

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401  
400 Chestnut Street Tower II

June 4, 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 L. M. Mills' letters to you dated September 14, 1981 and March 11 and August 12, 1982 which provided TVA's response and revised responses to NUREG-0737 item II.B.2, "Design Review of Plant Shielding and Environmental Qualification of Equipment For Spaces/Systems Which May Be Used In Postaccident Operations," respectively, for the Watts Bar Nuclear Plant (WBN).

By letter dated August 12, 1982, TVA inadvertently included inconsistent statements regarding the need for additional shielding at WBN. Enclosed is our revised response to this item which indicates that the postaccident sampling facility required by NUREG-0737 item II.B.3 will be designed and shielded to allow access after an accident; but that no other additional shielding will be required at WBN.

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

*D S Kammer*

D. S. Kammer  
Nuclear Engineer

Sworn to and subscribed before me  
this 4<sup>th</sup> day of June 1984

*Paulette L. White*  
Notary Public  
My Commission Expires 9-5-84

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 30303

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DESIGN REVIEW OF PLANT SHIELDING AND ENVIRONMENTAL  
QUALIFICATION OF EQUIPMENT FOR SPACES/SYSTEMS WHICH MAY BE  
USED IN POSTACCIDENT OPERATIONS

TVA RESPONSE (Revised June 4, 1984)

The Watts Bar design bases include the assumption of TID 14844 sources. TVA plants are specifically designed to mitigate major design basis events with no access outside the main control room (MCR) being required. With this goal in mind, the plants were not specifically designed for any access outside the MCR. To specifically design for guaranteed access at any time in most parts of the Auxiliary Building is not feasible. However, the current designs allow considerable capability for access for short times if the entry time into the area can be selectively chosen.

The current arrangements and shielding for normal operations will help minimize the impact from postaccident contained sources even though the shielding was not intended for that purpose. In certain instances, TVA has provided some shielding for postaccident access. TVA has performed a shielding review for Watts Bar. The review included generation of radiation source terms for primary system water and containment sump water based on TID 14844. These fluids were assumed to circulate in the plant systems designed for accident response and also in systems used in normal plant operation but which might be called upon for accident recovery. From the analyses performed, radiation doses can be determined at locations in the plant near accident recovery equipment.

Watts Bar is designed to mitigate major accidents without access to the plant outside the MCR. The postaccident sampling facility required by item II.B.3 of NUREG-0737 will be designed and shielded to allow access after an accident. It has been determined that no other additional shielding is necessary at Watts Bar.

A detailed report on TVA's shielding review for Sequoyah was transmitted to A. Schwencer by L. M. Mills dated June 16, 1980. This information is also applicable to Watts Bar.

Watts Bar Nuclear Plant will meet the requirements of GDC 19.