



231 W Michigan, PO Box 2046, Milwaukee, WI 53201-2046

(414) 221-2345

VPNPD-95-103

10 CFR 50.4
10 CFR 50.90

December 13, 1995

Document Control Desk
U.S. NUCLEAR REGULATORY COMMISSION
Mail Station P1-137
Washington, D. C. 20555

Gentlemen:

DOCKETS 50-266 AND 50-301
TECHNICAL SPECIFICATIONS CHANGE REQUEST 185
CORE OPERATING LIMITS REPORT
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 (PBNP) Units 1 and 2, respectively, to incorporate changes to the plant Technical Specifications. The proposed revisions will implement a Core Operating Limits Report (COLR) in accordance with Generic Letter 88-16, "Removal of Cycle-Specific Parameter Limits From Technical Specifications," and WCAP 14483, "Generic Methodology for Expanded Core Operating Limits Report." Various editorial changes are also included.

A sample COLR, marked-up Technical Specifications pages, a safety evaluation, and the no significant hazards consideration are enclosed.

DESCRIPTION OF CURRENT LICENSE CONDITION

1. Technical Specification (TS) Section 15.1, "Definitions," contains definitions of frequently used terms applicable to PBNP.
2. TS Section 15.2.1, "Safety Limit, Reactor Core," Specification 1 states that the combination of thermal power level, coolant pressure, and coolant temperature shall not exceed the limits shown on Figures 15.2.1-1 and 15.2.1-2, "Reactor Core Safety Limits," for Units 1 and 2 respectively.

Figures 15.2.1-1 and 15.2.1-2 represent the loci of points of thermal power, reactor coolant system pressure, and average

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temperature for which the calculated departure from nucleate boiling ratio (DNBR) is no less than the design limit DNBR or the average enthalpy at the vessel exit is less than the enthalpy of saturated liquid.

3. TS Section 15.2.3, "Limiting Safety System Settings, Protective Instrumentation," Specification 1.B(4) gives the Overtemperature Delta T reactor trip setpoint function and parameter values. Specification 1.B(5) gives the Overpower Delta T reactor trip setpoint function and parameter values.
4. TS Section 15.3.1.F, "Minimum Conditions for Criticality," Specifications 1 and 2 give the requirements for moderator temperature coefficient.

TS Section 15.3.1.G, "Operational Limitations," gives the departure from nucleate boiling (DNB) parameters which must be observed during rated power operation.

5. TS Section 15.3.3, "Emergency Core Cooling System, Auxiliary Cooling Systems, Air Recirculation Fan Coolers, and Containment Spray," Specification A.1.a gives the requirements for refueling water storage tank capacity and boron concentration. Specification A.1.b gives the requirements for accumulator pressure, capacity, and boron concentration.
6. TS Section 15.3.8, "Refueling," Specification 5 gives the requirements for primary coolant system boron concentration during refueling operations.
7. TS Section 15.3.10, "Control Rod and Power Distribution Limits," Specification A.1 gives shutdown bank insertion limits. Specification A.2 gives control bank insertion limits. Specifications A.3 and 4 give limits on shutdown margin. Specification B.1.a gives the limits for the hot channel factors. Specification B.2 gives the requirements for axial flux difference.
8. TS Section 15.6.9, "Plant Reporting Requirements," gives the requirements for the reporting of operating information to the Nuclear Regulatory Commission.

DESCRIPTION OF PROPOSED CHANGES

1. TS Section 15.1:

Technical Specification Section 15.1 is being modified to add the definition of a COLR as follows:

"Q. Core Operating Limits Report

The Core Operating Limits Report is the document that provides core operating limits for the current operating reload cycle. These cycle-specific core operating limits shall be determined for each reload cycle in accordance with specification 15.6.9.1.D. Plant operation within these operating limits is addressed in individual specifications."

2. TS Section 15.2.1:

Existing Specification 15.2.1.1 is being deleted.

New Specifications 15.2.1.1 and 2 are being added to read as follows:

- "1. During power operation, the departure from nucleate boiling ratio (DNBR) shall be maintained ≥ 1.17 for the WRB-1 DNB correlation.
2. During power operation, the peak fuel centerline temperature shall be maintained < 5080 °F, decreasing by 58 °F per 10,000 MWD/MTU of burnup."

