Docket No. 50-301

DEC 1 8 1974

Wisconsin Electric Power Company
Wisconsin Michigan Power Company
ATTN: Mr. Sol Burstein
Senior Vice President
231 West Michigan
Milwaukee, Wisconsin 53201

Gentlemen:

The Commission has issued the enclosed Amendment No. 6 to Facility Operating License No. DPR-27 for Point Beach Unit 2. This amendment includes Change No. 12 to the Technical Specifications and is in response to your request dated December 11, 1974, and staff discussions.

The amendment has the effect of permitting operation for 654 Effective Full Power Hours (EFPH) under present Technical Specifications with the Cycle 2 fuel now loaded in the core. You will note that our Safety Evaluation is predicated on our understanding that you have, by your letter of December 11, 1974, "committed to comply with the most conservative of current Unit 2 Technical Specifications, the proposed Unit 2 Cycle 2 Technical Specifications, and the proposed Final Acceptance Criteria Technical Specifications". We so construe your letter despite the sentence which reads "The plant will be operated in accordance with the same limiting conditions for operation as have applied during Cycle 1". Your return to operation prior to final disposition of the changes proposed in your letters of August 30, 1974 and October 7, 1974, shall be deemed confirmation by you that our understanding of your commitment is correct.

If you disagree with our understanding of your commitment, you are not authorized to return to operation pursuant to the enclosed Amendment No. 6.

OFFICE ▶						
SURNAME ▶						
DATE ▶						

Copies of the related Safety Evaluation and the Federal Register Notice are also enclosed.

Sincerely,

Original Signed

George Lear, Chief
Operating Reactors Branch #3
Directorate of Licensing

Enclosures:
1. Amendment No. 6
2. Safety Evaluation
3. Federal Register Notice

cc w/encls:
Mr. Bruce W. Churchill, Esquire
Shaw, Pittman, Potts & Trowbridge
910 - 17th Street, N. W.
Washington, D. C. 20006

Mr. Arthur M. Fish
Document Department
University of Wisconsin
Stevens Point Library
Stevens Point, Wisconsin 54481

Mr. William F. Eich, Chairman
Public Service Commission of
Wisconsin
Hill Farms State Office Building
Madison, Wisconsin 53702

Mr. Gary Williams
Federal Activities Branch
Environmental Protection Agency
Region V Office
1 N. Wacker Drive, Room 822
Chicago, Illinois 60606

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DATE ▶	12/ /74	12/13/74	12/13/74	12/13/74	12/13/74	12/13/74

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Docket No. 50-301

Wisconsin Electric Power Company
Wisconsin Michigan Power Company
ATTN: Mr. Sol Burstein
Senior Vice President
231 West Michigan
Milwaukee, Wisconsin 53201

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The amendment has the effect of permitting operation for 654 Effective Full Power Hours (EFPH) under present Technical Specifications with the Cycle 2 fuel now loaded in the core. You will note that our Safety Evaluation is predicated on our understanding that you have, by your letter of December 11, 1974, "Committed to comply with the most conservative of current Unit 2 Technical Specifications, the proposed Unit 2 Cycle 2 Technical Specifications, and the proposed Final Acceptance Criteria Technical Specifications". We so construe your letter despite the sentence which reads "The plant will be operated in accordance with the same limiting conditions for operation as have applied during Cycle 1". Your return to operation prior to final disposition of the changes proposed in your letters of August 30, 1974 and October 7, 1974, shall be deemed confirmation by you that our understanding of your committment is correct.

If you disagree with our understanding of your committment, you are not authorized to return to operation pursuant to the enclosed Amendment No. 6.

Copies of the related Safety Evaluation and the Federal Register Notice are also enclosed.

