

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

January 6, 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) Docket Nos. 50-327
Tennessee Valley Authority) 50-328

By my April 20, 1983 letter to you, we provided a plan, for our Sequoyah Nuclear Plant, for demonstrating compliance with the criteria for resolution of TMI Action Item II.K.3.5, automatic trip of reactor coolant pumps. Enclosed is a supplemental response to item II.K.3.5. The April 20, 1983 letter was provided in response to Generic Letter 83-10d issued by the NRC on February 8, 1983. As stated in the April 20, 1983 letter, the second part of the plan, which is intended to provide the justification for manual reactor coolant pump trip, was previously scheduled for completion by the end of 1983. However, delays have occurred in the release of the generic report by the Westinghouse Owners Group (WOG) justifying manual reactor coolant pump trip. The WOG expects to submit the generic report by March 1, 1984, thus completing the documentation for a generic response. TVA expects to complete the review of the WOG report within three months after receipt and provide a response justifying our present position on manual trip of reactor coolant pumps. However, a WOG submittal was made to the NRC to partially fulfill the requirements on December 1, 1983 by letter (OG-110) from P. Sheppard to R. Mattson.

If you have any questions concerning this matter, please get in touch with J. E. Wills at FTS 858-2683.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills

L. M. Mills, Manager
Nuclear Licensing

Sworn to and subscribed before me
this 6th day of January 1984

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

Enclosure

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Director of Nuclear Reactor Regulation

January 6, 1984

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

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2

REVISED SCHEDULE FOR RESOLUTION OF TMI ACTION ITEM II.K.3.5
AUTOMATIC TRIP OF REACTOR COOLANT PUMPS

Section I of the attachment to NRC letter 83-10d 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 setpoints for RCP trip. The WOG response to this section of NRC letter 83-10d is contained in revision 1 to the emergency response guidelines (ERGs), which has been approved and issued. TVA's plans and schedule for implementing revision 1 of WOG ERGs at Sequoyah are provided in an April 15, 1983 letter from me to you regarding supplement 1 to NUREG-0737 - Requirements for Emergency Response Capability (Generic Letter 82-33).

The RCP trip criteria adopted in the Sequoyah specific procedures not only ensures RCP trip for all losses of primary coolant, which 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 of the RCP trip criterion selected has been documented by the WOG in "Evaluation of Alternate RCP Trip Criteria," September 1983, which as stated above has been submitted to NRC for review.

Subsection 2 of section I of the attachment to NRC letter 83-10d 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 setpoint. Westinghouse has completed generic verification for the WOG that predicted LOCA transients, presuming the two-minute delay RCP trip, are nearly identical to those presented in safety analysis reports utilizing the W FLASH 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 W FLASH analyses to demonstrate, generically, compliance with the guidelines present in the subsection 2A of section I of the attachment to NRC Generic Letter 83-10d. 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. TVA will review the WOG report within three months after its receipt and provide a response justifying our position on manual trip of reactor coolant pumps upon completion of that review.

The WOG intends to submit the generic report justifying manual RCP trip by March 1, 1984. This will complete the documentation comprising a generic reply to NRC Generic Letter 83-10d.