Figures 15.2.1-1 and 15.2.1-2 are being deleted as they are being replaced by proposed new Specifications 15.2.1.1 and 2 listed above.

The Applicability section and Basis for TS Section 15.2.1 are being modified to reflect the changes to Specification 15.2.1.1 and the deletion of Figures 15.2.1-1 and 15.2.1-2.

3. TS Section 15.2.3:

Specification 15.2.3.1.B(4) is being modified to relocate the values for the cycle-specific parameters to the COLR.

Specification 15.2.3.1.B(5) is being modified to relocate the values for the cycle-specific parameters to the COLR.

The Basis for TS Section 15.2.3 is being modified to delete references to Figures 15.2.1-1 and 15.2.1-2.

4. TS Section 15.3.1:

Specification 15.3.1.F.1 is being modified to read as follows:

- "1. The moderator temperature coefficient shall be within the limits specified in the COLR."

Specification 15.3.1.F.2 is being deleted as it is incorporated into the COLR. Specifications 15.3.1.F.3, 4, and 5 are being renumbered to 15.3.1.F.2, 3, and 4 respectively.

Specification 15.3.1.G is being modified to read as follows:

"The following DNB related parameters shall be maintained within the limits specified in the COLR during Rated Power operation:

1. T_{avg} .
2. Reactor Coolant System (RCS) pressurizer pressure.
3. Reactor Coolant System raw measured Total Flow Rate (See Basis)."

The Basis for Specification 15.3.1.G is being modified to delete references to the specific values.

5. TS Section 15.3.3:

Specification 15.3.3.A.1.a is being modified to read as follows:

- "a. The refueling water tank contains not less than 275,000 gal. of water with a boron concentration within the limits specified in the COLR."

Specification 15.3.3.A.1.b is being modified to read as follows:

- "b. Each accumulator is pressurized to at least 700 psig and contains at least 1100 ft³ but no more than 1136 ft³ of water with a boron concentration within the limits specified in the COLR. Neither accumulator may be isolated.

6. TS Section 15.3.8:

Specification 15.3.8.5 is being modified to read as follows:

- "5. During reactor vessel head removal and while loading and unloading fuel from the reactor, boron concentration in the primary coolant system shall be maintained within the limits specified in the COLR."

7. TS Section 15.3.10:

Specification 15.3.10.A.1 is being modified to read as follows:

- "1. The shutdown bank shall within the limits specified in the COLR."

The footnote at the bottom of page 15.3.10-1 is being deleted as it is incorporated into the COLR.

Specification 15.3.10.A.2 is being modified to read as follows:

- "2. The control banks shall be within the limits specified in the COLR."

Specification 15.3.10.A.3 is being modified to read as follows:

- "3. The shutdown margin shall be within the limits specified in the COLR."

Specification 15.3.10.A.4 is being deleted as it is incorporated into the COLR. Specification 15.3.10.5 is being renumbered to 15.3.10.4.

Specification 15.3.10.B.1.a is being modified to read as follows:

- "a. The height dependent heat flux hot channel factor (F_q) and the nuclear enthalpy rise hot channel factor ($F_{\Delta H}^N$) shall be within the limits specified in the COLR."

Specifications 15.3.10.B.2.a, b, and c are being modified to replace references to Figure 15.3.10-4 with a reference to the COLR or specification 15.3.10.B.2.a as appropriate.

The Basis for TS Section 15.3.10 is being modified to replace references to specific limits with a reference to the COLR.

Figures 15.3.10-1, 2, 3, and 4 are being deleted from the Technical Specifications as they are being placed in the COLR.