Sincerely,

George Lear, Chief
Operating Reactors Branch #3
Directorate of Licensing

Enclosures:
1. Amendment No. 6
2. Safety Evaluation
3. Federal Register Notice

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DATE ➔			12/13/74	12/13/74	12/13/74	12/13/74

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cc: w/enclosures

Mr. Bruce W. Churchill, Esquire
Shaw, Pittman, Potts & Trowbridge
910 - 17th Street, N. W.
Washington, D. C. 20006

Manitowoc Public Library
808 Hamilton Street
Manitowoc, Wisconsin 54220

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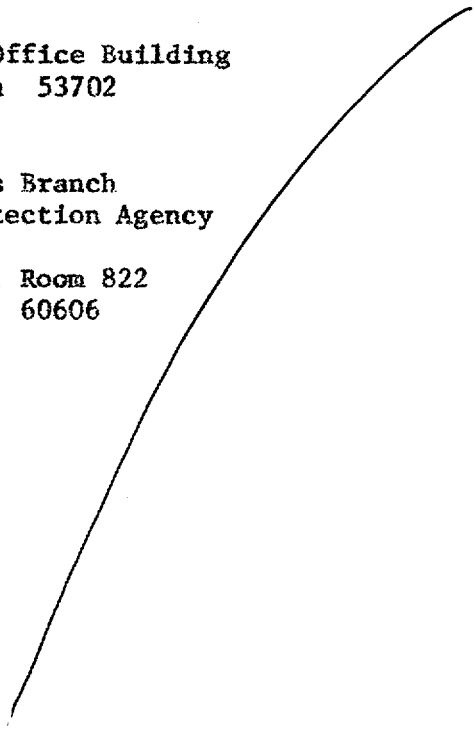

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WISCONSIN ELECTRIC POWER COMPANY

WISCONSIN MICHIGAN POWER COMPANY

DOCKET NO. 50-301

POINT BEACH NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 6
License No. DPR-27

1. The Atomic Energy Commission (the Commission) has found that:

   A. The application for amendment by Wisconsin Electric Power Company and Wisconsin Michigan Power Company (the licensees) dated December 11, 1974, 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. Prior public notice of this amendment is not required since the amendment does not involve a significant hazards consideration.

2. Accordingly, the license is amended by a change 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:

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"(B). Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. 12."

3. This license amendment is effective as of the date of its issuance.

FOR THE ATOMIC ENERGY COMMISSION

Original Signed

Karl R. Goller, Assistant Director
for Operating Reactors
Directorate of Licensing

Attachment:
Change No. 12
to Technical Specifications

Date of Issuance: DEC 1 3 1974

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ATTACHMENT TO LICENSE AMENDMENT NO. 6

CHANGE NO. 12 TO THE TECHNICAL SPECIFICATIONS

FACILITY OPERATING LICENSE NO. DPR-27

WISCONSIN ELECTRIC POWER COMPANY
AND
WISCONSIN MICHIGAN POWER COMPANY

POINT BEACH NUCLEAR PLANT, UNIT 2

DOCKET NO. 50-301

Revise Appendix A as follows: Replace page 15.2.1-1 and 15.2.1-3 with the attached pages.

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This combination of hot channel factors is higher than that calculated at full power for the range from all control rods fully withdrawn to maximum allowable control rod insertion. The control rod insertion limits are covered by Specification 15.3.10-1. Somewhat worse hot channel factors could occur at lower power levels because additional control rods are in the core. However, the control rod insertion limits dictated by Figure 15.3.10-1 assure that the DNB ratio is always greater at part power than at full power. Additional peaking factors to account for local peaking due to fuel rod axial gaps and reduction in fuel pellet stack length have been included in the calculation of the curves shown in Figure 15.2.1-1.

Figure 15.2.1-1 also includes an allowance for an increase in the enthalpy rise hot channel factor at reduced power based on the expression:

$F^N_H = 1.58\ [1 + 0.2\ (1-P)]$ where P is the fraction of rated power.

The hot channel factors are also sufficiently large to account for the degree of malpositioning of part-length rods that is allowed before the reactor trip set points are reduced and rod withdrawal block and load runback may be required. Rod withdrawal block and load runback occur before reactor trip setpoints are reached.

The Reactor Control and Protective System is designed to prevent any anticipated combination of transient conditions that would result in a DNB ratio of less than 1.30.

The fuel residence time for Unit 2, is limited to 14,000 EFPH to assure no fuel clad flattening without prior review by the Regulatory staff. The residence time of 14,000 EFPH is based on predicted minimum time to clad flattening for an operating pressure of 2250 psi up to mid-cycle, or 6500 EFPH, and 2000 psi thereafter. 12

15.2.0 SAFETY LIMITS AND LIMITING SAFETY SYSTEM SETTINGS

15.2.1 SAFETY LIMIT, REACTOR CORE

Applicability:

Applies to the limiting combinations of thermal power, reactor coolant system pressure, and coolant temperature during operation.

Objective:

To maintain the integrity of the fuel cladding.

Specification:

1. The combination of thermal power level, coolant pressure, and coolant temperature shall not exceed the limits shown in Figure 15.2.1-1. The safety limit is exceeded if the point defined by the combination of reactor coolant system average temperature and power level is at any time above the appropriate pressure line.
2. The fuel residence time for Unit 2 shall be limited to 14,000 effective full power hours (EFPH) under design operating conditions, provided the primary system pressure is reduced to 2000 psia by 6500 EFPH. 12

SAFETY EVALUATION BY THE DIRECTORATE OF LICENSING

SUPPORTING AMENDMENT NO. 6 TO LICENSE NO. DPR-27

CHANGE NO. 12 TO THE TECHNICAL SPECIFICATIONS

WISCONSIN ELECTRIC POWER COMPANY
AND
WISCONSIN MICHIGAN POWER COMPANY

DOCKET NO. 50-301

Introduction

By letters dated August 30 and October 7, 1974 Wisconsin Electric Power Company (WEPCO) proposed changes in the Facility Operating License DPR-27 for Point Beach Unit 2. WEPCO requested the allowable Unit 2 fuel residence time (the minimum predicted time to clad flattening) be increased to allow Unit 2 to operate through fuel Cycle 2. To justify the requested fuel residence time extension, WEPCO used a revised analytical model to predict the minimum time to clad flattening. This revised model is presently under review by the Commission. Because of the nature of the modifications in the revised model, a notice has been issued stating the Commission is considering WEPCO's requests of August 30, and October 7, 1974.

In order to allow Unit 2 to return to power utilizing the Cycle 2 fuel which is now loaded in the core, during the period while we are considering WEPCO's August 30 and October 7, 1974 submittals, WEPCO on December 11, 1974 requested that the present fuel residence limit of 14,000 Effective Full Power Hours (EFPH) be applied during the initial portion of Cycle 2. The Regulatory staff has previously reviewed and approved a fuel residence time for Unit 2, Cycle 1, of 14,000 EFPH. The present fuel assembly exposure at the end of Cycle 1 for all regions in Unit 2 is 13,346 effective full power hours, 654 EFPH less than the Technical Specification Limit of 14,000 EFPH. The same Region 2 fuel which was limiting for Cycle 1 is present in the Cycle 2 fuel loading pattern. This fuel has been evaluated by the Regulatory staff to assure no clad flattening through 14,000 EFPH of core operation. This value is independent of whether the fuel is operated in Cycle 1 or in Cycle 2. Therefore no change in limiting conditions for operation or limiting safety system settings is proposed by WEPCO.

Evaluation

We have applied an independent computer analysis of the potential for clad flattening of the fuel as now installed for core cycle 2 of Unit 2 and determined that a minimum collapse time of 20,000 EFPH available for

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the most limiting core region (Region 2). This determination was based on use of our computer code "BUCKLE 1784" which was compiled to calculate the change in ovality of an initially oval tube as a function of time, temperature, neutron flux and net uniform external pressure. The basic concept employed in BUCKLE is that a tube, which is assumed to be slightly out-of-round, tends to become more out-of-round with time when subjected to net uniform external pressures. Based on our independent and conservative computer analysis, we can conclude that operation of Region 2, until it attains 20,000 EFPH can be accomplished without significant decrease in any safety margin, without any increase in the consequences of an accident, and without any increase in the probability of an accident. Therefore operation of Unit 2 to 14,000 EFPH with the Cycle 2 fuel as now installed is acceptable.

