

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

OR 157B Lookout Place

85 DECEMBER 13, 1985

WBRD-50-390/85-59

WBRD-50-391/85-55

U.S. Nuclear Regulatory Commission
Region II

Attn: Dr. J. Nelson Grace, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Dear Dr. Grace:

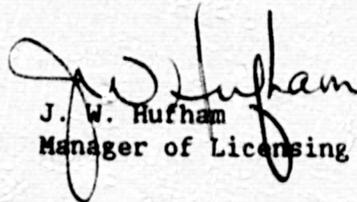
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - FLOODING IN CATEGORY 1 STRUCTURES
OUTSIDE CONTAINMENT - WBRD-50-390/85-59, WBRD-50-391/85-55 - INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
Al Ignatonis on October 28, 1985, in accordance with 10 CFR 50.55(e) as NCR
WBN NEB 8523. Enclosed is our interim report. We expect to submit our next
report on or about January 31, 1986.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY


J. W. Hufham
Manager of Licensing

Enclosure

cc (Enclosure):

Mr. James Taylor, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Records Center
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
FLOODING IN CATEGORY I STRUCTURES OUTSIDE CONTAINMENT
WBRD 50-390/85-59 AND WBRD-50-391/85-55
SCR WBN NEB 8523
10 CFR 50.55(e)
INTERIM REPORT

Description of Deficiency

TVA's Watts Bar Nuclear Plant (WBN) Design Criteria WB-DC-40-31.50, "Evaluating the Effects of a Pipe Failure Inside and Outside Containment," Section 4.4, requires evaluation of the environmental effects of high and moderate energy piping failures. The definition of environmental effects in Section 2.4 includes flooding. Also, 10 CFR 50.49(e)(6) requires the environmental qualification program to be based on and include submergence if the equipment is subject to being submerged. However, TVA has now determined that there is inadequate documentation for WBN, to conclude that there will be no unacceptable consequences as a result of flooding in a Category I structure, outside containment, following high or moderate energy pipe breaks (i.e., a specific evaluation of the flooding effects is not readily available). As such, it cannot be shown that the requirements of WB-DC-40-31.50 or 10 CFR 50.49(e)(6) have been met for affected equipment or structures.

This deficiency was discovered during a design review for a generic condition associated with significant condition report (SCR) SCR SQN NEB 8513. TVA has determined that similar, but not identical, deficiencies exist at Sequoyah Nuclear Plant (SQN) (identified in SCR SQN NEB 8513 as noted above) and Browns Ferry Nuclear Plant (BFN) (SCR BFN NEB 8507). The subject deficiency does not apply to Bellefonte Nuclear Plant (BLN).

Safety Implications

As a result of this deficiency, it is possible that some components, systems or structures are not specifically designed nor qualified for anticipated water accumulations following a pipe break. If not specifically designed/qualified for, or protected from submergence, it is possible that affected safety-related equipment could be rendered incapable of performing its intended design function following a pipe break outside containment. In addition, some systems which are not required to function following these pipe breaks, could possibly fail in a manner which could jeopardize the integrity of another system(s). This could, thereby, prevent the accomplishment of a required safety-related function.

Since specific consequences as a result of this deficiency are unknown at this time, TVA considers that had this condition remained uncorrected, it could have adversely affected the safety of operation of the plant.

Interim Progress

TVA is developing the scope and schedules for corrective actions necessary to resolve this deficiency. A final report will be provided to the NRC on this item by January 31, 1986.