TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

August 9, 1979

Director of Nuclear Reactor Regulation
Attention: Mr. L. S. Rubenstein, Acting Chief
Light Water Reactors Branch No. 4
Division of Project Management
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Rubenstein:

In the Matter of the Application of Tennessee Valley Authority	))	Docket Nos. 50-327, 50-328, 50-390, 50-391, 50-438, 50-439

Enclosed are 40 copies of a TVA report entitled "Justification of the Seismic Design Criteria Used for the Sequoyah, Watts Bar, and Bellefonte Nuclear Power Plants - Phase II - Responses to NRC Questions 1 Through 6." Also enclosed are 40 copies of a Weston Geophysical Corporation report prepared for TVA entitled "Earthquake Ground Motion Study in the Vicinity of the Sequoyah Nuclear Power Plant." These reports are submitted in response to R. S. Boyd's letter to N. B. Hughes dated October 4, 1978, requesting additional information on the seismic design bases for the Sequoyah, Watts Bar, and Bellefonte Nuclear Plants.

In particular, the enclosed reports: (1) respond to questions the NRC staff asked of our Phase II report; (2) include supplements issued to but not included in our Phase II report; (3) provide additional information to support the present design SSE; (4) summarize the studies undertaken to resolve this issue; and (5) list TVA's conclusions.

The enclosed reports provide additional information on the sensitivity of the site specific SSE response spectra developed from strong motion records. Also, the probabilities of exceeding the plants' SSE design spectra, compared to Phipps Bend Nuclear Plant and to the site specific response spectra developed using strong motion records, are presented along with a probabilistic analysis to justify the OBE. In addition, the results of an earthquake ground motion field study to determine the site specific response characteristics in Sequoyah vicinity are reported. These results show that Sequoyah is a relatively quiet site and has low response characteristics.

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TVA's approach was to show that the plants, as designed, are adequate by taking into account specific site conditions, earthquake magnitude, and distance to the earthquake source. The additional information enclosed, along with our Phase I and II reports and the "Southern Appalachian Tectonic Study," addresses these considerations in detail.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosures