



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 110 TO PROVISIONAL OPERATING LICENSE NO. DPR-20

CONSUMERS POWER COMPANY

PALISADES PLANT

DOCKET NO. 50-255

INTRODUCTION

By application dated January 19, 1988, Consumers Power Company (the licensee) requested changes to the Technical Specifications to delete the secondary water chemistry limits in Specification 3.18, along with surveillance requirements in Table 4.2.1, and to replace them with program requirements in Section 6, the administrative section of the Technical Specifications.

These changes are required in order to implement the use of boric acid addition to the secondary steam generator water to minimize steam generator corrosion and denting. The licensee's consultant recommended that Palisades should initiate boric acid secondary water treatment to alleviate the denting process.

EVALUATION

The NRC generally does not include secondary water chemistry limits or specific sampling locations and frequency in the Technical Specifications which are incorporated in the present Palisades Technical Specifications. Most pressurized water reactors (PWRs) follow a program for monitoring of secondary water chemistry to inhibit steam generator corrosion which is specified in the administrative controls section of the Standard Technical Specifications. By Generic Letter 85-02, issued April 17, 1985, the NRC issued NUREG-0844, "NRC Integrated Program for the Resolution of Unresolved Safety Issues A-3, A-4, and A-5 Regarding Steam Generator Tube Integrity."

This publication gave the staff's recommendations with regard to secondary water chemistry, which is to have a secondary water chemistry program. Specifically, the NRC staff's recommendations are stated as follows:

"Licensees and applicants should have a secondary water chemistry program (SWCP) to minimize steam generator tube degradation. The specific plant program should incorporate the secondary water chemistry guidelines in SGOG Special Report EPRI-NP-2704, "PWR Secondary Water Chemistry Guidelines," October 1982, and should address measures taken to minimize steam generator corrosion, including materials selection, chemistry limits, and control methods. In addition, the specific plant procedures should include progressively more stringent corrective actions for out-of-specification water chemistry

conditions. These corrective actions should include power reductions and shutdowns, as appropriate, when excessively corrosive conditions exist. Specific functional individuals should be identified as having the responsibility/authority to interpret plant water chemistry information and initiate appropriate plant actions to adjust chemistry, as necessary."

Revision 1 to "PWR Secondary Water Chemistry Guidelines" March 1987, EPRI NP-5056-SR, Appendix A, provides control parameter guidance for boric acid treatment as a remedial action for steam generator tube denting, which the NRC staff has endorsed.

The licensee proposed, and this amendment includes, the provisions of the Standard Technical Specifications for PWRs. The licensee's application discusses how each of these requirements are met and provides the plant procedures which implement each of the required elements. We find that these procedures adequately implement the criteria for a secondary water chemistry program by incorporating the Standard Technical Specifications, and this change is therefore acceptable.

EXIGENT CIRCUMSTANCES

The licensee requested that the NRC take prompt action on this change request in accordance with the provisions in 10 CFR 50.91(a)(6) for exigent circumstances. The exigent circumstances result from the fact that the licensee has recently completed an inspection of the steam generators following a plant shutdown on December 4, 1987, because of a steam generator tube leak. The inspection results indicate a correlation between the crack in the tube and tube denting which occurs at the support plant-tube interface. To mitigate or stop the progression of tube denting, the licensee proposes a change in the chemistry control being used on the secondary side of the steam generator by the addition of boric acid. This will not allow the licensee to meet the limits that were in place for the previous chemical treatment program. The plant is scheduled to go back on line on January 29, 1988. Specification 3.18 states that the chemistry limits must be met within 72 hours of going back on line. Therefore, an exigent change was needed. The NRC staff has determined that the licensee used its best efforts to make a timely application under the circumstances, and that exigent circumstances do exist and were not the result of any fault of the licensee.

FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission's regulations in 10 CFR 50.92 state that the Commission may make a final determination that a license amendment involves no significant hazards consideration if operation of the facility, in accordance with the amendment, would not:

- (1) involve a significant increase in the probability or consequences of any accident previously evaluated; or
- (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or

(3) involve a significant reduction in a margin of safety.

The requested amendment has been evaluated against the standards in 10 CFR 50.92, and we have made a determination that the requested amendment involves no significant hazards considerations. Water chemistry requirements do not establish minimum performance levels for plant safety and are adequately controlled as a plant procedure. Thus, the change would not affect the probability of any accident previously evaluated. In fact, the change to boric acid addition proposed by the licensee would be beneficial in mitigating steam generator degradation. The changes in secondary water chemistry do not affect the consequences of any accident previously considered nor create the possibility of an accident of a different kind, nor decrease any margin of safety.

STATE CONSULTATION

In accordance with the Commission's regulations, the designated representative of the State of Michigan was contacted regarding this amendment. The State representative had no comments.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and a change in a surveillance requirement. We have determined that the amendment involves 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 issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. 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.

CONCLUSION

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: February 1, 1988

Principal Contributor: Thomas V. Wambach, NRR

Mr. Kenneth W. Berry
Consumers Power Company

Palisades Plant

cc:

M. I. Miller, Esquire
Isham, Lincoln & Beale
51st Floor
Three First National Plaza
Chicago, Illinois 60602

Nuclear Facilities and
Environmental Monitoring
Section Office
Division of Radiological
Health
P.O. Box 30035
Lansing, Michigan 48909

Mr. Thomas A. McNish, Secretary
Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

Judd L. Bacon, Esquire
Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Jerry Sarno
Township Supervisor
Covert Township
36197 M-140 Highway
Covert, Michigan 49043

Office of the Governor
Room 1 - Capitol Building
Lansing, Michigan 48913

Mr. David P. Hoffman
Plant General Manager
Palisades Plant
27780 Blue Star Memorial Hwy.
Covert, Michigan 49043

Resident Inspector
c/o U.S. Nuclear Regulatory Commission
Palisades Plant
27782 Blue Star Memorial Hwy.
Covert, Michigan 49043