

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

In Supplement No. 2 to the Sequoyah Safety Evaluation Report (SER), the staff held the view that restrictions of 90 hours per year should be placed on containment purging and venting during plant operation, pending further analysis of the containment purging and venting requirements during normal plant operations.

By letters dated January 8 and February 10, 1981, TVA requested a change in the Technical Specifications to increase the time limitation on purging and venting. In justifying this, TVA has identified the need to maintain the containment pressure within Technical Specification limits, and to maintain activity levels within the containment atmosphere sufficiently low to permit personnel access to the ice condenser system components for inspection and maintenance, and to satisfy the surveillance requirements of the Technical Specifications. TVA estimated combined purging/venting needs in excess of 2440 hours per year. The staff has reviewed TVA's submittal, and has found that while their request appears to have merit, additional justification of the final purge/vent system operations is needed. By letters dated March 3, and April 2, 1981, TVA agreed to submit a detailed report on the operating experience of the plant no later than startup after the first refueling. This information will be used to provide a sound basis to determine the adequacy of the purge and vent time limit for the Sequoyah Nuclear Plant. Pending receipt of this additional information, the staff will limit purge/vent system operation as follows:

1. The Technical Specifications for the Sequoyah Nuclear Plant, Unit 1 are changed to limit use of the containment purge and vent systems to a total of no more than 1000 hours per year, per reactor unit, during the normal plant operating modes of startup, power operation, hot standby, and hot shutdown, with only one pair of purge/vent lines open at a time. The 1000 hour limit applies to the total time in use of all vent lines and purge lines. The staff's basis for finding the 1000 hour limit acceptable is that the design of the systems conforms with the provisions of Branch Technical Position 6-4. That is, the valves have satisfied certain operability criteria and the associated dose criteria. The staff considers that at least 1000 hours/year are justified for purging and venting at Sequoyah in order to:

- a) Limit for safety reasons, pressure buildup in containment during normal operations.
 - b) Promote as low as reasonably achievable exposure from airborne radioactivity to personnel entering containment during normal operation to perform safety related maintenance and surveillance.
2. In the cold shutdown and refueling modes, all purging and venting lines may be used simultaneously, and without time limitation. This evaluation conforms to the requirements of General Design Criteria 54, 55, 56, and 57 with respect to containment purging and venting.

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 accidents previously considered 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: April 15, 1981