

JANUARY 30 1979

Docket No. 50-301

Mr. Sol Burstein
Executive Vice President
Wisconsin Electric Power Company
231 West Michigan Street
Milwaukee, Wisconsin 53201

Dear Mr. Burstein:

The Commission has issued the enclosed Amendment No. 40 to Facility Operating License No. DPR-27 for the Point Beach Nuclear Plant, Unit No. 2. The amendment consist of changes to the Technical Specifications in response to your request dated November 16, 1978, as supplemented January 5, 1979.

The amendment revises the reactor coolant system pressure-temperature heatup and cooldown curves to be applied up to seven effective full power years for Unit No. 2.

You will note that a similar amendment for Unit No. 1 is not being issued at this time. As explained in our letter to you of December 20, 1978, we consider your request of November 16, 1978 to involve two Class III amendments for which the required license fee is \$8,000 (\$4,000 for each). Since you have remitted only \$4,400 for both, we are unable to process the amendment for Unit No. 1 until an additional \$3,600 has been received.

We have reviewed your letter of January 5, 1979, wherein you explained your basis for remitting \$4,400. We do not agree with your position that the amendments involve one Class III and one Class I amendment for the reasons stated in our December 20, 1978 letter. Since we have completed our review for the Unit No. 1 amendment, it will not be possible to refund the \$400. Rather than consider your request for amendment for Unit No. 1 withdrawn, then, we will consider your request still pending before us for action and complete action on the Unit No. 1 portion of your request when the additional \$3,600 is remitted. This has been discussed with and agreed to by your staff.

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OFFICE >					
SURNAME >					
DATE >					

Mr. Sol Burstein
 Wisconsin Electric Power Company - 2 -

Copies of the Safety Evaluation and Notice of Issuance are also enclosed.

Sincerely,

Original signed by
 C. TRAMMELL for

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

Enclosures:

1. Amendment No. 40 to DPR-27
2. Safety Evaluation
3. Notice of Issuance

cc: w/enclosures
 See next page

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Docket File 50-301

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TERA

J. Buchanan

B. Harless

C. Miles

TAC#11063

*w/ change
 as discussed
 with C. Trammell*

OFFICE	DOR:ORB1	DOR:ORB1	LFBM		OELD JB	DOR:ORB1
SURNAME	<i>C. Trammell</i> :jb	CSParrish	<i>R. Diggs</i>		<i>L. Brenner</i>	<i>A. Schwencer</i>
DATE	01/17/79	01/18/79	1/23/79		1/27/79	1/30/79

January 30, 1979

cc: Mr. Bruce Churchill, Esquire
Shaw, Pittman, Potts & Trowbridge
1800 M Street NW
Washington, D.C. 20036

Wisconsin Electric Power Company
ATTN: Mr. Glen Reed, Manager
Nuclear Power Division
Point Beach Nuclear Plant
231 West Michigan Street
Milwaukee, Wisconsin 53201

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Office of Radiation Programs (AW-459)
U. S. Environmental Protection Agency
Crystal Mall #2
Arlington, Virginia 20460

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



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. 40
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 November 16, 1978, as supplemented January 5, 1979 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:

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"(B) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 40, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications."

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

FOR THE NUCLEAR REGULATORY COMMISSION

for *Charles M. Trammell*
A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 30, 1979

