



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 211 TO FACILITY OPERATING LICENSE NO. DPR-77

AND AMENDMENT NO. 201 TO FACILITY OPERATING LICENSE NO. DPR-79

TENNESSEE VALLEY AUTHORITY

SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

1.0 INTRODUCTION

By letter dated August 7, 1995, Tennessee Valley Authority (TVA) requested changes to the Sequoyah Nuclear Plant (SQN) Units 1 and 2 Technical Specifications (TS) to revise the numerical value for the time constant τ_4 found in the overtemperature delta temperature (OT Δ T) and overpower delta temperature (OP Δ T) trip equations of TS Table 2.2-1. The τ_4 value would be changed from 12 seconds to 5 seconds. In addition, the equality signs for the τ and K constant numerical values would be changed to either a "less than or equal to" or a "greater than or equal to" function, as applicable. This application superseded a similar TS amendment that was proposed by letter dated April 6, 1995, to move these constants to the Core Operating Limits Report.

SQN has experienced OP Δ T turbine runback alarms on individual channels resulting in partial runback signals. These occurrences could result in turbine runbacks or reactor trips during functional testing at power. The proposed changes to the τ_4 constant numerical values result from a reanalysis to provide additional margin to the trip setpoints and minimize the potential for turbine runback and reactor trip signals. In the interim, SQN Unit 2 is presently operating at a maximum power of 99.5 percent of rated thermal power in order to reduce the potential for inadvertent turbine runback and reactor trip signals because of the spurious OP Δ T channel actuations.

2.0 EVALUATION

The SQN safety analyses that rely on the OP Δ T and OT Δ T trips for primary protection are the uncontrolled rod cluster assembly bank (RCCA) withdrawal at power, loss of external load and/or turbine trip, uncontrolled boron dilution, accidental depressurization of the reactor coolant system, steamline break with coincident rod withdrawal at power, and steamline break mass/energy outside containment. These transients were reanalyzed or evaluated by Westinghouse Electric Corporation (W) with the proposed changes and found to adhere to all of the safety analysis acceptance criteria described in the plant's Final Safety Analysis Report (FSAR). Therefore, the staff concludes that the proposed revision of the τ_4 constant numerical value is acceptable.

The revision of the equality signs for the constant numerical values of the OT Δ T and OP Δ T equations will provide the flexibility to set these values more

conservatively than the limits utilized in the safety analysis. These changes, which are consistent with the W improved Standard TS, NUREG-1431, do not change these functions. Therefore, the staff finds the proposed changes to the equality signs acceptable.

Based on the review described above, the staff finds the proposed modifications to the SQN Units 1 and 2 TS to revise the OTAT and OPAT equation constant numerical value τ_4 from 12 seconds to 5 seconds, and the change of the equality signs for the τ and K constant numerical values to either a "less than or equal to" or a "greater than or equal to" function, acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Tennessee State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (60 FR 42187). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Dated: September 15, 1995

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SEQUOYAH NUCLEAR PLANT

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AMENDMENT NO. 211 FOR SEQUOYAH UNIT NO. 1 - DOCKET NO. 50-327 and
AMENDMENT NO. 201 FOR SEQUOYAH UNIT NO. 2 - DOCKET NO. 50-328
DATED: September 15, 1995

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Docket Files

PUBLIC

SN Reading File

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0-14-E-4

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T-5-C-3(2 per docket)

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0-11-E-22

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