

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401  
400 Chestnut Street Tower II

January 5, 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:

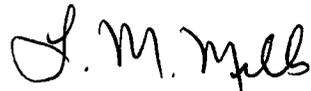
In the Matter of the Application of ) Docket Nos. 50-390  
Tennessee Valley Authority ) 50-391

By my letter to you dated April 22, 1983, TVA provided a response for Watts Bar Nuclear Plant to Generic Letter 83-10c. Enclosed is additional information concerning automatic trip of reactor coolant pumps (RCP). As specified by the enclosure, the Westinghouse Owners Group (WOG) expects to submit a generic report justifying manual RCP trip by March 1, 1984. TVA review of the WOG report and technical justification for treatment of RCPs will be completed three months after receipt of the WOG report.

If you have any questions concerning this matter, please get in touch with D. P. Ormsby at FTS 858-2682.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



L. M. Mills, Manager  
Nuclear Licensing

Sworn to and subscribed before me  
this 5<sup>th</sup> day of January 1984

Paulette G. 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, Regional Administrator  
101 Marietta Street, NW, Suite 2900  
Atlanta, Georgia 30303

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2  
ADDITIONAL INFORMATION ON GENERIC LETTER 83-10c

Reference: L. M. Mills' letter to E. Adensam dated April 22, 1983

The referenced letter presented the plan for demonstrating compliance with the criteria for resolution of TMI Action Plan Item II.K.3.5 which was established in letters from Darrell G. Eisenhut of the Nuclear Regulatory Commission to all Applicants with Westinghouse-designed Nuclear Steam Supply Systems (Generic Letter 83-10c) dated February 8, 1983. The following presents the status of the planned responses to NRC Generic Letter 83-10c. The date by which all parts of the program are to be completed has now been revised to March 1, 1984. However, a submittal to partially fulfill the requirements has been transmitted to NRC by Westinghouse Owners Group (WOG) letter OG-110, dated December 1, 1983 (Sheppard to Mattson).

Section I of the attachment to NRC Generic Letter 83-10c is concerned with "Pump Operation Criteria Which Can Result in RCP Trip During Transients and Accidents." Subsection 1 of Section I presents guidelines for establishing set points for RCP trip. The WOG response to this section of NRC Generic Letter 83-10c is contained in revision 1 to the Emergency Response Guidelines, which has been approved and issued.

The RCP trip criterion being adopted in the Watts Bar-specific procedures not only assures RCP trip for all losses of primary coolant for which trip is considered necessary, but also permits RCP operation to continue during most non-LOCA accidents, including steam generator tube rupture events up to the design basis double-ended tube rupture. The generic applicability for the RCP trip criterion selected has been documented by the WOG in "Evaluation of Alternate RCP Trip Criterion," September 1983, which as stated above has been submitted to the NRC for review.

Subsection 2 of Section I of the attachment to NRC Generic Letter 83-10c provides guidance for justification of manual RCP trip. Subsection 2a requires that compliance with 10 CFR 50.46 be demonstrated in an Appendix K small break LOCA analysis given that the RCPs are tripped two minutes after the onset of reactor conditions corresponding to the RCP trip set point. Westinghouse has completed generic verification for the WOG that predicted LOCA transients (presuming the two minute delayed RCP trip) are nearly identical to those presented in Safety Analysis Reports utilizing the WFLASH Evaluation Model. Thus, the Safety Analysis Reports for all plants are a valid means to demonstrate compliance with the subsection 2A guidelines.

Westinghouse is now performing better estimate WFLASH analyses to demonstrate, generically, compliance with the guidelines presented in Subsection 2A of Section I of the attachment to NRC Generic Letter 83-10c. These analyses will identify the minimum time available for

operator action for a range of break sizes such that the ECCS acceptance criteria of 10 CFR 50.46 are not exceeded. It is expected that the minimum time available for operator action will exceed the value contained in American National Standards Institute (ANSI) draft standard N660. Combined with the Subsection 2A justification, this will justify manual RCP trip for all plants.

The WOG intends to submit the generic report justifying manual RCP trip by March 1, 1984. TVA will review the WOG report and finalize our technical justification for treatment of RCPs based on that report. This review will be completed three months after receipt of the WOG report.

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