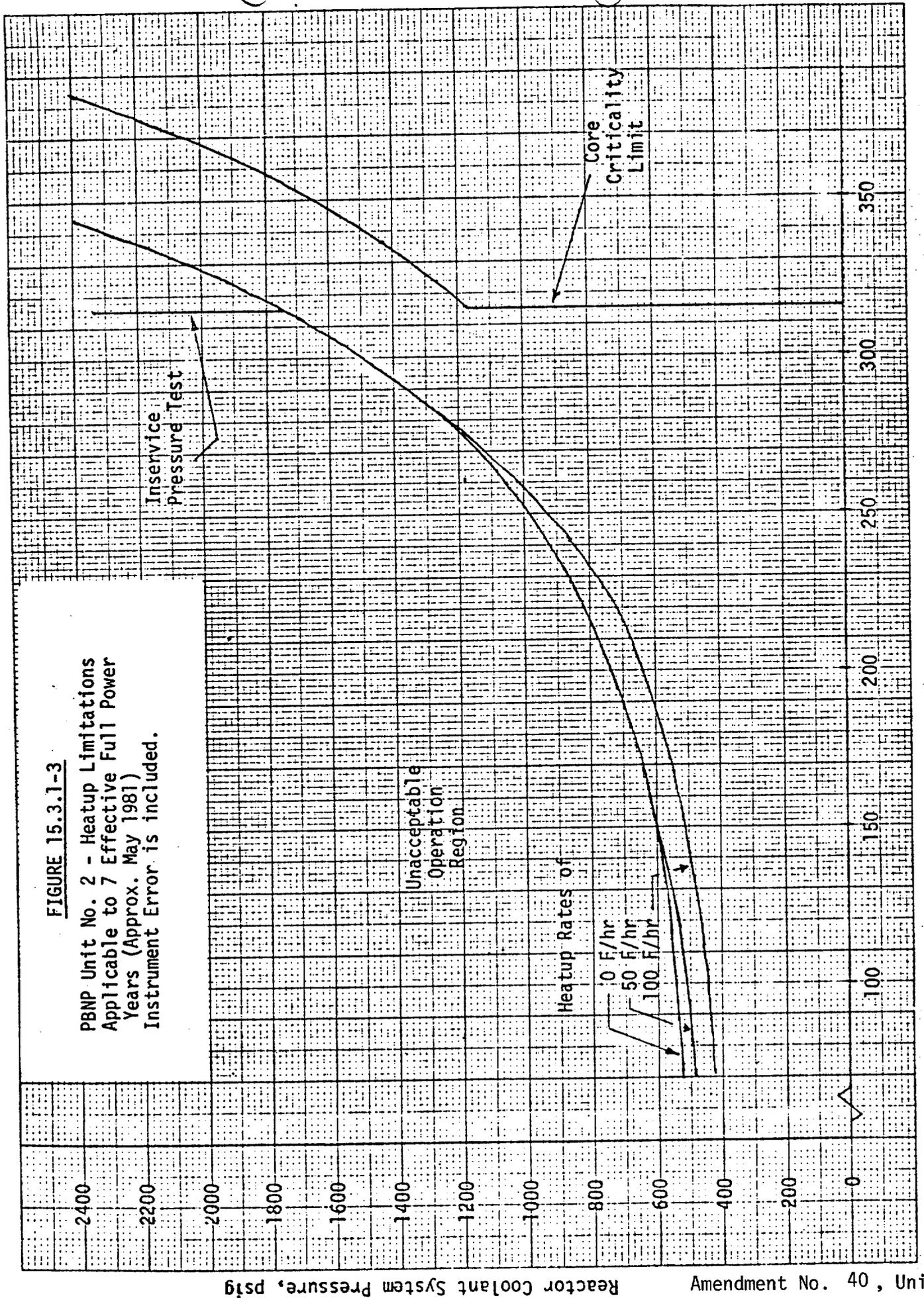
ATTACHMENT TO LICENSE AMENDMENT NO. 40
CHANGES TO THE TECHNICAL SPECIFICATIONS
FACILITY OPERATING LICENSE NO. DPR-27
DOCKET NO. 50-301

Revise Appendix A as follows:

1. Remove Table 15.3.1-1 and Figures 15.3.1-1 and 15.3.1-2 (no replacements).
2. Remove Figures 15.3.1-3 and 15.3.1-4 and replace with revised figures bearing the same numbers.

