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SEP 3 0 1974

Docket Nos. 50-266
and 50-301

Wisconsin Electric Power Company
Wisconsin Michigan Power Company
ATTN: Mr. Sol Burstein
Senior Vice President
23k West Michigan
Milwaukee, Wisconsin 53203

Gentlemen:

The Commission has issued the enclosed Amendment No. 5 to Facility License No. DPR-27 for the Point Beach Nuclear Plant Unit No. 2. This Amendment includes Change No. 11 to the Technical Specifications, Appendix A, and is in response to your request dated September 11, 1974.

The amendment permits the Point Beach Nuclear Plant Unit No. 2 to operate core cycle 1 for 14000 effective full power hours.

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

Sincerely,

Original Signed

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

Enclosures:
1. Amendment No. 5
2. Safety Evaluation
3. Federal Register Notice

cc: See next page

bcc: HJMcAlduff
JRBuchanan
TBAbernathy
ARosenthal
NHGoodrich

OFFICE	ORB#3	ORB#3	ORB#3	OGC	L:AD/ORs
SURNAME	PBErickson:kmf	SATeets	GLear		KRGoller
DATE	9/26/74	9/30/74	9/30/74	9/27/74	9/30/74

Form AEC-318 (Rev. 9-53) AECM 0240 ☆ U. S. GOVERNMENT PRINTING OFFICE: 1974-526-166

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

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

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DATE ➤						

WISCONSIN ELECTRIC POWER COMPANY

WISCONSIN MICHIGAN POWER COMPANY

DOCKET NO. 50-301

POINT BEACH NUCLEAR PLANT UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 5
License No. DPR-27

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

   A. The application for amendment by Wisconsin Electric Power Company and Wisconsin Michigan Power Company (the licensees) dated September 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 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 licensees shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. 11"

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. 11 to the
Technical Specifications

Date of Issuance: SEP 3 0 1974

OFFICE ➤						
SURNAME ➤						
DATE ➤						

ATTACHMENT TO LICENSE AMENDMENT NO. 5

CHANGE NO. 11 TO THE TECHNICAL SPECIFICATIONS

FACILITY OPERATING LICENSE NO. DPR-27

Replace Page 15.2.1-1 and 15.2.1-3 with the attached pages.

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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, Cycle 1, shall be presently limited to 14000 effective full power hours (EFPH) under design operating conditions, provided the primary system pressure is reduced to 2000 psia by 6500 EFPH. | 11

Change No. 11
Dated: SEP 3 0 1974

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 insure 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: 6

$F^N_H = 1.58\ [1 + 0.2\ (1-P)]$ 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, Cycle 1 is limited to 14000 EFPH to assure no fuel clad flattening without prior review by the Regulatory staff. The residence time of 14000 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. 11

Change No. 11
Dated: SEP 3 0 1974

SAFETY EVALUATION BY THE DIRECTORATE OF LICENSING

SUPPORTING AMENDMENT NO. 5 TO LICENSE NO. DPR-27

CHANGE NO. 11 TO THE TECHNICAL SPECIFICATIONS

WISCONSIN ELECTRIC POWER COMPANY AND

WISCONSIN MICHIGAN POWER COMPANY

Introduction

By letter dated September 11, 1974 Wisconsin Electric Power Company and Wisconsin Michigan Power Company requested a change to the Technical Specifications appended to Facility Operating License No. DPR-27 for the Point Beach Nuclear Plant Unit No. 2. The proposed change would allow Unit 2, Core Cycle 1, to operate for 14000 effective full power hours (EFPH).

Evaluation

The limit on EFPH is based on the potential for fuel clad flattening. Core Region 2 (the most limiting) of core cycle 1 was originally limited to 13000 EFPH based on a conservative clad flattening model. The licensee referenced a recent Westinghouse analysis (WCAP-8381) of clad flattening for support of their prediction that no clad flattening occurs for 14000 EFPH. This document is currently undergoing Staff review and evaluation. The Regulatory staff has completed an independent computer analysis of the potential for clad flattening in Region 2, core cycle 1 for Point Beach Unit No. 2 and obtained a collapse time of 21000 EFPH for this most limiting core region. This determination was based on use of the Staff's computer code BUCKLE 1784 which calculates creep buckling of an initially oval tube. The appropriate input data from Point Beach-2 was used in this BUCKLE analysis. BUCKLE is a computer code 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 slightly out-of-round, tends to become more out-of-round with time when subjected to net uniform external pressures. Therefore, operation of Unit 2, core cycle 1 for an additional 1000 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.

Conclusion

We have concluded, based on the reasons discussed above, that the authorization of this change does not involve a significant hazards consideration. We also conclude that 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 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

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

Original Signed

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

Dated: SEP 3 0 1974

OFFICE ➤						
SURNAME ➤						
DATE ➤						

UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-301

WISCONSIN ELECTRIC POWER COMPANY

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. 5 to Facility Operating License No. DPR-27 issued to Wisconsin Electric Power Company and Wisconsin Michigan Power Company which revised Technical Specifications for operation of the Point Beach Nuclear Plant Unit No. 2, located in the Town of Two Creeks, Manitowic County, Wisconsin. The amendment is effective as of its date of issuance.

The amendment permits operation of Point Beach Unit No. 2 Core Cycle 1 for 14000 Effective Full Power Hours.

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 September 11, 1974, (2) Amendment No. 5 to License No. DPR-27 with any attachments, and (3) the Commission's related Safety Evaluation.

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DATE ➤						

All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Manitowoc Public Library, 808 Hamilton Street, Manitowoc, Wisconsin 54220.

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 30th day of September, 1974.

FOR THE ATOMIC ENERGY COMMISSION

Original Signed

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

OFFICE ➤						
SURNAME ➤						
DATE ➤						