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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION RELATED TO AMENDMENT NO. 128 TO FACILITY OPERATING LICENSE NO. DPR-27

WISCONSIN ELECTRIC POWER COMPANY POINT BEACH NUCLEAR PLANT, UNIT NO. 2 DOCKET NO. 50-301

1.0 INTRODUCTION

In letters dated August 8, 1989 and August 31, 1989, the Wisconsin Electric Power Company (the licensee) proposed changes to the Point Beach Nuclear Plant, Unit 2 (PBNP-2) reactor vessel surveillance program. The changes are contained in Technical Specification Change Request 134. The changes include a revised surveillance capsule removal schedule and acknowledgement of the licensee's participation in the Babcock and Wilcox (B&W) Master Integrated Reactor Vessel Surveillance Program. The August 31, 1989 letter revised the capsule removal schedule which had been requested in the August 8, 1989 letter. The revised schedule became necessary because, beginning with the Unit 2 Fall 1989 Outage, PBNP-2 was changing the core design from a low leakage core (L3P) to a super low leakage core (L4P) with hafnium absorbers.

2.0 EVALUATION

Appendix H to 10 CFR Part 50 requires that the proposed schedule be approved prior to implementation and the schedule meet the requirements of ASTM E 185-82, to the extent practical. Since three capsules have already been withdrawn, the licensee proposed a change in the withdrawal of the fourth and fifth capsules.

According to ASTM E 185-82, PBNP-2 must (1) withdraw a minimum of 5 capsules; (2) withdraw the fourth capsule at 15 effective full power years (EFPY) or at a time when the accumulated neutron fluence of the capsule corresponds to the approximate end of life (EOL) fluence at the reactor vessel inner wall location, whichever comes first; and (3) withdraw the fifth capsule at the EOL or at a time when the accumulated neutron fluence of the capsule is not less than once or greater than twice the peak EOL vessel fluence.

The licensee proposes to (1) withdraw 5 capsules, (2) withdraw the fourth capsule at 14.7 EFPY, and (3) withdraw the fifth capsule at 19.5 EFPY. The capsule withdrawn at 14.7 EFPY will receive a neutron fluence of 3.09×10^{19} n/cm^2 and the capsule withdrawn at 19.5 EFPY will receive a neutron fluence of 4.10×10^{19} n/cm^2. When the PBNP-2 license expires on March 8, 2013 the vessel is projected to operate for 32.5 EFPY and the peak vessel EOL fluence is estimated to be 2.92×10^{19} n/cm^2. Based on this peak vessel EOL fluence, the proposed withdrawal schedule is acceptable.

The Babcock and Wilcox Owners Group (BWOG) Master Integrated Reactor Vessel Surveillance Program is a joint program between utilities, which had their reactor vessels fabricated by Babcock and Wilcox. The master program includes data from plant-specific capsules such as PBNP-2 and supplementary capsules, which contain samples similar to the weld metal in the beltline of PBNP-2. The goal of the master program is to obtain fracture toughness data to address the requirements of 10 CFR Part 50, Appendix G. The program is described in the BWOG Report BAW-1543, which will be reviewed by the staff as a topical report.

Based on the above information, the staff concludes that the reactor vessel capsule withdrawal schedule documented in the August 31, 1989 letter satisfies the requirements of Appendix H, 10 CFR Part 50. The staff finds the proposed change acceptable. Further, the licensee's participation in the BWOG Reactor Vessel Integrated Program is warranted, because the limiting weld metal in the reactor vessel beltline of PBNP-2 was fabricated by B&W. The change to the bases is acceptable because it reflects Point Beach's participation in this program. In a telephone conversation on September 29, 1989, the licensee concurred with the NRC staff that the wording in the bases section of the August 8, 1989 amendment request should apply.

3.0 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 or changes an inspection or surveillance requirement. The staff has 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 published 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.

4.0 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, 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.

Principal Contributor: B. Elliot

Dated: October 24, 1989