WEPCO has reviewed the accidents covered in the Final Safety Analysis Report for Unit 2. WEPCO has concluded that this change would not involve an increase in the probability of an accident, since the physical design aspects and fuel design parameters of the new fuel (Region 4) are similar to and fall within those accidents previously analyzed in the Point Beach Final Facility Description and Safety Analysis Report (FFDSAR). They have also concluded that the change does not involve an increase in the consequences of an accident because the accidents analyzed using the Cycle 2 loading pattern were not more adverse than previously reported in the FFDSAR and WCAP-8151. We agree with this conclusion. The results and conclusions of previous safety evaluations with respect to the fuel residence limits are applicable because clad flattening is predicted not to occur, there is no change in previously approved operating limits and there is no significant difference between the core loading of Cycle 1 and Cycle 2. Moreover, WEPCO has further committed to comply with the most conservative of current Unit 2 Technical Specifications, the proposed Unit 2 Cycle 2, Technical Specifications and the proposed Final Acceptance Criteria (FAC) Technical Specifications.

Inasmuch as the staff has previously reviewed the fuel residence time and found it to be reasonable with respect to clad flattening and since this action does not involve a change in plant operating limits, nor will it reduce the margin of safety or increase the risk or consequences of an accident, the change in the Technical Specifications does not involve a significant hazards consideration.

In order to make the present fuel residence limit applicable to the proposed operation, the references to Cycle 1 have been removed from the Technical Specifications.

Conclusion

We have concluded, based on the considerations discussed above, that:

(1) because the change does not involve a significant increase in the probability or consequences of accidents previously considered and does involve a significant decrease in any safety margin, it does

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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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Original Signed

P. B. Erickson
Operating Reactors Branch #3
Directorate of Licensing

Original Signed

George Lear, Chief
Operating Reactors Branch #3
Directorate of Licensing

Date: DEC 1 3 1974

OFFICE ➤						
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DATE ➤						

UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-301

WISCONSIN ELECTRIC POWER COMPANY
AND
WISCONSIN MICHIGAN POWER COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

Notice is hereby given that the U.S. Atomic Energy Commission (the Commission) has issued Amendment No. 6 to Facility Operating License No. DPR-27 issued to Wisconsin Electric Power Company and Wisconsin Michigan Power company which revised the Technical Specifications for operation of the Point Beach Nuclear Plant, Unit No. 2, located in Manatowac County, Wisconsin. The amendment is effective as of the date of issuance.

The amendment applies the present Unit 2 Cycle 1 fuel residence limit of 14,000 effective full power hours (EFPH) to the initial portion of Cycle 2, thus making it possible for Unit 2 to return to operation while the Commission is considering the issuance of a further amendment as noticed in the FEDERAL REGISTER on November 13, 1974 (39 FR 40062).

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment.

For further details with respect to this action, see (1) the application for amendment dated December 11, 1974, (2) Amendment No. 6 to License No. DPR-27 with any attachment, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at

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the Commission's Public Document Room, 1717 H Street, NW, Washington, D. C., and at the University of Wisconsin-Stevens Point Library, Stevens Point, Wisconsin.

A copy of items (2) and (3) may be obtained upon request addressed to the U.S. Atomic Energy Commission, Washington, D. C. 20545, Attention: Deputy Director for Reactor Projects, Directorate of Licensing - Regulation.

Dated at Bethesda, Maryland, this 13th day of December, 1974.

FOR THE ATOMIC ENERGY COMMISSION

Original Signed

George Lear, Chief
Operating Reactors Branch #3
Directorate of Licensing

OFFICE ➤						
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