

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 14 TO FACILITY OPERATING LICENSE DPR-77  
AND AMENDMENT NO. 5 TO FACILITY OPERATING LICENSE DPR-79  
TENNESSEE VALLEY AUTHORITY

INTRODUCTION

On June 18, 1982, TVA submitted a proposal for Sequoyah, Units 1 and 2, to replace the current automatic ECCS switchover (from injection mode to recirculation mode) design with a manual procedure for the period between June 18, 1982, and July 18, 1982, while improvements are implemented in containment sump level instrumentation. Because the sump level instrumentation feeds into the automatic switchover logic for ECCS, that logic would be compromised in the event of a LOCA or secondary system break while the containment sump monitors are not properly functioning. The licensee has proposed that, during the period while improvements are being implemented, a manual switchover procedure be authorized.

EVALUATION

The licensee has stated that simply bypassing the input from the containment sump level into the automatic switchover logic is not desirable. For certain scenarios involving failure of the RWST, this configuration could place an unacceptable demand on the operator to respond in order to avert cavitation of ECCS pumps after a premature automatic switchover (normally averted with properly functioning containment sump level instrumentation). The licensee states that the manual switchover procedure is preferable in this situation because even the reduced amount of water from a damaged RWST would provide a greater amount of time than pumping from a dry sump for the operator to take corrective action. Extended operation of the ECCS with either suction would cavitate the pumps, but its steamline break safety function of injecting boron would have been accomplished.

We have reviewed the concept of this manual procedure and its impact on the ECCS design. We have considered the impact of the manual procedure on the ECCS, including injected volume, NPSH to ECCS pumps during the recirculation mode, time available to complete switchover, and RWST volume.

Though an automatic switchover design is normally preferable because it relieves the operator of unnecessary burdens and because with it the switchover may be accomplished more efficiently (in terms of gallons of RWST water required), a number of manual switchover designs have been reviewed by the staff in the past and found acceptable.

From our review discussed above, we conclude that the proposal to use a manual switchover procedure provides an acceptable alternative, and that the plant may be operated safely while improvements are made to the containment sump level instrumentation (June 18, 1982, to July 18, 1982).

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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 Section 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 consideration discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant decrease in a safety margin, 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: July 7, 1982

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