

January 27, 1994

Docket Nos. 50-266  
and 50-301

DISTRIBUTION

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Mr. Robert E. Link, Vice President	PD3-3 Reading	DHagan
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231 West Michigan Street, Room P379	JHannon	OC/LFDCB
Milwaukee, Wisconsin 53201	MRushbrook	JMedoff
	AHansen	OGC-WF

Dear Mr. Link:

SUBJECT: AMENDMENT NOS. 145 AND 149 TO FACILITY OPERATING LICENSE NOS. DPR-24 AND DPR-27 (TACS M85687 AND M85688)

The Commission has issued the enclosed Amendment Nos. 145 and 149 to Facility Operating License Nos. DPR-24 and DPR-27 for the Point Beach Nuclear Plant, Unit Nos. 1 and 2. The amendments revise the Technical Specifications in response to your application dated January 14, 1993.

The amendments split Technical Specification (TS) 15.3.1.E.2, which defines the allowable limits of chloride and fluoride in the reactor coolant, into two individual Limiting Conditions for Operation (LCOs), thus clarifying the reactor coolant chemistry limitations. Additionally, the amendments add a 24-hour hot shutdown action statement to the reactor coolant impurity limit LCOs. The amendments also modify the corresponding TS Bases Section.

A copy of the Safety Evaluation is also enclosed. The notice of issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,  
Original signed by Allen G. Hansen

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

Enclosures:

1. Amendment No.145 to DPR-24
2. Amendment No.149 to DPR-27
3. Safety Evaluation

cc w/enclosures:  
See next page

LA:PDIII-3:DRPW  
MRushbrook  
1/6/93

INTERN *ABP*  
JKing/jfk/bj  
1/10/93

PM:PDIII-3:DRPW  
AHansen *AGH*  
1/10/93

D:PDIII-3:DRPW  
JHannon  
1/10/93

OGC-QWF  
*CPW*  
1/13/94

OFFICIAL RECORD

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Mr. Robert E. Link  
Wisconsin Electric Power Company

Point Beach Nuclear Plant  
Unit Nos. 1 and 2

cc:

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

WISCONSIN ELECTRIC POWER COMPANY

DOCKET NO. 50-266

POINT BEACH NUCLEAR PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 145  
License No. DPR-24

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Wisconsin Electric Power Company (the licensee) dated January 14, 1993, 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-24 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 145, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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3. This license amendment is effective immediately upon issuance. The Technical Specifications are to be implemented within 20 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



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

Attachment:  
Changes to the Technical  
Specifications

Date of issuance: January 27, 1994



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

WISCONSIN ELECTRIC POWER COMPANY

DOCKET NO. 50-301

POINT BEACH NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 149  
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 January 14, 1993, 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:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 149, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective immediately upon issuance. The Technical Specifications are to be implemented within 20 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



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

Attachment:  
Changes to the Technical  
Specifications

Date of issuance: January 27, 1994

ATTACHMENT TO LICENSE AMENDMENT NOS. 145 AND 149  
TO FACILITY OPERATING LICENSE NOS. DPR-24 AND DPR-27  
DOCKET NOS. 50-266 AND 50-301

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change.

REMOVE

15.3.1-15

15.3.1-16

INSERT

15.3.1-15

15.3.1-16

E. Maximum Reactor Coolant Oxygen and Chloride and Fluoride Concentration For Power Operation

Specification:

1. The concentration of oxygen in the reactor coolant shall not exceed 0.1 ppm.
2. The concentration of chloride in the reactor coolant shall not exceed 0.15 ppm.
3. The concentration of fluoride in the reactor coolant shall not exceed 0.15 ppm.
4. If oxygen, chloride or fluoride concentrations in the reactor coolant exceed the limits given in 1), 2) or 3), corrective action is to be taken immediately to return the system to within normal operation specifications. If the normal operational limits are not achieved within 24 hours of discovery of the out-of-specification condition, the reactor is to be brought to a hot shutdown condition within an additional 8 hours. If the system is not brought to within specifications within 48 hours of discovery, the system is to be brought to a cold shutdown condition within an additional 12 hours, and the cause of the out-of-specification operation ascertained and corrected.