FIGURE 15.3.1-3

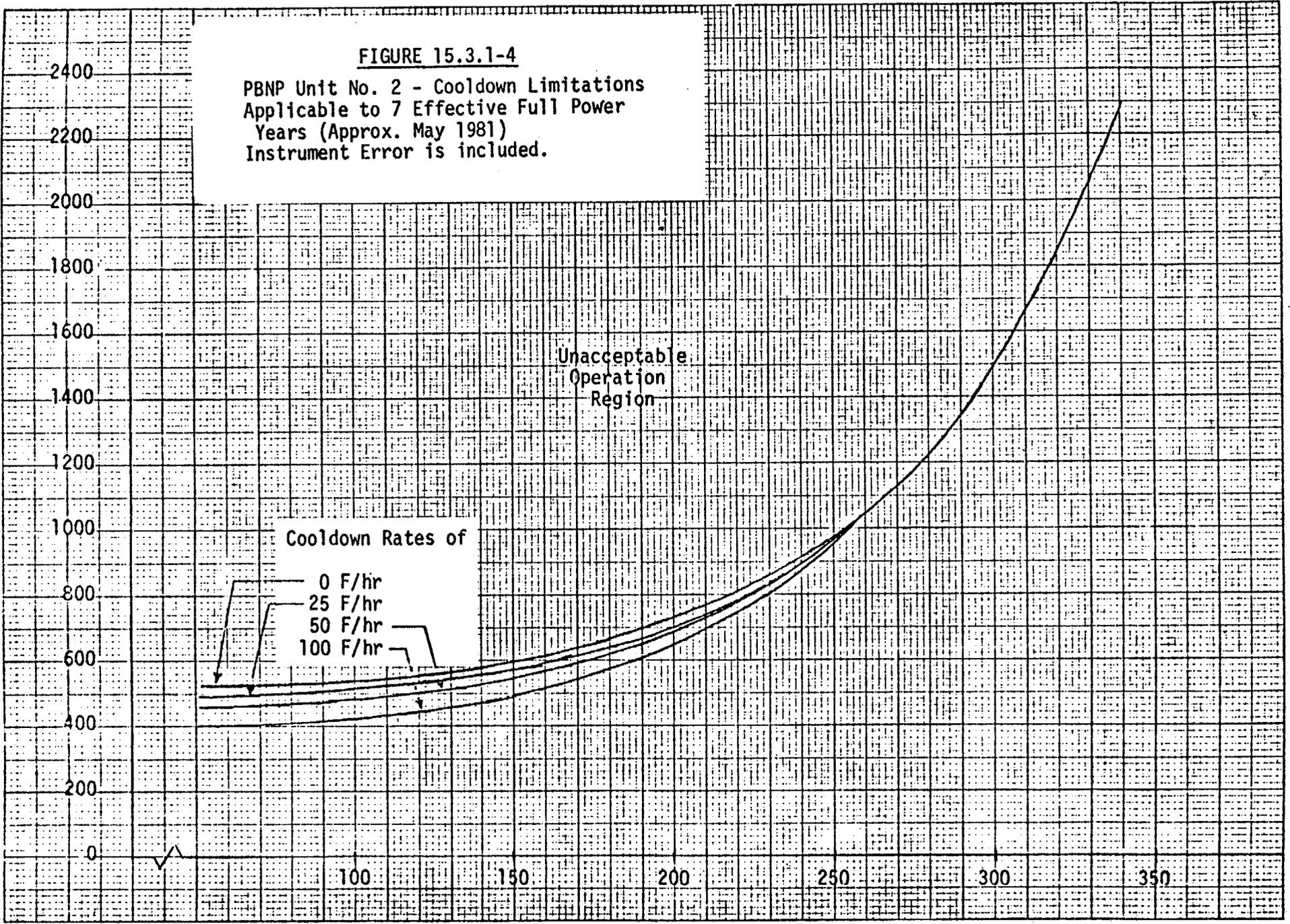
PBNP Unit No. 2 - Heatup Limitations
Applicable to 7 Effective Full Power
Years (Approx. May 1981)
Instrument Error is included.



Temperature, °F

FIGURE 15.3.1-4

PBNP Unit No. 2 - Cooldown Limitations
Applicable to 7 Effective Full Power
Years (Approx. May 1981)
Instrument Error is included.



Temperature, °F



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 40 TO FACILITY OPERATING LICENSE DPR-27
WISCONSIN ELECTRIC POWER COMPANY
POINT BEACH NUCLEAR PLANT, UNIT NO. 2
DOCKET NO. 50-301

Introduction

By letter dated November 16, 1978, as supplemented January 5, 1979, Wisconsin Electric Power Company requested changes to the Technical Specifications appended to Facility Operating License DPR-27 for Point Beach Unit No. 2. The requested changes would modify the reactor coolant system pressure-temperature limits to account for neutron irradiation-induced increases in reactor vessel metal nil ductility temperature (RT_{NDT})¹.

Discussion

10 CFR Part 50, Appendix G "Fracture Toughness Requirements", requires that pressure-temperature limits be established for reactor coolant system heatup and cooldown operations, inservice leak and hydrostatic tests, and reactor core operation. These limits are required to ensure that the stresses in the reactor vessel remain within acceptable limits. They are intended to provide adequate margins of safety during any condition of normal operation, including anticipated operational occurrences.

