication instrumentation was installed in August, 1992 to meet Regulatory Guide 1.97 Category 1 recommendations and was designated as a Type A variable. Proposed changes to Table TS 3.5-6 and Table TS 4.1-1 add TS requirements for the steam generator wide range level indication instrumentation. Specifically, the conditions and action statements for one and two instrumentation channels inoperable are being added to Table TS 3.5-6 "Instrumentation Operating Conditions For Indication". The proposed format is consistent with the Westinghouse Standard Technical Specifications, i.e., NUREG-0452.

To support item 10, Core Exit Thermocouples, two additional footnotes are being added to Table TS 3.5-6. Specifically, footnote No. 6 references TS 3.11.c and TS 3.11.d which also specify requirements for the core exit thermocouples. Table TS 3.5-6 item 10 and TS 3.11 are not in conflict, but contain slightly different requirements. Therefore, this note is being added to ensure the requirements of TS 3.11 are not mistakenly overlooked. Footnote No. 7 is also being added to provide additional information. For monitoring purposes, the core is subdivided into four quadrants with imaginary perpendicular axial lines dividing the quadrants. The thermocouples that fall on these axial lines are weighted as one-half for routine core surveillance purposes, i.e. calculating core exit thermocouple tilts. The purpose of footnote No. 7 is to allow, for accident monitoring purposes, the thermocouples on the axis to be counted as one full thermocouple in either quadrant. The application of the footnote does not allow for "double counting" of a particular thermocouple, or for satisfying the provisions of TS 3.11.c as core surveillance instrumentation.

This proposed revision is an additional requirement in the TS's to ensure the availability and reliability of the indication instrumentation; therefore, this change will not adversely affect the health and safety of the public.

The phrase "1/steam generator" is being deleted from Column 2 of Table TS 3.5-6. At the KNPP, only one instrumentation channel per steam generator is installed. Upon review of Table

3.5-6, it was noted that due to the plant specific design of auxiliary feedwater flow, the operators were being provided conflicting action statement requirements in the event of an inoperable channel. This proposed change is to eliminate the conflicting action statement requirements.

In the footnotes on Table TS 3.5-6 the phrase "or be in at least hot shutdown within the next 12 hours" is being replaced with the standard shutdown sequence terminology to ensure consistency within the specifications. The proposed change is more restrictive than the existing specification and does not alter the intent or the interpretation of the specification; therefore, there is no effect on public health or safety. In addition, Footnote 5 is being added to specify an allowable outage time of 7 days for the reactor vessel level indication, the core exit thermocouples, and the steam generator wide range level indication. This is consistent with the Westinghouse Standard Technical Specifications, i.e., NUREG-0452.

The surveillance requirements for the reactor vessel level indication instrumentation, core exit thermocouples, and steam generator wide range level indication instrumentation are being added to Table TS 4.1-1 "Minimum Frequencies For Checks, Calibrations and Test of Instrument Channels". The proposed format is consistent with the Westinghouse Standard Technical Specifications, i.e., NUREG-0452. This proposed revision is an additional requirement in the TS's to ensure the availability and reliability of the indication instrumentation; therefore, this change will not adversely affect the health and safety of the public.

#### Significant Hazards Determination for Proposed Changes to Table TS 3.5-6 and Table TS 4.1-1

The proposed changes were reviewed in accordance with the provisions of 10 CFR 50.92 to show no significant hazards exist. The proposed changes will not:

- 1) involve a significant increase in the probability or consequences of an accident previously evaluated.

In the unlikely event of a design basis or beyond design basis accident, the purpose of the steam generator wide range level indication instrumentation is to provide the operators indication of steam generator water level. The purpose of the ICCMS is to provide the operators information on the reactor vessel coolant inventory and temperature. The ICCMS was installed at KNPP in response to TMI Action Plan, NUREG-0737, Item II.F.2. The NRC staff has reviewed and accepted the ICCMS design at the KNPP. The ICCMS has been in operation since it was installed in 1987. The proposed TS changes will not change the operation of the instrumentation as previously described to the NRC in earlier submittals.

The intent of adding operability requirements, LCO, action statements and surveillance requirements to the TS's is to ensure the availability and reliability of the instrumentation. The proposed change is an additional restriction not presently included in the TS's; therefore, it will not increase the probability or consequences of an accident previously evaluated.

- 2) create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed change does not alter the plant configuration or overall plant performance; therefore, it does not create the possibility of a new or different kind of accident.

- 3) involve a significant reduction in the margin of safety.

The proposed change will add requirements to the TS's to ensure the reliability and availability of the reactor vessel level indication instrumentation, the core exit thermocouples, and the steam generator wide range level indication instrumentation. This

is an enhancement from an overall safety standpoint and therefore does not reduce the margin of safety.

Additionally, the proposed change is similar to example C.2.e(ii) in 51 FR 7751. Example C.2.e(ii) states that changes that constitute an additional limitation, restriction or control not presently included in the TS's are not likely to involve a significant hazard.

Safety Evaluation for Proposed Administrative Changes to Table TS 3.5-6 and Table TS 4.1-1

A number of formatting changes and corrections of minor typographical errors are being included with this proposed TS change. The addition of items No. 9, 10 and 11 to Table TS 3.5-6 required carrying the table over to a second page and renumbering the footnotes accordingly. These changes are being proposed in conjunction with converting the TS document over to the WordPerfect software now being used at WPSC for wordprocessing. Among these changes are; changing the title of Table TS 3.5-6 to add the phrase "accident monitoring", consolidating the footnotes and remarks columns, and boxing in the tables to give the specification a neater appearance. These changes have been reviewed to ensure that they do not alter the intent or interpretation of the specification; therefore, there is no effect on public health or safety.

Significant Hazards Determination for Proposed Administrative Changes to Table TS 3.5-6 and Table TS 4.1-1

The proposed change was reviewed in accordance with the provisions of 10 CFR 50.92 to show no significant hazards exist. The proposed change will not:

- 1) involve a significant increase in the probability or consequences of an accident previously evaluated, or

- 2) create the possibility of a new or different kind of accident from any accident previously evaluated, or
- 3) involve a significant reduction in the margin of safety.

The proposed changes are administrative in nature and do not alter the intent or interpretation of the TS. Therefore, no significant hazards exist.

Additionally, the proposed change is similar to example C.2.e(i) in 51 FR 7751. Example C.2.e(i) states that changes which are purely administrative in nature; i.e. to achieve consistency throughout the technical specifications, correct an error, or a change in nomenclature, are not likely to involve a significant hazard.

#### Environmental Considerations

This proposed amendment involves a change to a requirement with respect to the installation or use of a facility component located within the restricted area, as defined in 10 CFR part 20, or a change to a surveillance requirement. WPSC has determined that the proposed amendment involves no significant hazards considerations and no significant change in the types of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. Accordingly, this proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with this proposed amendment.