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NOV 15 1973

DOCKET NOS.: 50-438 AND 50-439

APPLICANT : TENNESSEE VALLEY AUTHORITY (TVA)

FACILITY : BELLEFONTE NUCLEAR PLANT, UNITS 1 AND 2

**SUMMARY OF MEETING HELD ON NOVEMBER 6, 1973 TO DISCUSS CONTAINMENT SUBCOMPARTMENT DIFFERENTIAL PRESSURE ANALYSIS**

On November 6, 1973, representatives of TVA and B&W met with the Regulatory staff to discuss the containment subcompartment differential pressure analysis. These discussions included areas of interest to the Containment Systems Branch.

A list of attendees is enclosed.

Significant points discussed are summarized below:

**1. Analytical Methods and Margins for Uncertainty**

The AEC and B&W calculations of a two node benchmark problem were compared to aid in the staff's evaluation of TVA's position that their calculational methods with a 10% margin are comparable, in terms of design differential pressures, to the staff's use of the Relap-3 code with a 40% margin. These comparisons appeared to substantiate TVA's position for the choked flow benchmark. For the unchoked flow benchmark, TVA's method with a 10% margin was considerably below the staff's method with a 40% margin. The staff indicated that a suitable way to resolve the lack of margin for unchoked flow would be to place a 40% margin on the results of the CRAFT code when using acceptable assumptions for discharge coefficients and k factors. TVA indicated their next PSAR amendment would document their position on this analysis.

**2. Modeling of Subcompartments**

TVA described changes in the design of the reactor cavity and in the piping restraint system which they were considering. These changes would affect the modeling of subcompartments to some degree. The staff requested that drawings of the physical layout of the models be

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included in TVA's responses to recent AEC requests for additional information. B&W described the results of a sensitivity study that they had conducted using the CRAFT code. This study showed little sensitivity to inertial effects. The method for treating insulation in the models was also discussed.

3. Design Differential Pressures for Subcompartment Structures

The staff requested that the design pressures used in the structural analysis be supplied, since it appeared that the differential pressures presented in Table 6.2-8a of the PSAR were calculated pressures and not necessarily those used in the structural design.

Original Signed

Don K. Davis, Project Manager  
Pressurized Water Reactors Branch 4  
Directorate of Licensing

Enclosure:  
List of Attendees

- DISTRIBUTION:
- Docket Files (2)
- AEC PDR
- Local PDR
- L Rdg File
- RP Rdg File
- PWR-4 Rdg File
- RCDeYoung
- ASchwencer
- RWKlecker
- RO (3)
- TR ADs
- TR BCs
- RP ADs
- RP BCs
- DDavis
- GDittman
- EGoulbourne
- OGC
- JHendrie
- ACRS (16)
- CAnderson
- JKudrick

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