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

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November 7, 1983

WBRD-50-390/83-62
WBRD-50-391/83-57

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - LOADING ON DIESEL GENERATOR FOR LOCA AND BLACKOUT CAUSING UNACCEPTABLE FREQUENCY TRANSIENT WBRD-50-390/83-62, WBRD-50-391/83-57 - FIRST INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Linda Watson on October 7, 1983 in accordance with 10 CFR 50.55(e) as NCR WBN EEB 8312. Enclosed is our first interim report. We expect to submit our next report on or about December 21, 1983.

If you have any questions, please get in touch with R. H. Shell at FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Licensing

Enclosure
cc: Mr. Richard C. DeYoung, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Records Center (Enclosure)
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
LOADING ON DIESEL GENERATOR FOR LOCA AND BLACKOUT CAUSING
UNACCEPTABLE FREQUENCY TRANSIENT
NCR WBN EEB 8312
WBRD-50-390/83-62, WBRD-50-391/83-57
10 CFR 50.55(e)
FIRST INTERIM REPORT

Description of Deficiency

According to the results of an analysis done by Morris-Knudsen, the manufacturer of the Watts Bar diesel generators, the present TVA design loading on diesel generator 1B-B for a simultaneous loss-of-coolant accident (LOCA) and blackout could cause a frequency transient as high as 12 percent. This transient would appear in the interval from 0 to 8 seconds after the diesel generator connects to the 6.9-kV shutdown board 1B-B. This analysis has also shown that under the same LOCA/blackout conditions the diesel generator 2B-B could experience a frequency transient as high as 7 percent at approximately 35 seconds.

Interim Progress

TVA has begun an investigation of this matter and has tentatively identified six pieces of equipment (several train A and train B chiller packages and air conditioner compressors) which, if prevented from connecting to the diesel generator during sequenced loading, would bring the calculated frequency transient within Regulatory Guide 1.9 limits. TVA is still determining the affect the removal of these loads from the initial sequencing would have on system's operation and overall plant safety.