



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 60

FACILITY OPERATING LICENSES NO. DPR-69

BALTIMORE GAS AND ELECTRIC COMPANY

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT NO. 2

Introduction

By application dated December 23, 1982, Baltimore Gas and Electric Company (BG&E) requested changes to the Technical Specifications (TS) for Calvert Cliffs Unit 2. The proposed changes would reflect a recent modifications to remote shutdown instrumentation as described in TS Table 3.3-9, "Remote Shutdown Monitoring Instrumentation."

Discussion and Evaluation

Technical Specification Table 3.3-9 describes the remote shutdown instrumentation for Calvert Cliffs Unit 2. This instrumentation allows the reactor operator to monitor key safety parameters from outside the control room. No automatic safety features are actuated from the remote shutdown instrumentation. Changes to Reactor Coolant Cold Leg Temperature, Steam Generator Pressure and Wide Range Neutron Flux instrumentation are described herein.

With regard to Reactor Coolant Cold Leg Temperature (RCS)  $T_c$ , NUREG 0737, Item II.F.2 requires the installation of instrumentation for detection of inadequate core cooling. Accordingly, subcooled margin monitors have been installed utilizing, among other inputs, existing temperature measurement channel inputs. The initial installation of the subcooled margin monitors utilized (RCS)  $T_c$  narrow range temperature inputs. The detection range of the subcooled margin monitor was limited by the measurement range provide by the cold leg temperature measurement channels. The design of the subcooled margin monitors precludes providing any representative engineering data at temperature measurement ranges less than 212°F (boiling point of water) or greater than 705°F (critical point of water). The guidance contained in Reg. Guide 1.97 suggested modifications to provide temperature measurement ranges of 150°F to 750°F. Since temperature measurement ranges below the boiling point or above the critical point of water provided no useful input to the subcooled margin monitors and produced the undesirable effect of greater inaccuracy over the extended measurement ranges, a limited  $T_c$  measurement range between the two points that would provide useful input to the subcooled margin monitors was selected. We find the above measurement range to be acceptable and therefore the change to the associated entry in TS Table 3.3-9 is appropriate.

Steam generator level measurement has been modified to provide an extended range of level indication. It had previously indicated level from -116 to +63.5 inches. The modification increases the range to -401 to +63.5 inches. The steam generator level measurement channel provides indication at the remote shutdown panel (2C43) and does not provide any control functions at

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the panel. The addition of wide range level indication provides the operator with more representative information of actual steam generator inventory. Accordingly, this modification is acceptable and the change to the associated TS is appropriate.

As a result of implementing certain modifications associated with the addition of auxiliary feedwater third train capability, the remote shutdown panel has been moved to a location nearer to the control room. Wide range neutron flux instrumentation has been temporarily deleted from the new remote shutdown panel and left in place in its original location in the auxiliary feedwater pump room. This instrumentation provides indication of neutron flux levels at power levels less than  $4 \times 10^{-7}\%$  in the post trip condition. The ability to monitor wide range neutron flux from locations outside the control room has not changed as a result of current modifications. Accordingly, the proposed change to TS Table 3.3-9, describing the correct location of the Wide Range Neutron Flux instrumentation, is appropriate.

#### Environmental Consideration

We have determined that the amendment does 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 amendment involves 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 this amendment.

#### Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant reduction in a margin of safety, the amendment does 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: January 3, 1983

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