Basis:

By maintaining the oxygen, chloride and fluoride concentration in the reactor coolant within the limits as specified by E 1), 2) and 3), the functional integrity of the materials of the Reactor Coolant System is assured under all operating conditions.<sup>(1)</sup>

If these limits are exceeded, measures can be taken to correct the condition, e.g., replacement of ion exchange resin or adjustment of the hydrogen

concentration in the volume control tank<sup>(2)</sup>, and further because of the time-dependent nature of any adverse effects arising from oxygen, chloride and fluoride concentration in excess of the limits, it is unnecessary to shut down immediately since the condition can be corrected. Thus the period of 24 hours for corrective action to restore the concentrations within the limits has been established. If the corrective action has not been effective at the end of the 24-hour period, then the reactor will be brought to the hot shutdown condition in a normal controlled manner and the corrective action will continue. If at the end of the 48 hour period the corrective action has not been effective, long term corrective action could be required. The reactor will be brought to the cold shutdown condition in a normal, controlled manner and action continued to correct the out-of-specification condition.

#### References

- (1) FSAR Section 4.2
- (2) FSAR Section 9.2



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 145 AND 149 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 January 14, 1993, the Wisconsin Electric Power Company, the licensee, submitted a request for revisions to the Point Beach Nuclear Plant Technical Specifications to clarify reactor coolant chemistry limitations and action to be taken if the limits are exceeded. The proposed amendments would modify Technical Specification (TS) 15.3.1.E, "Maximum Reactor Coolant Oxygen and Chloride and Fluoride Concentration for Power Operation" and the TS Bases Section. The amendments would separate the reactor coolant chloride and fluoride Limiting Condition for Operation (LCO) into two separate LCOs. Additionally, the amendments would change the action statement, TS 15.3.1.E.2, to allow the licensee 24 hours to correct an out-of-specification oxygen, chloride, or fluoride condition. If the out-of-specification condition is not corrected within the 24 hour grace period, the licensee would be required to commence a power reduction to a hot shutdown condition. The action statement would also allow the licensee 48 hours to correct the out-of-specification condition before being required to place the reactor in a cold shutdown condition. The amendment request was necessitated when the licensee reviewed the TSs and determined that it was worded in a manner that the 24 hour time allowance could only be followed if the reactor coolant oxygen level was out-of-specification in conjunction with the chloride or fluoride level being out-of-specification.

2.0 BACKGROUND

2.1 Purpose of the Specification

The purpose of TS Section 15.3.1.E, "Maximum Coolant Oxygen and Chloride and Fluoride Concentration for Power Operation," is to maintain oxygen, fluoride, and chloride concentrations within established limits. The adverse effects arising from oxygen, chloride, and fluoride concentrations in excess of the specified limits can cause corrosion and promote additional time-dependent material degradation mechanisms, thus compromising the functional integrity of the reactor coolant pressure boundaries. Because the adverse effects associated with an improper water chemistry take some time to become significant, the specifications allow a reasonable period of time to correct the condition.

In addition, the specifications define the required action to be taken if the limits are exceeded. Industry efforts to mitigate the effects of improper water chemistry have been coordinated by the Electric Power Research Institute (EPRI). EPRI has developed a set of pressurized water reactor chemistry guidelines, which are currently used in the industry, to serve as a basis for primary and secondary water chemistry limits.

## 2.2 Current License Condition

The current license condition as stated in the TSs is applicable for both Units 1 and 2. Specification 15.3.1.E.1 defines the limit of oxygen concentration within the reactor coolant and Specification 15.3.1.E.2 defines the limit for chloride in combination with fluoride concentration within the reactor coolant. In addition, Specification 15.3.1.E.3 specifies the actions to be taken when the oxygen concentration and the chloride or fluoride concentration of the reactor coolant simultaneously exceed the given limits (15.3.1.E.1 and 15.3.1.E.2). If the proper water chemistry is not restored within 24 hours of discovering the out-of-specification condition, the licensee is required to place the reactor in hot shutdown. In addition, if the proper water chemistry is not restored within 48 hours of discovery, the licensee is required to place the reactor in cold shutdown.

