

ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
SEISMIC RESPONSE FOR PRIMARY BRANCH
LINES MAY NOT BE CONSERVATIVE
NCR CEB 79-18 10 CFR 50.55(e)
THIRD INTERIM REPORT

Description of Deficiency

Babcock & Wilcox (B&W) specification 1391 provides TVA with response spectra for use in TVA primary system branch line analyses. Revisions 1 and 2 of this specification provided SSE spectra at a single damping value with instructions for TVA to use one half of the SSE data as the one half SSE (OBE) response spectra. The damping value used to generate the response spectra was a composite modal damping value. Although B&W stated the composite value was in accordance with applicable regulatory guides, the value was conservative only for all pipe sizes under one half SSE loadings. TVA interpreted the spectra as being in accordance with the applicable criteria for all pipe sizes under all loadings and performed system analyses accordingly.

A proposed revision 3 reflected refinement of spring rates along with other design changes and provided new SSE and one half SSE response spectra for several damping values. TVA review of the proposed revision 3 data indicates the revision 1 and 2 one half SSE spectra may not be conservative for branch piping less than 12 inches in diameter.

Interim Progress

TVA has received a second draft of revision 3 to the Babcock & Wilcox specification 1391. After review of this new information, TVA has determined that a reanalysis of TVA's primary system branch lines must be performed.

The primary system branch lines affected by the B&W 1391 response spectra have been reanalyzed except for two cases. B&W has indicated that the final version of the 1391 specification will not be issued until May 1980; however, no spectra changes from the second draft of revision 3 have been identified.