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JUL 5 1973

Docket Nos. ~~50-438~~  
and 50-439

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

Gentlemen:

On June 14, 1973, you were notified by letter that your application for a permit to construct the Bellefonte Nuclear Plant, Units 1 and 2 had been accepted for docketing. In order that we may continue our review of your application, additional information is required. The information requested is described in the enclosure and pertains to the different sections of the Preliminary Safety Analysis Report.

To avoid delay in our review, the information identified in the enclosure must be submitted in thirty (30) days. If you cannot submit the additional information in thirty (30) days, inform us of your schedule for providing the additional information requested so that we may reschedule our review accordingly.

Sincerely,

A. Schwencer, Chief  
Pressurized Water Reactors  
Branch No. 4  
Directorate of Licensing

Enclosure:  
Request for Additional Information

cc: Mr. R. H. Marquis  
General Counsel  
629 New Sprinkle Building  
Knoxville, Tennessee 37902

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*JG*

OFFICE ▶	PWR-4 <i>DKD</i>	L: CAPWR-4 <i>AS</i>				
SURNAME ▶	DKDavis: kmf	ASchwencer				
DATE ▶	7/ 3 /73	7/ 3 /73				



UNITED STATES  
ATOMIC ENERGY COMMISSION  
WASHINGTON, O.C. 20545

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A handwritten signature in cursive script, appearing to read "A. Schwencer", is written over a horizontal line.

A. Schwencer, Chief  
Pressurized Water Reactors  
Branch No. 4  
Directorate of Licensing

Enclosure:  
Request for Additional Information

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

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

2.0 SITE CHARACTERISTICS

- 2.1.5 In Section 2.5.4.1, Geologic Features, although investigations performed thus far seem to demonstrate that there has been no extensive solution activity below a depth of about 10 feet within the foundation bedrock, the following should be considered:
- (a) a commitment to geologically map in detail the walls and bottoms of all excavations for Category 1 structures. The map to be included in the FSAR.
  - (b) additional and more closely spaced core borings (vertical and/or angled borings), to be drilled beneath all Category I structures. Borings drilled at 100 foot centers may not be sufficient. Drilling of core holes on 10 to 50 ft. centers may be needed at locations of Category I structures, to preclude the existence of significant cavities.

3.0 DESIGN OF STRUCTURES, COMPONENTS, EQUIPMENT AND SYSTEMS

3.20 In Section 3.8.1.2, provide the applicable portions of the proposed ACI-ASME Code (ACI-359; currently issued for trial use and being reviewed by the AEC).

3.21 In Section 3.6.3, (a) Pipe whip restraint design criterion #1 indicates elastic dynamic analysis utilizing a 20% increase in specified minimum yield strength. An increase of 10% is acceptable to account for the strain rate effect. Justify utilizing a 20% increase in specified minimum yield strength. (b) The inclusion of design criteria for component supports in the pipe whip restraint section is not understood. Design criteria for component supports should be guided by the criteria in subsection NF (draft version) of Section III of the ASME Code. The criteria presented in the PSAR appear less conservative.

3.22 Section 3.9.1.2, if analysis without testing is used to guarantee the operability of mechanical equipment under faulted condition loads, justification of criteria is necessary.

3.23 In Section 3.9.2.4, while active pumps and valves are identified, the stress levels allowed under the various loading combinations listed in Section 3.9.2.2 are apparently the same for active and non-active pumps and valves. Justify this inconsistency with current practice.

5.0 REACTOR COOLANT SYSTEM AND CONNECTED SYSTEMS

5.2 In Section 5.2.1.4, Table 5.2-2 contains several annulled Cases which do not apply to the Codes and Addenda listed in Table 5.2-1. These are Cases 1480, 1486, and 1487. Additionally, only the current versions of Code Cases described to be used should be listed, unless specific justification is presented to use an earlier version.

5.3 In Section 5.2.1.6, the information presented on active pumps and valves is not sufficient to demonstrate that they will function under faulted condition loadings. Apparently no differentiation is made in design stress limits between active and inactive pumps and valves. Justify this inconsistency with current practice.

6.0 ENGINEERED SAFETY FEATURES

6.23 In Section 6.2.3, Containment Air Purification and Cleanup Systems, provide justification for all areas in disagreement with Regulatory Guide 1.52, "Design, Testing, and Maintenance Criteria for Atmospheric Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants." In particular, justify the following:

- a. The test requirements for HEPA filters are not in accordance with ANSI N101.1-1972 to a penetration of no more than .03% for individual filters and .05% for the entire bank. The test requirements for carbon beds are unstated.
- b. Secondary systems air filtration, a system for ESF use, does not consist of the following components: prefilters, moisture separators, heaters (to reduce the RH to 70%), HEPA filters upstream of the absorber, HEPA filters downstream of the adsorbers.
- c. The secondary containment filtration systems are not designed to reduce the relative humidity to 70%.