TENNESSEE VALLEY AUTHORITY

400 Chestnut Street Tower II

February 4, 1981

SQRD-50-328/81-13
WBRD-50-390/81-13
WBRD-50-391/81-12

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

SEQUOYAH NUCLEAR PLANT UNIT 2 AND WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - FAILURE OF THE GENERATOR SYSTEM TO SUPPLY ADEQUATE VOLTAGE TO THE SAFETY-RELATED BOARDS - SQRD-50-328/81-13, WBRD-50-390/81-13, WBRD-50-391/81-12 - FIRST INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector M. Thomas on January 5, 1981, in accordance with 10 CFR 50.55(e) as NCR's SQN EEB 8054 and WBN EEB 8009. Enclosed is our first interim report. We expect to submit our next report by April 3, 1981.

If you have any questions, please get in touch with D. L. Lambert at FTS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure
cc: Mr. Victor Stello, Director (Enclosure) ✓
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

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ENCLOSURE

SEQUOYAH NUCLEAR PLANT UNIT 2 AND WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
SQRD-50-328/81-13, WBRD-50-390/81-13, WBRD-50-391/81-12
FAILURE OF THE GENERATOR SYSTEM TO SUPPLY
ADEQUATE VOLTAGE TO THE SAFETY-RELATED BOARDS
10 CFR 50.55(e)
FIRST INTERIM REPORT

Description of Deficiency

When a reactor is tripped automatically for reasons other than an electrical fault or generator bearing failure, the main generator is not tripped for 30 seconds. During this time, the turbine stop valves are closed, and the generator is driven as a synchronous motor. The transfer of the safety boards to the preferred offsite supply is also delayed for 30 seconds. If the generator voltage regulator system failed to operate within its specified range during this delay period, inadequate voltage could be supplied to the 6900-volt shutdown boards following the unit trip. If this occurred, both trains of essential safety-related equipment supplied by the 6900-volt shutdown boards would be unable to meet the required response times stated in the safety analysis report.

Interim Corrective Action

TVA is performing an examination to reanalyze the design basis for the delay in tripping the generator after a turbine trip. The examination will consider both normal and abnormal operation of the generator exciter and its controls and abnormal operation of the generator protective relays as well as the lower limits of degraded voltage conditions of the 500-kV and 161-kV grids.