

April 14, 1989

Docket Nos. 50-266  
and 50-301

Mr. C. W. Fay, Vice President  
Nuclear Power Department  
Wisconsin Electric Power Company  
231 West Michigan Street, Room 308  
Milwaukee, Wisconsin 53201

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Dear Mr. Fay:

SUBJECT: AMENDMENT NOS. 117 AND 120 TO FACILITY OPERATING LICENSE NOS. DPR-24  
AND DPR-27 (TACS 72719 AND 72720)

The Commission has issued the enclosed Amendment Nos. 117 and 120 to Facility Operating License Nos. DPR-24 and DPR-27 for the Point Beach Nuclear Plant, Unit Nos. 1 and 2. The amendments revise the Technical Specifications in response to your application dated March 23, 1989.

These amendments revise provisions of the Point Beach Nuclear Plant, Unit Nos. 1 and 2, Technical Specifications relating to the permissible enrichments for storage of fuel assemblies in the new fuel storage vault and spent fuel storage pool.

A copy of the Safety Evaluation is also enclosed. The notice of issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

/s/

Warren H. Swenson, Project Manager  
Project Directorate III-3  
Division of Reactor Projects  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 117 to DPR-24
2. Amendment No. 120 to DPR-27
3. Safety Evaluation

cc w/enclosures:

See next page

Office: LA/PDIII-3  
Surname: PKreutzer  
Date: 4/14/89

*WHS*  
PM/PDIII-3  
WSwenson/mr  
4/15/89

*for*  
PD/PDIII-3  
JHannon  
4/15/89

*APH*  
OGC-WF1  
4/10/89

*DF01*  
*1/1*

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*CP-1*  
*cc*

Mr. C. W. Fay  
Wisconsin Electric Power Company

Point Beach Nuclear Plant  
Units 1 and 2

cc:

Mr. Bruce Churchill, Esq.  
Shaw, Pittman, Potts and Trowbridge  
2300 N Street, N.W.  
Washington, DC 20037

Mr. James J. Zach, Manager  
Point Beach Nuclear Plant  
Wisconsin Electric Power Company  
6610 Nuclear Road  
Two Rivers, Wisconsin 54241

Town Chairman  
Town of Two Creeks  
Route 3  
Two Rivers, Wisconsin 54241

Chairman  
Public Service Commission  
of Wisconsin  
Hills Farms State Office Building  
Madison, Wisconsin 53702

Regional Administrator, Region III  
U.S. Nuclear Regulatory Commission  
Office of Executive Director  
for Operations  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Resident Inspector's Office  
U.S. Nuclear Regulatory Commission  
6612 Nuclear Road  
Two Rivers, Wisconsin 54241



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

WISCONSIN ELECTRIC POWER COMPANY

DOCKET NO. 50-266

POINT BEACH NUCLEAR PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 117  
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 March 23, 1989 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.

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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. 117, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective at 4:15 PM (EDT) on April 15, 1989.

FOR THE NUCLEAR REGULATORY COMMISSION

*for Thomas V. Wambach*  
John N. Hannon, Director  
Project Directorate III-3  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: April 14, 1989



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

WISCONSIN ELECTRIC POWER COMPANY

DOCKET NO. 50-301

POINT BEACH NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 120  
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 March 23, 1989 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. 120, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective at 4:15 PM (EDT) on April 15, 1989.

FOR THE NUCLEAR REGULATORY COMMISSION

*for* *Thomas V. Wambach*

John N. Hannon, Director  
Project Directorate III-3  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

Attachment:  
Charges to the Technical  
Specifications

Date of Issuance: April 14, 1989

ATTACHMENT TO LICENSE AMENDMENT NOS. 117 AND 120  
TO FACILITY OPERATING LICENSE NOS. DPR-24 AND DPR-27  
DOCKET NOS. 50-266 AND 50-301

Revise Appendix A Technical Specifications by removing the page identified below and inserting the enclosed page. The revised page is identified by amendment number and contains marginal lines indicating the area of change.

REMOVE

15.5.4-1

INSERT

15.5.4-1

#### 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 44.8 grams of U-235 per axial centimeter of standard fuel assembly and 40.0 grams of U-235 per axial centimeter of OFA fuel assembly. 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 1800 ppm boron whenever there are spent fuel assemblies in the storage pool.
4. Except for the two storage locations adjacent to the designated slot for the spent fuel storage rack neutron absorbing material surveillance specimen irradiation, 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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NOS. 117 AND 120 TO  
FACILITY OPERATING LICENSE NOS. DPR-24 AND DPR-27

WISCONSIN ELECTRIC POWER COMPANY  
POINT BEACH NUCLEAR PLANT, UNIT NOS. 1 AND 2  
DOCKET NOS. 50-266 AND 50-301

1.0 INTRODUCTION

By letter dated March 23, 1989, Wisconsin Electric Power Company (the licensee) submitted an application to amend the operating licenses for the Point Beach Nuclear Plant, Unit Nos. 1 and 2. The proposed amendments would revise provisions of the Technical Specifications (TS's) Section 15.5.4.2 relating to the permissible enrichments for storage of fuel assemblies in the new fuel storage vault and spent fuel storage pool. Specifically, the amendments would increase the U-235 content permitted for optimized fuel assemblies (OFA) from 39.4 grams per axial centimeter to 40.0 grams per axial centimeter. In addition, the word "assemblies" is changed to "assembly" in two places in order to clarify the intent of the TS in that it applies to each fuel assembly and not to an average over more than one assembly. Furthermore, the licensee requested that the NRC invoke the exigency provisions of 10 CFR 50.91 to permit issuance of the license amendments to support the Point Beach Refueling Outage No. 16. The licensee provided justification for use of those provisions.

2.0 EVALUATION

The licensee requested that the U-235 loading limit specified in TS 15.5.4.2 for fuel storage in the new fuel storage vault and the spent fuel pool be revised from its current value of 39.4 grams per axial centimeter for OFA fuel assemblies to 40.0 grams per axial centimeter in order to reflect the normal enrichment process tolerances (+/- 0.05 percent). The U-235 loading level is not a parameter that is considered in accident analyses for operations of the Point Beach Nuclear Plant. Furthermore, the new fuel storage vaults and the spent fuel pool have already been evaluated for higher enrichment levels than requested for these amendments. Criticality analyses for the new fuel storage vault and the spent fuel pool show that, with a U-235 fuel loading of 40.0 grams per axial centimeter for OFA fuel assemblies, more than adequate margin exists to meet the 5 percent shutdown margin stated in TS 15.5.4.2. Potential radiological effects due to a spent fuel handling accident remain unchanged because there is no associated increase in discharge burnup. Furthermore, effects on the spent fuel pool due to decay heat, radiation effects, or gamma heating remain unchanged for the same reason. Based on the analysis above, the proposed change is acceptable.

The licensee also requested that the word "assemblies" be changed to "assembly" for both the standard and OFA U-235 fuel loading limits. This change clarifies the intent of the technical specification in that the U-235 loading limit applies to each fuel assembly and not to an average taken over more than one assembly. This proposed change is acceptable also.

### 3.0 EXIGENT CIRCUMSTANCES

On July 6, 1988, the licensee submitted a license amendment application which would permit the storage of fuel with U-235 content of up to 46.8 grams per axial centimeter of OFA fuel assemblies. The application included discussion of the criticality analysis for both the new fuel storage vault and for the spent fuel storage pool showing that adequate margin exists for maintaining the 5 percent shutdown margin stated in TS 15.5.4.2. The licensee also provided an evaluation of the potential effects of the higher enriched fuel and the associated increase in discharge burnup in relation to decay heat, radiation effects, and gamma heating on the spent fuel pool. The licensee concluded that these parameters were generally insensitive to increasing U-235 content because higher discharge burnups result in fewer fuel assemblies discharged per cycle and that heating and gamma dose considerations to the spent fuel pool were bounded by previous analyses.

In mid-February 1989, the NRC notified the licensee that it was necessary for the NRC to engage an outside consultant to review possible environmental effects of potential accidents involving the more highly enriched/higher burnup fuel. As a result, it is unlikely that the July 6, 1988 request for amendments would be approved before the end of 1989. At that time, the licensee notified the NRC that 16 fuel assemblies had been ordered at a nominal enrichment of 4.0 weight percent U-235 (equivalent to 39.4 grams per axial centimeter) and that it was possible that some assemblies could exceed the specification limit of 39.4 grams of U-235 per axial centimeter due to normal enrichment process tolerances (+/- 0.05 weight percent). All fuel assemblies have now been fabricated and the final fuel assays indicate that 9 of the 16 assemblies exceed the 39.4 gram per axial centimeter limit for U-235 content. The U-235 content in the 16 fuel assemblies varied from 39.19 grams per axial centimeter to 39.64 grams per axial centimeter with an average of 39.415 grams per axial centimeter. On March 20, 1989, the licensee provided this information to the NRC along with their conclusion that these assemblies satisfied the intent of the TS's based on the region average U-235 content taken to 3 significant digits (as expressed in the TS's). On March 21, 1989, the NRC informed the licensee that the licensee's interpretation was contrary to that of the NRC staff and that each of the fuel assemblies must comply with the TS 15.5.4.2 limit on U-235 loading.

