



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

FEB 21 2002

10 CFR 50.9

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555

Gentlemen:

In the Matter of ) Docket No.50-390  
Tennessee Valley Authority )

SUBJECT: WATTS BAR NUCLEAR PLANT - RESPONSES TO RAI REGARDING  
TRITIUM PRODUCING BURNABLE ABSORBER RODS (TPBARS) (TAC NO. MB1884)

The purpose of this letter is to provide TVA's response to NRC's request for additional information sent by email dated January 28, 2002. NRC's request was subsequently provided in a letter dated February 11, 2002. The enclosure provides both the questions asked and the responses to those questions.

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There are no regulatory commitments made by this letter. If you have any questions about this letter, please contact me at (423) 365-1824.

Sincerely,



P. L. Pace  
Manager, Site Licensing  
and Industry Affairs

Enclosure

cc: See page 3

Subscribed and sworn to before me  
on this 21st day of February 2002.

E. J. Jannone Long  
Notary Public

My Commission expires May 21, 2005

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PLP:RAS

Enclosure

cc (Enclosure):

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ENCLOSURE  
TENNESSEE VALLEY AUTHORITY  
WATTS NUCLEAR PLANT (WBN)  
UNIT 1  
DOCKET NO. 50-390  
RESPONSES TO NRC REQUEST FOR ADDITIONAL INFORMATION

1. In Part B.III.6.A.2 of Tennessee Valley Authority's August 20, 2001, submittal, TVA states that damage to more than 24 tritium producing burnable absorber rods contained in a consolidation canister is precluded for all credible impact scenarios. What is the basis for this?

TVA Response:

An analysis completed by Pacific Northwest National Laboratories (PNNL) has demonstrated that no TPBAR cladding failures are expected to occur during an impact event. The evaluation of TPBAR cladding stress is based on a canister loaded with TPBARs traveling at forty feet per minute (FPM) impacting onto a rigid surface. Forty FPM is based on a maximum uncontrolled lowering hook speed of the Spent Fuel Pool hoist. TPBAR stresses resulting from feasible impact events (e.g. canister impact with a fuel rack, weir gate, pool wall, Consolidation Fixture, etc.) are bounded by the rigid surface impact evaluations. The canister and handling system design and configuration limit the impact forces on the canister.

2. The licensee states that an analysis was not performed for a fuel assembly falling onto a loaded consolidation canister, therefore administrative and/or design features will be in place to preclude damage. What are the specific administrative and /or design features, and when will these be implemented?

TVA Response:

Implementation of TVA's tritium program will result in the following administrative controls:

Existing fuel storage cells will be designated as consolidation canister storage locations. These consolidation storage locations will be located on the outside row near one corner of the fuel pool away from any fuel movement path. At WBN, these locations will be restricted from any other use while the TPBARs are contained in the spent fuel pool. Fuel storage cells immediately adjacent to the designated canister storage locations may

remain empty or may contain new fuel or spent fuel assemblies. In any event, fuel movement procedure controls put into place as a result of the tritium program will prevent movement directly over the canisters.