8. TS Section 15.6.9:

New specification 15.6.9.1.D is being added to read as follows:

- "D. Core Operating Limits Report (COLR)

1. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following Specifications:

15.3.10.A.3	Shutdown Margin
15.3.1.F.1	Moderator Temperature Coefficient
15.3.10.A.1	Shutdown Bank Insertion Limit
15.3.10.A.2	Control Bank Insertion Limits
15.3.10.B.1.a	Height Dependent Heat Flux Hot Channel Factor (F_Q) and Nuclear Enthalpy Rise Hot Channel Factor ($F_{\Delta H}^N$)
15.3.10.B.2.a	Axial Flux Difference
15.2.3.1.B(4)	Overtemperature ΔT Setpoint
15.2.3.1.B(5)	Overpower ΔT Setpoint
15.3.1.G	RCS Pressure, Temperature, and Flow Departure From Nucleate Boiling (DNB) Limits
15.3.3.A.1.b	Accumulator Boron Concentration
15.3.3.A.1.a	Refueling Water Storage Tank (RWST) Boron Concentration
15.3.8.5	Refueling Boron Concentration

2. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC. The NRC-approved methodologies are listed below for each of the core operating limits:

COLR Section	Parameter	NRC Approved Methodology
2.1	Shutdown Margin	WCAP-9273-NP-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985
2.2	Moderator Temperature Coefficient	WCAP-9273-NP-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985
2.3	Shutdown Bank Insertion Limit	WCAP-9273-NP-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985
2.4	Control Bank Insertion Limits	WCAP-9273-NP-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985
2.5	Height Dependent Heat Flux Hot Channel Factor (F_Q) and Nuclear Enthalpy Rise Hot Channel Factor (F_{NH}^N)	WCAP-9273-NP-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985 Thadani to Johnson, "Acceptance for Reference of Licensing Topical Report, WCAP-10924, 'Westinghouse Large Break LOCA Best Estimate Methodology,' Addendum 4, 'Model Revisions'," February 1991
2.6	Axial Flux Difference	WCAP-9273-NP-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985
2.7	Overtemperature ΔT Setpoint	WCAP-9273-NP-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985
2.8	Overpower ΔT Setpoint	WCAP-9273-NP-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985
2.9	RCS Pressure, Temperature, and Flow Departure From Nucleate Boiling (DNB) Limits	WCAP-9273-NP-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985 WCAP-11397-P-A, "Revised Thermal Design Procedure," April 1989
2.10	Accumulator Boron Concentration	WCAP-9273-NP-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985
2.11	Refueling Water Storage Tank (RWST) Boron Concentration	WCAP-9273-NP-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985
2.12	Refueling Boron Concentration	WCAP-9273-NP-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985

3. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, emergency core cooling system limits, nuclear limits such as shutdown margin, transient analysis limits, and accident analysis limits) of the safety analysis are met.
4. The COLR, including any mid-cycle revisions or supplements, shall be provided to the NRC upon issuance for each reload cycle."

BASIS AND JUSTIFICATION

The reactor physics parameters for each core reload cycle differ depending on such variables as the previous cycle burnup, number and enrichment of new fuel assemblies, and expected cycle length. Several of the Technical Specifications address limits which are associated with reactor physics parameters that may change with each reload, requiring the processing of changes to the Technical Specifications to update these limits each fuel cycle.

In Generic Letter 88-16, "Removal of Cycle-Specific Parameter Limits From Technical Specifications," the NRC provided guidance for removal of cycle specific reactor physics parameters that are calculated using NRC approved methodologies from the Technical Specifications. The generic letter provides for removal of these parameters by placing them in a Core Operating Limits Report (COLR) that would be submitted to the NRC following any change in the reactor physics parameters. WCAP 14483, "Generic Methodology for Expanded Core Operating Limits Report," provides guidance for relocating DNB, Overtemperature Delta T, and Overpower Delta T parameters to the COLR and for replacing the Reactor Core Safety Limits figures with text that describes the safety limits.

The COLR is being established at PBNP in accordance with GL 88-16 and WCAP 14483 to avoid the unnecessary burden of changing limits which are developed using an NRC approved methodology.

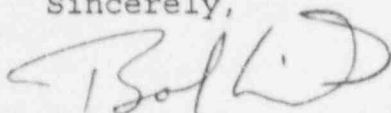
We have determined that the proposed amendments do not involve a significant hazards consideration, authorize a significant change in the types or total amounts of any effluent release, or result in any significant increase in individual or cumulative occupational exposure. Therefore, we conclude that 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.

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As stated in Westinghouse Owner's Group (WOG) to NRC letter dated December 1, 1995, we are the lead plant for the expanded COLR. In order to support our schedule, and that of other WOG utilities that have indicated their desire to implement similar changes, we request approval of this amendment request by March 29, 1996.

