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

June 4, 1987

Docket Nos. 50-327
and 50-328

Tennessee Valley Authority
ATTN: Mr. S. A. White
Manager of Nuclear Power
6N 38A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Gentlemen:

SUBJECT: REPORT NOS. 50-327/87-14 AND 50-328/87-14

This letter forwards the results of a special inspection of TVA's Design Baseline and Verification Program (DBVP) for the Sequoyah Nuclear Power Plant, conducted at the plant site on March 2-13. 1987. The NRC inspection was comprised of a multi-discipline team of personnel from the Office of Inspection and Enforcement, consultants, and the Region II Office. The team concentrated on the System Evaluation Reports, documenting the conclusions of the DBVP. The team also reviewed DBVP program procedures and plans and the action items resulting from independent oversight of this program by TVA's Engineering Assurance group.

The inspection team also evaluated TVA's actions in response to previous NRC design control and DBVP inspection reports. In this evaluation, the NRC assessed TVA's corrective and preventive measures detailed in your letters dated December 31, 1986 (revised response to Inspection Report 86-27), February 3, 1987 (response to inspection reports 86-38 and 86-45), and April 22, 1987 (response to inspection report 86-55 and revised responses for items remaining open from other design control related inspection reports).

As a result of the inspection, the NRC team concluded that the DBVP was generally conducted in accordance with the program plan. Implementation by both the DBVP project and Engineering Assurance groups appears to be adequate in most instances sampled by the inspection team within the scope of the program areas inspected to date.

Results of the inspection are presented in the enclosure. Most significant among the inspection team's observations are the following:

(1) A potential common cause failure exists in the design of Sequoyah HVAC equipment in that air handling units are designed to trip off on high temperature (85°F). The temperature sensors for fans cooling redundant 480 volt electrical board rooms are located close to each other. Therefore, a temperature above 85°F may result in loss of HVAC to redundant 480V shutdown boards.

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(2) TVA has not established and implemented periodic surveillance tests which will verify automatic standby features of the diesel building exhaust ventilation fans and various fans associated with safety-related auxiliary building air handling units.

(3) Walkdown drawing discrepancies have been directly incorporated into the drawings, without performing engineering evaluations of the discrepancies.

(4) The DBVP had determined that component labeling errors did not constitute restart items and that certain inadequately performed post modification tests did not need to be completed prior to restart. These determinations were questioned by the team.

During a review of the preliminary DBVP report following the inspection, the team noted that in certain cases the report did not identify interdisciplinary technical problems and large groups of items appear to be mischaracterized as random occurrences.

A written response is requested from TVA addressing the observations identified in Appendix A of the enclosed report. The NRC intends to follow your actions to resolve these items.

An inspection to evaluate TVA's corrective actions for items identified by the DBVP and by the various NRC design control inspections is planned for June 1987, but will depend on the state of completion of TVA's corrective actions. This inspection will include an assessment of restart decision making by evaluating on a sampling basis the corrective actions TVA intends to defer until after restart. The inspection will also assess the adequacy of both proposed and completed corrective actions.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosure will be placed in the NRC Public Document Room.

Should you have any questions concerning this inspection, please contact me or Mr. Gene Imbro (301) 492-9664.

Sincerely,

Steven D. Richardson

Stewart D. Ebneter, Director
TVA Projects Staff
Office of Special Projects

Enclosure:
Inspection Report 50-327/87-14
and 50-328/87-14

cc w/enclosure:
See next page

cc w/enclosure:

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