



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SEQUOYAH NUCLEAR POWER PLANT UNITS 1 & 2
SAFETY EVALUATION REPORT FOR EMPLOYEE CONCERNS
ELEMENT REPORT 221.2(B), REVISION 1
"PIPE SUPPORT DESIGN
EVALUATION OF DIFFERENCE IN ANALYZED DESIGN
LOADS FOR PIPE SUPPORTS"

I. Subject

Category: Engineering (20000)
Subcategory: Pipe Support Design (22100)
Element: Evaluation of Difference in Analyzed Design Loads for Pipe
Supports (22102)
Concern: SQN-86-002-05

The basis for Element Report 221.2(B), Revision 1 is Employee Concern SQN-86-002-05 which questions the consideration of zero period acceleration (ZPA) effects at Sequoyah Nuclear Power Plant (SQN).

II. Summary of Issues

The Employee Concerns Task Group (ECTG) report identified the following two issues from the employee concern:

1. In certain piping configurations, ZPA loads may be greater than the low frequency seismic excitation loads.
2. Management does not want to discuss the ZPA issue as it may delay the startup.

III. Evaluation

A technical review of Employee Concerns Element Report 221.2(B), Revision 1 was performed by NCT Engineering, Inc. under NRC Contract No. 05-86-156. The results of this review are summarized in the attached NCT technical evaluation report dated November 30, 1987 on Employee Concerns Element Report 221.2(B), Revision 1.

Element Report 221.2(B), Revision 1 found that the employee concern was not valid based on independent studies of the issue that had been performed by TVA. However, the ECTG report identified a corrective action which required TVA to finalize the preliminary reviews and studies on ZPA. The ECTG closeout verification has not been completed on TVA's corrective action. The NCT review of Element Report 221.2(B), Revision 1 and TVA's corrective actions found that,

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although the employee concern could have resulted in additional reviews of ZPA by TVA, TVA's evaluation of the seismic ZPA issue at Sequoyah was acceptable. The staff concurs with the conclusions presented in the NCT technical evaluation report.

The NCT technical evaluation report identified an issue with ZPA for the DBA load case. A Gilbert/Commonwealth (G/C) report titled "Sequoyah Unit 2 Rigorous Analysis Review," dated May 13, 1987 presented additional comparisons at ZPA effects at Sequoyah. The G/C report is currently being reviewed by TVA as part of the civil calculation program and this report was not addressed by Element Report 221.2(B), Revision 1. Based on the NCT review of the G/C report, it appeared that DBA ZPA effects may not have been adequately addressed by TVA. This issue will be further reviewed by the NRC staff as part of the civil calculation review effort.

IV. Conclusions

Based on the review of Employee Concerns Element Report 221.2(B), Revision 1 and TVA's studies of ZPA effects at Sequoyah, the staff concludes that Employee Concern SQN-86-002-05 has been adequately addressed for seismic loads. Resolution of the ZPA issue for containment DBA loads will be addressed as part of the staff's civil calculation program review effort.

V. Addendum

The safety evaluation report for this element report contained an open restart item related to TVA's evaluation of DBA ZPA effects. This item was reviewed during an inspection the week of February 15, 1988. Based on additional evaluations performed by TVA, this issue is considered resolved for restart.