

January 27, 1995

Distribution w/encls:

Mr. Robert E. Link, Vice President
Nuclear Power Department
Wisconsin Electric Power Company
231 West Michigan Street, Room P379
Milwaukee, WI 53201

Docket Files
PUBLIC
PD3-3 Reading
JRoe
EGreenman, RIII
CGrimes
OC/LFDCB
GHill(4)
ACRS (4)
OPA
RJones
SBrewer

SUBJECT: CORRECTION TO SAFETY EVALUATION FOR AMENDMENT NOS. 158 AND 162 TO FACILITY OPERATING LICENSE NOS. DPR-24 AND DPR-27 - POINT BEACH NUCLEAR PLANT, UNIT NOS. 1 AND 2 (TAC NOS. M89702 AND M89703)

Dear Mr. Link:

The Commission issued Amendment Nos. 158 and 162 to Facility Operating License Nos. DPR-24 and DPR-27 for the Point Beach Nuclear Plant, Units 1 and 2, on December 12, 1994. The amendments revised the Technical Specifications in response to your application dated March 29, 1994.

The amendments modified Point Beach Nuclear Plant Technical Specification (TS) 15.3.2, "Chemical and Volume Control System," by eliminating the necessity for high concentration boric acid and removing the operability requirements for the associated heat tracing. The basis for Section 15.3.2 and applicable surveillances in Table 15.4.1-2 were also revised to support the above changes.

A copy of the Safety Evaluation (SE) was enclosed with the amendment. The SE included descriptions of your facilities which did not account for recent changes which you had implemented at Point Beach. Enclosed are two revised SEs which properly describe your facility. The first copy shows the changes in "redline" and "strikeout," while the second copy is final, with margin bars. Please call me at (301) 415-1390 if you have any questions.

Sincerely,

ORIGINAL SIGNED BY:

Allen G. Hansen, Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-266
and 50-301

NOT FOR OFFICIAL COPY

- Enclosures: 1. Redline/Strikeout Safety Evaluation
2. Final Corrected Safety Evaluation

cc w/encls: See next page
DOCUMENT NAME: G:\PTBEACH\PTB89702.LTR

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure
"N" = No copy

OFFICE	PD33:HA	E	PD33:PM	E	PD3-3:PD	E
NAME	MRushbrock		AHansen		LNorrholm	
DATE	1/27/95		1/27/95		1/27/95	

020697

OFFICIAL RECORD COPY

AA3

9502030028 950127
PDR ADOCK 05000266
P PDR

DFO1



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 27, 1995

Mr. Robert E. Link, Vice President
Nuclear Power Department
Wisconsin Electric Power Company
231 West Michigan Street, Room P379
Milwaukee, WI 53201

SUBJECT: CORRECTION TO SAFETY EVALUATION FOR AMENDMENT NOS. 158 AND 162 TO
FACILITY OPERATING LICENSE NOS. DPR-24 AND DPR-27 - POINT BEACH
NUCLEAR PLANT, UNIT NOS. 1 AND 2 (TAC NOS. M89702 AND M89703)

Dear Mr. Link:

The Commission issued Amendment Nos. 158 and 162 to Facility Operating License Nos. DPR-24 and DPR-27 for the Point Beach Nuclear Plant, Units 1 and 2, on December 12, 1994. The amendments revised the Technical Specifications in response to your application dated March 29, 1994.

The amendments modified Point Beach Nuclear Plant Technical Specification (TS) 15.3.2, "Chemical and Volume Control System," by eliminating the necessity for high concentration boric acid and removing the operability requirements for the associated heat tracing. The basis for Section 15.3.2 and applicable surveillances in Table 15.4.1-2 were also revised to support the above changes.

A copy of the Safety Evaluation (SE) was enclosed with the amendment. The SE included descriptions of your facilities which did not account for recent changes which you had implemented at Point Beach. Enclosed are two revised SEs which properly describe your facility. The first copy shows the changes in "redline" and "strikeout," while the second copy is final, with margin bars. Please call me at (301) 415-1390 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "A.G. Hansen".

Allen G. Hansen, Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-266
and 50-301

Enclosures: 1. Redline/Strikeout Safety Evaluation
2. Final Corrected Safety Evaluation

cc w/encls: See next page

Mr. Robert E. Link, Vice President
Wisconsin Electric Power Company

Point Beach Nuclear Plant
Unit Nos. 1 and 2

cc:

Ernest L. Blake, Jr.
Shaw, Pittman, Potts & Trowbridge
2300 N Street, N.W.
Washington, DC 20037

Mr. Gregory J. Maxfield, 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
U.S. NRC, Region III
801 Warrenville Road
Lisle, Illinois 60532-4531

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



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 158 AND 162 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 29, 1994, Wisconsin Electric Power Company, the licensee for Point Beach Nuclear Plant (PBNP), submitted a proposal to change the Technical Specifications (TS). Specifically, the proposed changes modify TS 15.3.2, "Chemical and Volume Control System," by decreasing the boric acid storage tank (BAST) boric acid concentration, removing the boric acid system heat tracing and extending the allowed outage time for one of the two charging pumps, one of the two boron injection flow paths, or one of the two boric acid transfer pumps from 24 to 72 hours. Proposed changes to the associated basis for TS 15.3.2 and the applicable surveillances in Table 15.4.1-2 are also included in the submittal.