The current action statement in TS 15.3.1.E is worded such that the 24 hour time allowance can only be followed if the reactor coolant oxygen level is out of specification in conjunction with the chloride or fluoride levels also being out of specification. Thus, TS 15.3.1.E could be interpreted as requiring a reactor shutdown (in accordance with the plant's "motherhood" statement) within three hours of discovery of an out of specification primary coolant chemistry parameter.

## 2.2 Proposed Changes

The proposed revisions will serve to clarify reactor coolant chemistry limitations and actions to be taken if the limits are exceeded.

- (1) Split Specification 15.3.1.E.2 into two specifications (15.3.1.E.2 and 15.3.1.E.3). Specification 15.3.1.E.2 will define the chloride limit and Specification 15.3.1.E.3 will define the fluoride limit.
- (2) Specification 15.3.1.E.3 will be renumbered 15.3.1.E.4 allowing the licensee 24 hours to correct an out-of-specification chemistry condition when any one of the limits on oxygen, fluoride, or chloride concentration in the reactor coolant are exceeded individually.
- (3) Modify the basis for Specification Section 15.3.1.E clarifying the required actions for exceeding a defined limit.

### 3.0 EVALUATION

The licensee's proposal to separate the reactor coolant chloride and fluoride LCO into respective individual LCOs is an administrative request only. The proposed limits on reactor coolant system (RCS) chloride and fluoride concentrations will continue to be set at 0.15 ppm. These limits are in accordance with those recommended by EPRI for RCS chloride and fluoride levels in pressurized water reactors (PWRs). The proposed action statement is different in that it allows the licensee a 24 hour grace period to correct any out-of-specification RCS oxygen, chloride, or fluoride levels, prior to commencing a power reduction to the hot shutdown condition.

EPRI has recommended that certain actions be taken by plant operations and chemistry departments when reactor coolant impurities reach certain levels. At Action 1 levels, it is recommended that management take some sort of action. Action 1 levels do not constitute an immediate threat to the integrity of the RCS. At Action 2 levels, EPRI recommends that the out-of-specification impurity be returned to specification within a designated grace period, or else that the reactor be brought to a safe shutdown condition. Action 2 levels also do not constitute an immediate threat to the integrity of the RCS, but could constitute a long term threat should the adverse condition not be corrected. At Action 3 levels, EPRI recommends that the operators initiate an immediate plant shutdown. Action 3 levels could constitute an immediate threat to the integrity of the RCS, and are usually set at a factor of 10 higher than the Action 2 levels.

The 24-hour grace period proposed by the licensee is in agreement with the time interval recommended by EPRI for Action 2 impurity levels. The 48-hour grace period to cold shutdown is also within agreement of the EPRI Primary Water Chemistry Guidelines. The staff has noted that the Point Beach Technical Specifications do not address the actions to be taken by the licensee should the RCS impurities increase to Action 3 levels. However, the licensee has stated that Action 3 level conditions are covered by the actions recommended in the plant Administrative Chemistry Procedures for reactor coolant chemistry, in accordance with normal plant operations.

The separation of the RCS chloride and fluoride LCOs is an administrative change. The change to the RCS impurity level action statement is in agreement with the EPRI recommendations, and the licensee has specific procedures to follow should any of the RCS chemistry parameters reach ten times the levels cited in TS 15.3.1.E. The proposed bases changes were also reviewed, and found to be consistent with the proposed TS changes. Therefore, the staff finds the proposed TS and bases changes acceptable.

#### 4.0 STATE CONSULTATION

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

#### 5.0 ENVIRONMENTAL CONSIDERATION

These amendments change 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 or change a surveillance requirement. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously published a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding (58 FR 12270). Accordingly, these amendments meet 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 these amendments.

#### 6.0 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 the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: J. Medoff

Date: January 27, 1994