



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NOS. 44 AND 27 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 dated July 14, 1980, Baltimore Gas and Electric Company (BG&E or the licensee) requested amendments to Facility Operating Licenses Nos. DPR-53 and DPR-69 for the Calvert Cliffs Nuclear Power Plant (CCNPP), Unit Nos. 1 and 2.

This application would modify Paragraph 4.5.1.b and add a new Paragraph 4.5.1.f to the TS Surveillance Requirements for the Safety Injection (SI) tanks to authorize a change in the location where samples are taken when SI tank level increases are routinely made.

Discussion and Evaluation

The present boron concentration surveillance requirement for the SI tanks (TS 4.5.1.b) requires sampling of any SI tank within 6 hours after each solution volume increase of $> 1\%$ of the tank volume. This sampling requires a significant containment entry and an expenditure of personnel radiation exposure.

The Baltimore Gas and Electric (BG&E) staff has discussed with us the problem of continual volume decrease, due to valve seat leakage, in one SI tank per unit. The leakage is contained inside the system piping, is collected in the reactor coolant drain tank, and later processed by the liquid radioactive waste system. This condition requires the refilling of the Unit 2 SI tank every day and the Unit 1 tank every 3 or 4 days in order to meet the level requirements of TS 3.5.1.b. Thus, containment entries with corresponding use of personnel radiation exposure are presently being made to satisfy TS 4.5.1.b at the rate of about 9 per week for both units.

The BG&E proposed change (July 14, 1980 letter) is to take a sample of the borated water to be added to the low volume SI tanks at the discharge of the High Pressure Safety Injection (HPSI) pumps used to add the solution. This sample would be taken outside the

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containment within one hour of the time when the refilling is made. The HPSI pumps take suction from the Refueling Water Storage Tanks (RWTs) during normal reactor operation and for the refilling of any SI tank. The boron concentration TS limit on the RWT is the same as that of the SI tanks, 1700 to 2200 parts per million (ppm). TS 4.5.4.a requires that the RWT boron concentration be verified at least once per seven days.

The alternatives to this proposed TS change are:

1. To continue taking the required samples in the containment about 9 times per week at a personnel exposure of 350 to 500 man-mrem per week, or
2. Shut down each unit to locate and repair the leaking SI tank valves. This alternative would require about a five day outage per unit.

The BG&E staff has committed to locate and repair the valves that are leaking through during the next scheduled refueling outage for each unit. These outages are currently scheduled for late 1980 and early 1981 for Unit 1 and Unit 2, respectively. In addition, the BG&E staff has agreed to keep the SI tank leakage at a minimum by maintaining the equipment in good repair if this change is authorized on a permanent basis.

The proposed method of sampling would include a 10 minute, 90 gallon per minute flush of the fill line from the RWT into the reactor coolant drain tank, and then taking a sample at the running HPSI pump discharge within one hour before the low volume SI tank is refilled. The BG&E staff has agreed to modify their operating procedures to clearly specify the appropriate steps in this operation. Our Office of Inspection and Enforcement resident inspector will review this revised procedure for conformance with the above conditions. No change was proposed or is authorized to the sampling location, at the S for the monthly sample required by TS 4.5.1.b.

We have concluded that the proposed method of sampling, while not as direct as drawing a sample from the SI tank inside containment, provides an acceptable measurement of the concentration of boron in the makeup solution added to the tank. This coupled with the monthly sample taken inside containment will ensure that an adequate boron concentration is maintained in the solution stored in SI tanks.

Based on the above review, we find the proposed change acceptable for the long term operation of the Calvert Cliffs units.

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 the 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 accidents previously considered and do not involve a significant decrease in a safety margin, 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 of issuance: August 1, 1980