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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION FOR TWO REQUESTS FOR RELIEF FROM INSERVICE TESTING REQUIREMENTS

CONSUMERS POWER COMPANY

BIG ROCK POINT PLANT

DOCKET NO. 50-155

LICENSE NO. DPR-6

INTRODUCTION

The licensee, by letter dated April 10, 1985, submitted two relief requests for the second ten-year inservice inspection and testing interval at the Big Rock Point Plant. NRC Regulation 10 CFR 50.55a (g), requires that the inservice testing program conform to the NRC approved edition and associated addenda of Section XI of the American Society of Mechanical Engineers' Boiler and Pressure Vessel Code unless specific relief is granted by the Commission.

This safety evaluation addresses two relief requests submitted in the aforementioned letter which propose alternate testing for the exercise and leak testing requirements for Feedwater Check valves, VFW-9, VFW-304 and VFW-305.

EVALUATION OF RELIEF REQUESTS

1. Relief Request for Feedwater Check Valve VFW-305

By letter dated December 22, 1983, the licensee declared the subject valve to be a containment isolation valve (Category A/C), and, by letter dated April 10, 1985 requested relief from various test requirements delineated in the ASME Code. These are:

a. IWV-3410 through IWV-3412, and IWV-3520 through IWV-3522, require that Category A and C valves be exercised on a quarterly basis to the position required to fulfill their function unless such operation is not practical during plant operation.

The licensee stated that the Category A safety function of the valve is closure for containment isolation purposes, and that the Category C safety function is to allow forward flow of makeup feedwater during normal operation.

The licensee requests relief from the quarterly exercising requirements of IWV-3410 through IWV-3412, and IWV-3520 through IWV-3522.

b. IWV-3420 through IWV-3425 delineate the method and frequency that Category A valves are leak tested. The licensee requests relief from these methods and proposes leak testing the valves per 10 CFR 50, Appendix J during each refueling as alternate testing.

The staff agrees that quarterly exercising of the valve is impractical as closure would interrupt feedwater flow and presence of feedwater flow indicates that the valve is open. With regard to the leak testing requirements, the proposed method of alternate testing is acceptable, i.e. per 10 CFR 50, Appendix J; however, the trending and corrective action requirements of Subsections IWV-3426 and IWV-3427 shall continue to apply.

Relief as requested by the licensee is granted with the stipulation that the requirements of IWV-3426 and IWV-3427 continue to apply.

2. Relief Request for Feedwater Check Valve, VFW-304 and Feedwater Stop Check Valve, VFW-9

Subsections IWV-3520 through IWV-3522 require that check valves be exercised quarterly to the position required to fulfill their function. The licensee states that the valves cannot be exercised to the closed position during normal operation as feedwater flow would be interrupted, and that indication that the valves are open is verified by observation of the proper feedwater flow when returning the system to service after shutdown. The licensee stated that closure of the VFW-304 valve could not be determined as no direct or indirect indication was available to verify the seating of the valve disk; however, since the VFW-9 valve has a handwheel allowing manipulation of the valve, seating of the VFW-9 valve could be verified. The licensee requests that VFW-9 be exercised manually only during refueling as the valve is physically located in a high radiation zone and the accumulated exposure for exercising the valve during short duration reactor cold shutdowns is equivalent to between 0.7 and 1 man-rem.

The staff agrees that closure verification for the VFW-304 valve and the quarterly exercising of both the VFW-304 and VFW-9 valves are impractical. Because the VFW-9 valve is located in a high radiation zone, and no credit has been taken for this valve for containment isolation purposes, coupled with the fact that observation of proper feedwater flow verifies that the valve opens, verification of valve closure for the VFW-9 valve during each refueling is considered to be acceptable.

The staff finds the licensee's request for relief from the quarterly exercising of the VFW-304 and VFW-9 valves to be acceptable with the understanding that the VFW-9 valve will be manually exercised at refueling.

CONCLUSION

Based on the considerations discussed above, the staff concluded (1) that relief granted from the examination and testing requirements and alternate methods and provisions imposed through this safety evaluation gives reasonable assurance of the piping and component pressure boundary and support structural integrity, and (2) that granting relief where the Code requirements are impractical is authorized by law and will not endanger life or property, or the common defense and security, and is otherwise in the public interest considering the burden that could result if they were imposed on the facility.

ACKNOWLEDGEMENT

Principal Contributor: P. L. Eng

Dated: December 12, 1985.