

Template NRR-058



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 20, 2000

Mr. Michael B. Sellman
Senior Vice President and
Chief Nuclear Officer
Wisconsin Electric Power Company
231 West Michigan Street
Milwaukee, WI 53201

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS RE: SPENT FUEL STORAGE REQUIREMENTS (TSCR 214) (TAC NOS. MA6039 AND MA6040) AND CORRECTION TO AMENDMENT NOS. 193 AND 198 RE: DESIGN AND OPERATION OF FUEL CYCLES WITH UPGRADED WESTINGHOUSE FUEL (TAC NOS. MA5939 AND MA5940)

Dear Mr. Sellman:

The Commission has issued the enclosed Amendment No. 194 to Facility Operating License No. DPR-24 and Amendment No. 199 to Facility Operating License No. DPR-27 for the Point Beach Nuclear Plant, Units 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated July 1, 1999.

These amendments reflect a change to TS Section 15.5.4. The amendments remove one of the two separate methods for verifying the acceptability of reactor fuel for placement and storage in the spent fuel pool and new fuel storage vault.

In addition to issuance of the enclosed amendments, this letter corrects an error made in a previous TS amendment. On February 8, 2000, the Commission issued Amendment Nos. 193 and 198 to Facility Operating License Nos. DPR-24 and DPR-27 for Point Beach, Units 1 and 2, respectively. The amendments revised the TSs to reflect changes to the design and operation of the Point Beach fuel cycle in order to incorporate the Westinghouse 422V+ fuel assemblies into the reactor cores.

Amendment Nos. 193 and 198 were issued containing an error on TS page 15.5.4-1. The phrase "or have a reference infinite multiplication factor, K_{∞} , less than or equal to 1.49364, which includes a 1% Δ K reactivity bias" was mistakenly deleted from TS. This TS change was

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M. Sellman

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not unrelated to Amendment Nos. 193 and 198 and the phrase should have remained in the TSs when the above amendments were issued. However, deletion of this phrase was requested in Wisconsin Electric's TS change request 214 and is approved as part of the enclosed Amendment Nos. 194 and 199 .

A copy of our related safety evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

Beth A. Wetzel, Senior Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-266 and 50-301

- Enclosures: 1. Amendment No. 194 to DPR-24
- 2. Amendment No. 199 to DPR-27
- 3. Safety Evaluation

cc w/encls: See next page

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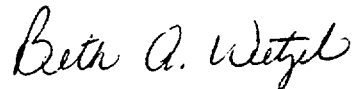
M. Sellman

- 2 -

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Sincerely,



Beth A. Wetzel, Senior Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-266 and 50-301

Enclosures: 1. Amendment No. 194 to DPR-24
2. Amendment No. 199 to DPR-27
3. Safety Evaluation

cc w/encls: See next page

Point Beach Nuclear Plant, Units 1 and 2

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November 1999



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

WISCONSIN ELECTRIC POWER COMPANY

DOCKET NO. 50-266

POINT BEACH NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 194
License No. DPR-24

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Wisconsin Electric Power Company (the licensee) dated July 1, 1999, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

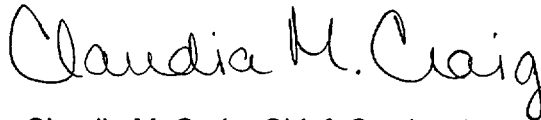
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-24 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 194 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with Technical Specifications.

3. This license amendment is effective as of the date of issuance and shall be implemented within 45 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Claudia M. Craig, Chief, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of issuance: March 20, 2000



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

WISCONSIN ELECTRIC POWER COMPANY

DOCKET NO. 50-301

POINT BEACH NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 199
License No. DPR-27

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Wisconsin Electric Power Company (the licensee) dated July 1, 1999, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

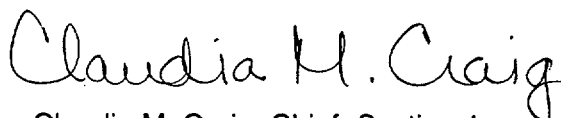
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-27 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 199, are hereby incorporated in the license. The licensee shall operate the facility in accordance with Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 45 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Claudia M. Craig, Chief, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of issuance: March 20, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 194
TO FACILITY OPERATING LICENSE NO. DPR-24
AND LICENSE AMENDMENT NO. 199
TO FACILITY OPERATING LICENSE NO. DPR-27
DOCKET NOS. 50-266 AND 50-301

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

REMOVE

15.5.4-2

INSERT

15.5.4-2

15.5.4 FUEL STORAGE

Applicability

Applies to the capacity and storage arrays of new and spent fuel.

Objective

To define those aspects of fuel storage relating to prevention of criticality in fuel storage areas.

Specification

1. The new fuel storage and spent fuel pool structures are designed to withstand the anticipated earthquake loadings as Class I structures. The spent fuel pool has a stainless steel liner to ensure against loss of water.
2. The new and spent fuel storage racks are designed so that it is impossible to store assemblies in other than the prescribed storage locations. The fuel is stored vertically in an array with sufficient center-to-center distance between assemblies to assure $K_{eff} < 0.95$ with the storage pool filled with unborated water and with the fuel loading in the assemblies limited to 5.0 w/o U-235, with or without axial blanket loadings. Each assembly with a fuel loading greater than 4.6 w/o U-235 must contain Integral Fuel Burnable Absorber (IFBA) rods in accordance with Figure 15.5.4-1 for the spent fuel pool. Fresh fuel assemblies with the maximum enrichment of up to 5.0 weight percent U235 and a minimum of 32 1.25X IFBA rods can utilize all available new fuel vault storage cells. An inspection area shall allow rotation of fuel assemblies for visual inspection, but shall not be used for storage.
3. The spent fuel storage pool shall be filled with borated water at a concentration of at least 2100 ppm boron whenever there are spent fuel assemblies in the storage pool.
4. Spent fuel assembly storage locations immediately adjacent to the spent fuel pool perimeter or divider walls shall not be occupied by fuel assemblies which have been subcritical for less than one year.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 194

TO FACILITY OPERATING LICENSE NO. DPR-24

AND AMENDMENT NO. 199 TO FACILITY OPERATING LICENSE NO. DPR-27

WISCONSIN ELECTRIC POWER COMPANY

POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-266 AND 50-301

1.0 INTRODUCTION

By application dated July 1, 1999, the Wisconsin Electric Power Company (the licensee) requested changes to the Technical Specifications (TSs) for Point Beach Nuclear Plant (PBNP), Units 1 and 2. The proposed changes to the TSs would reflect removal of the infinite multiplication factor (k_{∞}) methodology for verifying the acceptability of fuel assembly storage in the new fuel storage vault and the spent fuel pool storage racks. Specifically, TS 15.5.4.2, "Fuel Storage," would be modified to remove the requirement for a k_{∞} of less than or equal to 1.49464 for acceptable fuel storage.

The request is based on the Nuclear Safety Advisory Letter (NSAL) 99-003, dated February 26, 1999, issued by Westinghouse Energy Systems. The NSAL communicated information that Westinghouse had recently determined that the use of the reference k_{∞} method could be nonconservative with respect to fuel storage.

2.0 EVALUATION

TS 15.5.4 allows either of two separate methods for verifying the acceptability of reactor fuel enriched to greater than 4.6 weight percent (w/o) U-235 for storage in the new and spent fuel storage racks. For the first method, a minimum number of integral fuel burnable absorber (IFBA) rods are required dependent on initial enrichment. In this method, credit is taken for the reactivity decrease due to the neutron absorber material coated on the outside of the fuel pellet. For the alternative method, a maximum assembly reference k_{∞} of 1.49364 must be met. This second method is based on calculations which show that a fuel assembly which has a k_{∞} of no greater than 1.49364 in the PBNP core geometry will meet the NRC subcriticality acceptance criterion of k_{eff} no greater than 0.95 in the spent fuel storage rack.

On February 26, 1999, Westinghouse issued NSAL 99-003 to all plants with Westinghouse fuel storage criticality analyses stating that the use of the reference k_{∞} method could lead to IFBA requirements that are less conservative than those determined using the IFBA versus

enrichment methodology. Based on this, Westinghouse recommended that those plants, such as PBNP, whose TSs contain both the k_{∞} value and the IFBA versus enrichment curve methodology should only use the IFBA versus enrichment curve methodology for compliance with the 0.95 k_{eff} fuel storage limit. Therefore, the licensee has proposed to remove the k_{∞} methodology from the PBNP TSs for Units 1 and 2.

All fuel stored in the PBNP storage racks will continue to meet the NRC subcriticality acceptance criterion specified in TS 15.5.4.2, "Fuel Storage," and Figure 15.5.4-1, "Fuel Assembly IFBA Requirements," without the use of the k_{∞} methodology. Therefore, the proposed TS change is acceptable.

The staff has reviewed the proposed change that would remove the k_{∞} methodology from the PBNP TSs. The proposed change would remove a potentially nonconservative methodology for determining acceptable fuel storage at PBNP and conforms to the Westinghouse recommendation in NSAL 99-003. All fuel stored in the PBNP new and spent fuel storage racks would continue to meet NRC storage requirements defined by TS 15.5.4.2 and TS Figure 15.5.4-1 without the use of the k_{∞} methodology. Therefore, the staff finds the proposed change acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Wisconsin State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

These amendments change 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 change a surveillance requirement. The staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluent that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously published a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding (64 FR 40911). Accordingly, these amendments meet 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 the issuance of these amendments.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: L. Kopp

Date: March 20, 2000