If you require additional information, please contact us.

Sincerely,



Bob Link
Vice President
Nuclear Power

mmr/KVA

Attachment

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

Subscribed and sworn before me on
this 13th day of December 1995.



Notary Public, State of Wisconsin

My commission expires 10/27/96.

TECHNICAL SPECIFICATIONS CHANGE REQUEST 185
SAFETY EVALUATION

INTRODUCTION

Wisconsin Electric Power Company (Licensee) has applied for amendments to Facility Operating Licenses DPR-24 and DPR-27 for Point Beach Nuclear Plant (PBNP) Units 1 and 2. The proposed revisions will implement a Core Operating Limits Report (COLR) in accordance with Generic Letter 88-16, "Removal of Cycle-Specific Parameter Limits From Technical Specifications," and WCAP 14483, "Generic Methodology for Expanded Core Operating Limits Report." Various editorial changes are also included.

EVALUATION

The relocation of the cycle-specific parameters from the PBNP Technical Specifications to the COLR does not affect the operation of PBNP. The appropriate actions required if the limits are exceeded will remain in the Technical Specifications. Revisions to the COLR will be made in accordance with 10 CFR 50.59. This will ensure that changes to the COLR do not compromise safety since the cycle-specific changes will be reviewed and evaluated in accordance with an established and accepted process. The NRC will be notified of all revisions to the COLR in accordance with proposed Specification 15.6.9.D, "Core Operating Limits Report." Any change to the cycle-specific parameter values contained in the COLR will be based on NRC-approved methodologies. The NRC-approved methodologies used to determine the values of the parameters contained in the COLR are listed in proposed Specification 15.6.9.D.

CONCLUSION

The proposed revisions to the PBNP Technical Specifications are administrative in nature since they do not change any of the limits or surveillance requirements. The use of a COLR provides more flexibility for operations and core design, in that it allows changes of the parameters to be made consistent with the burnup and energy constraints of the cycle without requiring a License Amendment, yet it assures that the NRC is informed of the reactor physics parameters that are being used for each cycle.

TECHNICAL SPECIFICATION CHANGE REQUEST 185
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 are as follows:

1. Operation of this facility under the proposed Technical Specifications will not create a significant increase in the probability or consequences of an accident previously evaluated.

The relocation of the cycle-specific parameters from the Point Beach Nuclear Plant (PBNP) Technical Specifications to the Core Operating Limits Report (COLR) has no impact on plant operation or accident analyses. The proposed changes are administrative in nature. The Technical Specifications will continue to require operation within the core operational limits for each cycle reload calculated by the NRC-approved reload design methodologies. The appropriate actions required if limits are exceeded will remain in the Technical Specifications. The reload report presents the results of a cycle-specific evaluation of accidents and transients addressed in the PBNP Final Safety Analysis Report (FSAR). The cycle-specific evaluation demonstrates that changes in the unit's fuel cycle design and corresponding COLR parameters do not involve a significant increase in the probability or consequences of an accident previously evaluated. Therefore, these changes do not involve a significant increase in the probability or consequences of any accident previously evaluated.

2. Operation of this facility under the proposed Technical Specifications will not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed change to relocate the cycle-specific parameters from the Technical Specifications to the COLR is administrative in nature. No change to the design, configuration, or method of operation of the plant is made by this change. The cycle-specific parameters will be determined using NRC-approved methodologies. The Technical Specifications will continue to require operation within the core operating limits and appropriate actions will be taken

if the limits are exceeded. Therefore, these changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Operation of this facility under the proposed Technical Specifications will not create a significant reduction in a margin of safety.

Existing Technical Specification operability and surveillance requirements are not reduced by the proposed changes to relocate cycle-specific parameters from the Technical Specifications to the COLR. The cycle-specific COLR limits for reloads will continue to be developed based on NRC-approved methodologies, thereby maintaining accepted margins of safety. The Technical Specifications will still require that the core be operated within these limits and specify appropriate actions to be taken if the limits are violated. Each reload undergoes a 10CFR50.59 safety review to assure that operating the unit within the cycle-specific limits will not involve a significant reduction in a margin of safety. Therefore, these changes do not involve a significant reduction in the margin of safety.