2.0 EVALUATION

The PBNP concentrated boric acid system consists of three 5000 gallon BASTs and four boric acid transfer pumps (two per unit), along with the associated piping, valves, and heat tracing circuitry. One BAST is normally aligned to each unit and the third BAST can be used as a swing tank and aligned to either unit. Boric acid, currently with a concentration between 11.5 and 12.5 weight percent (wt%), can be injected into the reactor coolant system with the charging pumps through either the emergency, manual, or boric acid blender flow paths, or with the safety injection (SI) pumps. One 275,000 gallon refueling water storage tank (RWST) per unit is also available, as a source of 2000 ppm boric acid.

~~Upon an SI actuation, the engineered safety features (ESF) logic opens the valve between the BAST and the suction of the SI pumps, aligning the BAST as the initial suction source of the SI fluid. When the BAST low low level setpoint is reached, the suction line up from the BAST to SI isolates and the suction valves between the RWST and the SI pumps open automatically.~~

The proposed system changes include lowering the boric acid concentration of the BAST from the current 11.5-12.5 wt% to the values delineated in the new

Table 15.3.2-1, ~~and removing the heat tracing system, and eliminating the logic which automatically opens the valves in the flow path from the BASTs to the SI pumps on an ESF signal.~~

The proposed TS 15.3.2.B.2 and C.2 ensure that two flow paths and associated sources of borated water are available to maintain long term subcriticality. If the BASTs are used as the source for boration, there has to be sufficient boron to meet the range of concentrations specified in Table 15.3.2-1. The licensee has determined, through the use of the BORDER (Boron Design Requirements) methodology, that 300 pounds of stored boron is sufficient for PBNP's annual fuel cycle.

The minimum temperature requirement listed in Table 15.3.2-1 provides protection against boron precipitation. The temperatures specified in the proposed table represent the solubility temperature plus 5 °F (for boric acid concentrations less than 5 wt%), and the solubility temperature plus 7.8 °F (for boric acid concentrations greater than or equal to 5 wt%). The 7.8 °F margin corresponds to the present margin for 12.5 wt% boric acid solution. The 5 °F solubility temperature margin was chosen by the licensee, because of operational flexibility and the solubility temperature being nearly equal to the ambient temperature.

The licensee determined that these changes could have an effect on the analysis of the loss of coolant accident (LOCA) and steamline break (SLB) events in the Final Safety Analysis Report (FSAR). The licensee re-analyzed these two events, accounting for the proposed changes, and determined that the results remain within the acceptance criteria of the accident analyses.

The licensee also completed an in-house calculation to verify that, for a typical fuel cycle and assuming worse-case conditions, the reactor can be maintained hot subcritical following a reactor trip. Specifically, the licensee determined that the amount of negative reactivity that can be inserted by one charging pump, borating at a minimum speed and using the RWST as its suction source, is greater than the positive reactivity added from the decay of xenon in the longterm.

The applicable surveillances in Table 15.4.1-2 are proposed to be changed by removal of the boric acid heat tracing operability requirements, and by addition of a surveillance to be done, after each boric acid concentration change, during the period that the BASTs are relied upon, as a source of borated water.

The licensee proposed an increase in the allowable outage time in TS 15.3.2.D for one of the two boration flow paths from 24 to 72 hours. The licensee has based this change on the design capability of the boration system to provide sufficient volume through one flow path, meeting the required shutdown margin, xenon-free, from any operating condition. This change is consistent with NUREG-0452, Revision 4, "Standard Technical Specifications for Westinghouse Pressurized Water Reactors" (STS).

The licensee also proposed an increase in the TS 15.3.2.D hot shutdown requirement time from 3 hours to 6 hours, an additional requirement for

boration, as part of the hot shutdown requirement, an increase in the time to restore operability from 48 hours to 7 days, and a decrease in the cold shutdown requirement from 48 hours to 30 hours. These changes are consistent with the current staff positions for the proposed system configurations, and with the STS.

The licensee has demonstrated that these changes do not adversely affect the FSAR accident analyses and that, with the changes, the plant will still be able to mitigate the consequences of accidents and anticipated operational occurrences. Based on this demonstration by the licensee, the staff finds these changes acceptable. In addition, the staff agrees with the licensee that the proposed changes to the bases are consistent with, and support the above changes.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Wisconsin State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluent that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding (59 FR 37091). Accordingly, this amendment meets 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 this amendment.

5.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: S. Brewer

Date: December 12, 1994



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 158 AND 162 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 29, 1994, Wisconsin Electric Power Company, the licensee for Point Beach Nuclear Plant (PBNP), submitted a proposal to change the Technical Specifications (TS). Specifically, the proposed changes modify TS 15.3.2, "Chemical and Volume Control System," by decreasing the boric acid storage tank (BAST) boric acid concentration, removing the boric acid system heat tracing and extending the allowed outage time for one of the two charging pumps, one of the two boron injection flow paths, or one of the two boric acid transfer pumps from 24 to 72 hours. Proposed changes to the associated basis for TS 15.3.2 and the applicable surveillances in Table 15.4.1-2 are also included in the submittal.

2.0 EVALUATION

The PBNP concentrated boric acid system consists of three 5000 gallon BASTs and four boric acid transfer pumps (two per unit), along with the associated piping, valves, and heat tracing circuitry. One BAST is normally aligned to each unit and the third BAST can be used as a swing tank and aligned to either unit. Boric acid, currently with a concentration between 11.5 and 12.5 weight percent (wt%), can be injected into the reactor coolant system with the charging pumps through either the emergency, manual, or boric acid blender flow paths, or with the safety injection (SI) pumps. One 275,000 gallon refueling water storage tank (RWST) per unit is also available, as a source of 2000 ppm boric acid.

The proposed system changes include lowering the boric acid concentration of the BAST from the current 11.5-12.5 wt% to the values delineated in the new Table 15.3.2-1, and removing the heat tracing system.

The proposed TS 15.3.2.B.2 and C.2 ensure that two flow paths and associated sources of borated water are available to maintain long term subcriticality. If the BASTs are used as the source for boration, there has to be sufficient boron to meet the range of concentrations specified in Table 15.3.2-1. The licensee has determined, through the use of the BORDER (Boron Design

Requirements) methodology, that 300 pounds of stored boron is sufficient for PBNP's annual fuel cycle.

The minimum temperature requirement listed in Table 15.3.2-1 provides protection against boron precipitation. The temperatures specified in the proposed table represent the solubility temperature plus 5 °F (for boric acid concentrations less than 5 wt%), and the solubility temperature plus 7.8 °F (for boric acid concentrations greater than or equal to 5 wt%). The 7.8 °F margin corresponds to the present margin for 12.5 wt% boric acid solution. The 5 °F solubility temperature margin was chosen by the licensee, because of operational flexibility and the solubility temperature being nearly equal to the ambient temperature.

The licensee determined that these changes could have an effect on the analysis of the loss of coolant accident (LOCA) and steamline break (SLB) events in the Final Safety Analysis Report (FSAR). The licensee re-analyzed these two events, accounting for the proposed changes, and determined that the results remain within the acceptance criteria of the accident analyses.

The licensee also completed an in-house calculation to verify that, for a typical fuel cycle and assuming worse-case conditions, the reactor can be maintained hot subcritical following a reactor trip. Specifically, the licensee determined that the amount of negative reactivity that can be inserted by one charging pump, borating at a minimum speed and using the RWST as its suction source, is greater than the positive reactivity added from the decay of xenon in the longterm.

The applicable surveillances in Table 15.4.1-2 are proposed to be changed by removal of the boric acid heat tracing operability requirements, and by addition of a surveillance to be done, after each boric acid concentration change, during the period that the BASTs are relied upon, as a source of borated water.

The licensee proposed an increase in the allowable outage time in TS 15.3.2.D for one of the two boration flow paths from 24 to 72 hours. The licensee has based this change on the design capability of the boration system to provide sufficient volume through one flow path, meeting the required shutdown margin, xenon-free, from any operating condition. This change is consistent with NUREG-0452, Revision 4, "Standard Technical Specifications for Westinghouse Pressurized Water Reactors" (STS).

The licensee also proposed an increase in the TS 15.3.2.D hot shutdown requirement time from 3 hours to 6 hours, an additional requirement for boration, as part of the hot shutdown requirement, an increase in the time to restore operability from 48 hours to 7 days, and a decrease in the cold shutdown requirement from 48 hours to 30 hours. These changes are consistent with the current staff positions for the proposed system configurations, and with the STS.

The licensee has demonstrated that these changes do not adversely affect the FSAR accident analyses and that, with the changes, the plant will still be able to mitigate the consequences of accidents and anticipated operational

occurrences. Based on this demonstration by the licensee, the staff finds these changes acceptable. In addition, the staff agrees with the licensee that the proposed changes to the bases are consistent with, and support the above changes.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Wisconsin State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluent that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding (59 FR 37091). Accordingly, this amendment meets 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 this amendment.

5.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: S. Brewer

Date: December 12, 1994