

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

October 23, 1984

Director of Nuclear Reactor Regulation
Attention: Ms. E. Adensam, Chief
Licensing Branch No. 4
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Ms. Adensam:

In the Matter of the Application of) Docket Nos. 50-390
Tennessee Valley Authority) 50-391

Please refer to my letter to you dated April 6, 1984 which provided TVA's response to NUREG-0737 Item II.K.3.10, "Proposed Anticipatory Trip Modification" for the Watts Bar Nuclear Plant (WBN).

Included in the referenced transmittal was a Westinghouse (W) report which concluded that the probability of a small break loss-of-coolant-accident resulting from a stuck-open power operated relief valve was unaffected by the deletion of the reactor trip on turbine trip function below 50-percent power at WBN. The W report further indicated however, that TVA would need to perform a supporting radiological dose analysis in order to verify the acceptability of the deletion.

A conference call was held between TVA and NRC representatives on October 4, 1984 in which TVA was requested to provide additional information regarding the dose rate analysis. Specifically, the NRC requested that TVA describe;

1. The assumptions used in the steam release rate calculations and the corresponding results, and
2. The assumptions used in the offsite dose calculations and the corresponding results.

Enclosed is the requested information.

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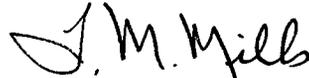
Director of Nuclear Reactor Regulation

October 23, 1984

If you have any questions concerning this matter, please get in touch with D. B. Ellis at FTS 858-2681.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



L. M. Mills, Manager
Nuclear Licensing

Sworn to and subscribed before me
this 23rd day of Oct. 1984

Paulette N. White
Notary Public
My Commission Expires 8-24-88

Enclosure

cc: U.S. Nuclear Regulatory Commission (Enclosure)
Region II
Attn: Mr. James P. O'Reilly Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
NUREG-0737 ITEM II.K.3.10
ANTICIPATORY TRIP MODIFICATION
RESPONSE TO NRC REQUEST FOR INFORMATION

1. Steam Release Calculation Assumptions

- A. Reactor trips on low-low steam generator level.
- B. Heat dissipated after reactor trip was based on end of core life decay heat plus heat from the reactor coolant system metal plus sensible heat plus reactor coolant pump motor heat.

Steam Release Calculation Results

Up to 2 hours	1,279,260 lbm
2 to 8 hours	1,250,312 lbm
8 to 24 hours	1,109,424 lbm
Total	3,638,996 lbm

2. Offsite Dose Calculation Assumptions

- A. Steam release rates are as given above.
- B. The radioactivity in the steam corresponds to the values given in Table 11.1-7 of the Watts Bar FSAR, which are based on the data in NUREG-0017 adjusted for the Watts Bar parameters.
- C. The atmospheric dispersion values were taken from Table 15A-2 of the Watts Bar FSAR.

Offsite Dose Calculation Results

	<u>Whole Body Dose (rem)</u>	<u>Inhalation (rem)</u>
Site Boundary	6.0E-8	2.4E-5
Low Population Zone	2.2E-8	8.7E-6