



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NOS. 79 AND 59 TO

FACILITY OPERATING LICENSES NOS. DPR-53 AND DPR-69

BALTIMORE GAS AND ELECTRIC COMPANY

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT NOS. 1 & 2

DOCKET NOS. 50-317 AND 50-318

Introduction

By application for license amendment dated September 22, 1982, Baltimore Gas and Electric Company (BG&E) requested changes to Technical Specifications (TS) for Calvert Cliffs Units 1 and 2. The proposed changes to TS 4.6.4.1.4, "Containment Isolation Valves", would increase the interval for containment purge isolation valve testing from six (6) months to approximately eighteen (18) months. In addition, a containment purge isolation valve seal replacement program would be incorporated in the TS.

Discussion

On February 1, 1982, the NRC issued Amendment Nos. 65 and 47 to the Operating Licenses for Calvert Cliffs Units 1 and 2. These amendments contained Limiting Conditions for Operation and Surveillance Requirements for the containment purge isolation valves. One such specification, TS 4.6.4.1.4, required the measurement of the leakage associated with the purge isolation valves at least once every six (6) months.

By application dated September 22, 1982, BG&E requested that the six month test requirement of TS 4.6.4.1.4 be replaced with a leakage test to be conducted,

"...anytime upon entering MODE 5 from power operation modes, unless the last surveillance test has been performed within the past 6 months or anytime after being opened and prior to entering MODE 4 from shutdown modes..."

Since the only scheduled entering into MODE 5 (cold shutdown) is for refueling, the scheduled leakage test interval would correspond with the refueling interval which is expected to be 18 months for Calvert Cliffs Units 1 and 2. Since TS 3.6.1.7, "Containment Purge System" requires the containment purge isolation valves to remain closed except in MODES 5 and 6 (cold shutdown and refueling modes, respectively), the scheduled interval for opening of these valves would also correspond with the refueling interval. As indicated in the application, this proposed

change in the containment purge isolation valve leakage test interval was the result of difficulty encountered by BG&E in performing these leakage tests as a result of the thermal gradient across the test boundary. BG&E also indicated that testing the containment purge isolation valves with the reactor shutdown would reduce the radiation exposure to personnel performing the leakage testing.

BG&E has also requested a change to the TS which would incorporate a containment purge isolation valve seal replacement program in the TS as new TS 4.6.4.1.5. This program requires that,

"...The containment purge isolation valve seals shall be replaced with new seals at a frequency to ensure that no individual seal remains in service greater than 2 consecutive fuel reload cycles."

The September 22, 1982 application stated that the individual seal replacement interval was selected based upon the seal vendor and BG&E experience. This experience indicates that the resilient seals associated with the containment purge isolation valves can be expected to maintain a high degree of integrity for five (5) years of operation. The proposed individual seal replacement interval of two refueling cycles corresponds to approximately three (3) years.

Evaluation

In issuing Amendment Nos. 65 and 47, the NRC had been responding to the concern that the resilient seals of the purge isolation valves might degrade, causing eventual leakage, even if these valves remained closed. Such degradation was not observed at Calvert Cliffs. In their September 22, 1982 application, BG&E presented an alternative to a six-month leak testing program for the containment purge isolation valves. This alternative consists of:

- o an eighteen-month leak testing program, and
- o a seal replacement program.

Experience to date at Calvert Cliffs has shown the purge isolation valve seals can satisfactorily perform their function for periods in excess of three years. Accordingly, we conclude that a three-year seal replacement program is sufficient to compensate for the decrease in seal reliability associated with increasing the leak test interval from six to eighteen months. The changes to TS 4.6.4.1.4 and the addition of TS 4.6.4.1.5 do not decrease the reliability of the containment purge isolation valves and are therefore acceptable.

Environmental Consideration

We have determined that the amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of an accident previously evaluated, do not create the possibility of an accident of a type different from any evaluated previously, and do not involve a significant reduction in a margin of safety, the amendments do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Date: October 13, 1982

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