The specific pressure-temperature limits which are initially established depend upon the metallurgical properties of the reactor vessel material and the design service conditions. However, the metallurgical properties vary over the lifetime of the reactor vessel because of the effects of neutron irradiation. One principal effect of the neutron irradiation is that it causes the reactor vessel nil ductility temperature (RT_{NDT}) to increase or shift with time. The practical results of

¹ RT_{NDT} is the temperature associated with the transition from a ductile to a brittle fracture mode of failure of a metal test specimen.

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the RT_{NDT} shift is that, for any given value of reactor coolant system pressure, the reactor vessel metal temperature must be maintained at higher values during the heatup and cooldown process. By periodically revising the pressure-temperature limits to account for neutron irradiation induced increases in RT_{NDT} , the stresses in the reactor vessel are maintained within acceptable limits.

The magnitude of the shift in RT_{NDT} is proportional to the integrated amount of neutron irradiation experienced by the reactor vessel. In addition a reactor vessel material surveillance program is established to check the validity of the predicted increases in RT_{NDT} . Surveillance specimens are periodically removed from the reactor vessel for testing and analysis. The results of the tests and analysis are compared with the predicted shifts in RT_{NDT} , and the pressure-temperature limits are revised accordingly.

Evaluation

The revised operating limits are based on the data and calculation methods contained in Westinghouse Report WCAP-8738². The licensee submitted revised operating limit curves applicable for operation through seven effective full-power years (EFPY) for Unit 2. The present operating curves in the Technical Specifications are applicable for five EFPY. Point Beach Unit No. 2 will reach five EFPY in January 1979.

We have reviewed the proposed changes to the operating limits for Point Beach Unit No. 2, and performed independent calculations to verify compliance with 10 CFR 50, Appendix G. The amount of radiation damage, increase in RT_{NDT} , of the vessel materials is predicted from the results of the reactor vessel material surveillance program.

To date two material surveillance capsules have been withdrawn from the Point Beach Unit No. 2 reactor vessel and tested. Specimens in these two capsules were subjected to neutron fluences of 4.5 and 9.5×10^{18} n/cm². The test results from these capsules show that weld metal is the limiting material. At seven EFPY the maximum

² WCAP-8738, "Heatup and Cooldown Limit Curves for the Wisconsin Electric Power Company and the Wisconsin Michigan Power Company Point Beach Nuclear Plant Unit No. 2", January 1977.

fluence on vessel weld metal at the $1/4 T^3$ location is estimated to be 6.4×10^{18} n/cm². Using this fluence and the test results from the material surveillance program, the proposed pressure-temperature operating limits have been evaluated and found to be in conformance with Appendix G, 10 CFR 50.

The proposed limits will be in accordance with Appendix G, 10 CFR 50 through seven EFPY. Conformance with Appendix G to 10 CFR Part 50 in establishing safe operating limitations will ensure adequate safety margins during operation, testing, maintenance and postulated accident conditions and constitutes an acceptable basis for satisfying the requirements to NRC General Design Criterion 31, Appendix A, 10 CFR Part 50. From our review we conclude that the proposed pressure-temperature operating limits for Point Beach Unit No. 2 are acceptable for operation through seven EFPY.

Environmental Consideration

We have determined that the 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 change 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 change 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: January 30, 1979

³ $1/4 T$ is one-fourth the thickness of the vessel wall, measured from the inside.

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-301WISCONSIN ELECTRIC POWER COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 40 to Facility Operating License No. DPR-27 issued to Wisconsin Electric Power Company, which revised Technical Specifications for operation of Point Beach Nuclear Plant Unit No. 2, located about 15 miles north of Manitowoc, Wisconsin. The amendment is effective as of the date of issuance.

The amendment revises the reactor coolant system pressure-temperature heatup and cooldown curves to be applied up to seven effective full power years for Unit No. 2.

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. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

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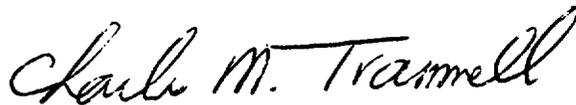
- 2 -

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 appraisal 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 November 16, 1978, as supplemented January 5, 1979, (2) Amendment No. 40 to License No. DPR-27, and (3) the Commission's related letter and Safety Evaluation. 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 University of Wisconsin, Stevens Point Library, Stevens Point, Wisconsin 54481. 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 30th day of January, 1979.

FOR THE NUCLEAR REGULATORY COMMISSION



Charles M. Trammell, Acting Chief
Operating Reactors Branch #1
Division of Operating Reactors