The licensee believes that exigent circumstances exist in that failure to obtain relief from the NRC TS interpretation could cause a delay in the resumption of operation of Point Beach Unit 1. Unless TS 15.5.4.2 is revised, the licensee will be unable to store those fuel assemblies with U-235 content exceeding 39.4 grams per axial centimeter in the spent fuel storage pool. This will result in significant delay in the sequencing of the core load and fuel shuffle, since those fuel assemblies will require extraordinary measures and special procedures to be moved from the new fuel shipping containers to the reactor vessel. The resulting delays could extend the refueling outage and delay return to power by 1-1/2 days. Furthermore, in the event that the licensee had to subsequently unload the core, startup could be delayed indefinitely, since the licensee would have no storage area authorized to receive these fuel assemblies.

The NRC has reviewed the licensee's justification for use of the "exigent circumstances" provisions of 10 CFR 50.91(a)(6)(vi) and concurs that exigent circumstances exist. The licensee submitted an application to revise the TS limit concerning U-235 fuel loading 9 months prior to the scheduled refueling shutdown and could not have foreseen the delay necessary to complete processing of their application. Further, the licensee had no actual knowledge that certain OFA fuel assemblies did in fact exceed the fuel loading limit until fuel fabrication was complete. Finally, wording of the TS (use of the word "assemblies") seemed to indicate that an average U-235 content over a region (consisting of two or more fuel assemblies) was implied. The licensee believes that such an interpretation is reasonable and had no prior knowledge that the NRC staff interpretation would be more restrictive.

The NRC staff noticed the proposed amendments in the Federal Register on March 31, 1989 (54 FR 13261). There were no public comments in response to the notice. Consultations were held with the State of Wisconsin on March 31, 1989. The State of Wisconsin offered no comments.

#### 4.0 FINAL NO SIGNIFICANT HAZARDS DETERMINATION

The Commission has made a proposed determination that the amendment request involves no significant hazards considerations (54 FR 13261). Under the Commission's regulations in 10 CFR 50.92, the Commission may make a final determination that a license amendment involves no significant hazards considerations if operation of the facility in accordance with the amendment would 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 a margin of safety.

The proposed amendments would not involve a significant increase in the probability or consequences of an accident previously evaluated since the U-235 loading level is not a parameter that is considered in accident analyses for operations of the Point Beach Nuclear Plant. Furthermore, the new fuel storage vaults and the spent fuel pool have already been evaluated for higher enrichment levels than requested for these amendments. Criticality analyses for the new fuel storage vault and the spent fuel pool show that more than adequate margin exists to meet the 5 percent shutdown margin stated in TS 15.5.4.2 with a U-235 fuel loading of 40.0 grams per axial centimeter for OFA fuel assemblies. The probability or consequences of a spent fuel handling accident or accidents related to increased decay heat, radiation effects, or gamma heating remain unchanged because there is no associated increase in discharge burnup. The proposed amendments would not create the possibility of a new or different kind of accident from any accident previously evaluated since the amendments do not result in any physical changes either to plant equipment (other than the increased U-235 loading) or procedures. Finally, the proposed amendments would not involve a significant reduction in a margin of safety for the same reasons discussed above. No other safety margins are affected.

Moreover, the Commission has provided guidance concerning the application of the criteria by providing examples of actions not likely to involve significant hazards considerations (51 FR 7751). One of the examples of actions not likely to involve significant hazards considerations is "(i) A purely administrative change to technical specifications: for example, a change to achieve consistency throughout the technical specifications, correction of an error, or a change in nomenclature." The change in the U-235 loading limit for OFA fuel assemblies is an administrative change since the limit would be changed to correct an oversight in the TS, to account for the normal enrichment process tolerances. Further, to remove the ambiguity in interpretation of the U-235 loading limit the word "assemblies" has been changed to "assembly" for both the standard and OFA fuel loading limits. This is an administrative change clarifying the intent of the technical specification in that the U-235 loading limit applies to each fuel assembly individually. Thus, the proposed amendments match the Commission's example of an action "not likely to involve significant hazards considerations".

Based on the analysis presented above, the staff concludes that the amendments meet the three criteria of 10 CFR 50.92. Therefore, the staff has made a final determination that the proposed amendments do not involve significant hazards considerations.

## 5.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or changes an inspection or 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 effluents 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. 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.

## 6.0 CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of an accident previously evaluated, do not create the possibility of an accident of a type different from any evaluated previously, and do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and 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: W. Swenson

Dated: April 14, 1989