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Docket No. 50-305

Wisconsin Public Service Corporation
ATTN: Mr. E. W.James
Senior Vice President
Post Office Box 1200
Green Bay, Wisconsin 54305

Gentlemen:

The Commission has issued the enclosed Amendment No. 11 to Facility License No. DPR-43 for the Kewaunee Nuclear Power Plant. The amendment consists of changes to the Technical Specifications and is in response to your request dated October 26, 1976.

This amendment revises the Technical Specifications to delete requirements to perform control rod bank worth and isothermal temperature coefficient measurements between 4000 and 7500 MWD/MTU for fuel cycle 2.

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

Sincerely,

/s/

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Enclosures:
1. Amendment No. 11 to DPR-43
2. Safety Evaluation
3. Federal Register Notice

cc w/encl:
See next page

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

December 9, 1976

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ATTN: Mr. E. W.James
Senior Vice President
Post Office Box 1200
Green Bay, Wisconsin 54305

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A. Schwencer

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

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3. Federal Register Notice

cc w/encl:
See next page

cc: Steven E. Keane, Esquire
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Kewaunee Public Library
314 Milwaukee Street
Kewaunee, Wisconsin 54216

Mr. Donald L. Quistorff
Chairman Kewaunee County Board
Kewaunee County Courthouse
Kewaunee, Wisconsin 54216

Mr. Lester Huber
Chairman, Town of Carlton
Route 1
Kewaunee, Wisconsin 54216

Mr. Normal M. Clapp, Chairman
Public Service Commission of
Wisconsin
Hill Farms State Office Building
Madison, Wisconsin 53702

Chief, Energy Systems
Analyses Branch (AW-459)
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U.S. Environmental Protection Agency
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Washington, D.C. 20460

U.S. Environmental Protection Agency
Federal Activities Branch
Region V Office
ATTN: EIS COORDINATOR
230 South Dearborn Street
Chicago, Illinois 60604

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

WISCONSIN PUBLIC SERVICE CORPORATION

WISCONSIN POWER AND LIGHT COMPANY

MADISON GAS AND ELECTRIC COMPANY

DOCKET NO. 50-305

KEWAUNEE NUCLEAR POWER PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 11
License No. DPR-43

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Wisconsin Public Service Corporation, Wisconsin Power and Light Company and Madison Gas and Electric Company (the licensees) dated October 26, 1976, 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.

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

FOR THE NUCLEAR REGULATORY COMMISSION

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 9, 1976

ATTACHMENT TO LICENSE AMENDMENT NO. 11

FACILITY OPERATING LICENSE NO. DPR-43

DOCKET NO. 50-305

Revise Appendix A as follows:

Replace pages 3.10-7a and 3.10-16 with attached revised pages.

The rod position indicator channel is sufficiently accurate to detect a rod ±7-1/2 inches away from its demand position. If the rod position indicator channel is not operable, the operator will be fully aware of the inoperability of the channel, and special surveillance of core power tilt indications, using established procedures and relying on excore nuclear detectors, and/or movable incore detectors, will be used to verify power distribution symmetry.

One inoperable control rod is acceptable provided the potential consequences of accidents are not worse than the cases analyzed in the safety analysis report. A 30 day period is provided for the re-analysis of all accidents sensitive to the changed initial conditions.

The required drop time to dashpot entry is consistent with safety analysis.

The DNB related accident analysis assumed as initial conditions that the T_{inlet} was 4°F above nominal design or T_{avg} was 4°F above nominal design. The Reactor Coolant System pressure was assumed to be 30 psi below nominal design.

To provide additional assurances during the initial stages of core life that the core for cycle 2 conforms to the accident analysis and the core performance is correctly modeled by the calculations the specifications of section 3.10.m are provided. It is intended that these section 3.10.m specifications be interim measures and that they will be removed from the specifications upon continued indication that measurements and predictions are in agreement within the normal acceptance criteria for such comparisons.

3.10.k During steady state 100% power operation T inlet shall be maintained below 540°F.

3.10.l During steady state 100% power operation reactor coolant system pressure shall be maintained above 2200 psig.

3.10.m Cycle 2 interim requirements to assure conformance to accident analyses are as follows:

1. Control rod worth measurements shall be performed during low power physics tests at beginning of core life for control banks A, B, C and D plus one shutdown bank.

2. Incore mapping shall be performed every 15 calendar days of power operation to compare measured power distribution to prediction. Results of comparisons will be available for NRC review on a monthly interval.

3. Boron depletion vs. core burnup data shall be compared to prediction. Comparison of measurement to prediction will be available for NRC review on a monthly interval.

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

SAFETY EVALUATION BY THE OFFICE OF THE NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 11 TO FACILITY LICENSE NO. DPR-43

WISCONSIN PUBLIC SERVICE CORPORATION

WISCONSIN POWER AND LIGHT COMPANY

MADISON GAS AND ELECTRIC COMPANY

KEWAUNEE NUCLEAR POWER PLANT

DOCKET NO. 50-305

Introduction

By letter dated October 26, 1976, Wisconsin Public Service Corporation (licensee) has proposed changes to the Technical Specifications for the Kewaunee Nuclear Power Plant which would delete a provision which calls for control rod bank worth and isothermal temperature coefficient measurements.

Discussion

A provision for control rod bank worth and isothermal temperature coefficient measurement was included in an April 5, 1976 license amendment. This amendment approved operation of Kewaunee with the cycle 2 core. Obtaining these measurements were accepted as one means of providing assurance of shutdown margin at end-of-cycle (EOC) of cycle 2 by verification of adequate margin past mid-core cycle (MOC). The need to provide such a means of assurance resulted from the change from the Westinghouse designated core loading pattern of 40 new fuel assemblies (Core 2A) to the licensee's designated pattern of 32 new fuel assemblies (Core 2B), and from the fact that the licensee's calculational methods had not, at that time, been reviewed by us.

We stated in our April 5, 1976 Safety Evaluation that the measurement provisions would be eliminated if the licensee were to provide analyses using calculational methods which we have approved. The licensee's letter of October 26, 1976, provided these analyses.

Evaluation

The licensee has submitted analyses, performed by Westinghouse of the shutdown margin, bank worths, and isothermal temperature coefficient for Core 2B at conditions beginning of cycle (BOC), MOC and EOC. These analyses verify the adequacy of the shutdown margin throughout core life.

We have reviewed the analyses and the BOC calculated values have been compared with the values measured at BOC. The calculated values for control rod bank worth agree with measured values within 6% for each bank measured. The MOC and EOC calculations were performed using the same methods. Reactivity defects and rod insertion allowances were calculated and used in the verification of shutdown requirements and margins. The analyses verify that there is adequate shutdown margin for EOC.

In addition, we have reviewed the other requirements of Technical Specification 3.10.M. These include the BOC startup tests, the incore maps and the boron depletion vs. core burnup data submitted in monthly reports to us. The predicted and measured power distributions show agreement within 5% for individual fuel assemblies. The boron depletion vs. burnup agrees well with the calculated curve.

Based on our review of the analyses and test results submitted, we conclude that they demonstrate that adequate shutdown margin will exist of end-of-cycle. Therefore, we find that Technical Specification 3.10.m.4 can be deleted.

We have determined that this amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR 51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does 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.

Date: December 9, 1976

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-305

WISCONSIN PUBLIC SERVICE CORPORATION

WISCONSIN POWER AND LIGHT COMPANY

MADISON GAS AND ELECTRIC COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U.S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 11 to Facility Operating License No. DPR-43, issued to Wisconsin Public Service Corporation, Wisconsin Power & Light Company, and Madison Gas and Electric Company (the licensees), which revised Technical Specifications for operation of the Kewaunee Nuclear Power Plant, located in Kewaunee, Wisconsin. The amendment is effective as of its date of issuance.

This amendment revises the Technical Specifications to delete requirements to perform control rod bank worth and isothermal temperature coefficient measurements between 4000 and 7500 MWD/MTU for fuel cycle 2.

The application for 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. Prior public notice of this amendment was not required since the amendment does not involve a signigicant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement, or negative declaration and environmental impact appriasal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated October 26, 1976, (2) Amendment No. 11 to License No. DPR-43, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, NW., Washington, D.C. and at the Kewaunee Public Library, 314 Milwaukee Street, Kewaunee, Wisconsin 54216. A copy of items (2) and (3) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 9th day of December 1976.

FOR THE NUCLEAR REGULATORY COMMISSION

A. Schwencer

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors