

Docket Nos. 50-438  
and 50-439

MAR 7 1974

Tennessee Valley Authority  
ATTN: Mr. James E. Watson  
Manager of Power  
818 Power Building  
Chattanooga, Tennessee 37401

Gentlemen:

In order that we may continue our review of your application for a license to construct the Bellefonte Nuclear Plant, Units 1 and 2, additional information is required. The information requested is described in the enclosure and pertains to Chapter 7 of the Preliminary Safety Analysis Report.

In order to maintain our licensing review schedule, we will need a completely adequate response to all enclosed requests by April 1, 1974. Please inform us within 7 days after receipt of this letter of your confirmation of the schedule date or the date you will be able to meet. If you cannot meet our specified date or if your reply is not fully responsive to our request, it is highly likely that the overall schedule for completing the licensing review for the project will have to be extended. Since reassignment of the staff's efforts will require completion of the new assignment prior to returning to this project, the extension will most likely be greater than the delay in your response.

Please contact us if you have any questions regarding the information requested.

Sincerely,

Original Signed by

A. Schwencer, Chief  
Light Water Reactors Br. 2-3  
Directorate of Licensing

Enclosure:  
Request for Additional Information

ccs:	See Next Page	LWR 2-3	L:C/LWR 2-3		
OFFICE ▶		DKDavis:khf	ASchwencer		
SURNAME ▶					
DATE ▶		3/ 7 /74	3/ 7 /74		

CB

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- RO (3)
- DKDavis
- EIGoulbourne
- ACRS (16)
- KGoller
- KKniel
- DVassallo

ccs: Mr. R. H. Marquis  
General Counsel  
629 New Sprakle Building  
Knoxville, Tennessee 37902

William E. Garner, Esquire  
Route 4  
Scottsboro, Alabama 35768

Mr. Lyle A. Taylor  
3301 Helena, NW  
Huntsville, Alabama 35810

bcc: Mr. James McFarland  
Senior Project Manager  
Babcock & Wilcox  
Power Generation Division  
P. O. Box 1260  
Lynchburg, VA 24505

E. G. Beasley, Jr.  
307 U.B.A.  
Tennessee Valley Authority  
Knoxville, Tennessee 37902

OFFICE ▶						
SURNAME ▶						
DATE ▶						

REQUEST FOR ADDITIONAL INFORMATION  
TENNESSEE VALLEY AUTHORITY  
BELLEFONTE NUCLEAR PLANT, UNITS 1 & 2  
DOCKET NOS. 50-438 AND 50-439

7.25 Based on the information presented in Section 6.3.2.17, we believe that:

- a. The proposed design of the circuits used to change over to the cross-over mode (using the LPI pumps as boosters for the HPI Pumps) and the recirculation mode of operation following a LOCA does not conform to the requirements of IEEE Std 279-1971, and
- b. The complexity of the proposed change-over may not provide adequate assurance that the operator will correctly perform the required actions.

The staff's position is that the instrumentation and controls provided to accomplish the change-over to the recirculation mode and the cross-over mode should be designed to meet the requirements of IEEE 279-1971 including the requirements for manual initiation of protective actions at the systems level. In addition, the procedures should be of such simplicity as to provide a high degree of assurance that the operator will perform correctly all actions that are necessary to protect the health and safety of the public.

Therefore, either modify your design to show conformance with the staff's position, or justify your design, as opposed to a design which provides automatic and system level manual initiation of switch over as required by the literal interpretation of IEEE Std 279-1971.

Justification of the present design should include the following:

1. Define the time available for the operator to complete the necessary monitoring and switching functions for the cross-over mode (i.e., using LPI pumps as boosters for HPI pumps) and the recirculation mode prior to onset of conditions (assume and define worst case) that are unacceptable from the standpoint of plant safety.
2. Provide a description of the control panel arrangement of the indicators and switches which the operator must monitor and operate to affect switchover.
3. Describe the permissive interlocks that are provided (for equipment protection or other reasons) between the various ECCS components that are operated during switchover.
4. Identify the system conditions that require the use of the cross-over mode prior to or coincident with the initiation of the recirculation mode of operation.

7.26

In Request 7.16, we stated our belief that the Auxiliary Feedwater System as described in Section 7.4.2.3.1 did not comply with Section 4.12 of IEEE Std 279-1971. Subsequently, you revised your PSAR to comply with this standard. We now find that another control system, the Steam Line Break Instrumentation and Control, that is essential to plant safety does not comply with Section 4.12. Discuss your intent to comply with Section 4.12 of IEEE Std 279-1971 for all Essential Control Instrumentation and describe the necessary design changes, or justify your design by discussing your reasons for concluding that such an exception is in accordance with requirements of IEEE Std 279-1971.