



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, D. C. 20555

March 14, 1979

Honorable Joseph M. Hendrie  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555

SUBJECT: COMBINATION OF DYNAMIC LOADS AS A REGULATORY DESIGN BASIS

Dear Dr. Hendrie:

This letter is in response to Commissioner Kennedy's question at the November 2, 1978 meeting between the Commissioners and the ACRS, concerning the combination of dynamic loads as a design basis for nuclear facilities.

The NRC Staff is considering the use of "Square Root of the Sum of the Squares" methodology when combining LOCA and seismic loadings for the primary coolant system boundary. This may eliminate some possibly undesirable conservatism in load combination methodology; however, it addresses only a small portion of the issues in question. The treatment of structural supports for example, is not, at present, considered similarly.

The ACRS is aware of a number of technical programs addressing load-combinations which have been initiated by the Office of Nuclear Reactor Regulation under technical assistance contracts and through requests to the Office of Nuclear Regulatory Research. These may ultimately alter the Staff position on combined loads. However, their presently incomplete status makes a full commentary premature at this time.

The ACRS has established a Subcommittee to continue review of this question and will report to you at an appropriate time.

Sincerely,

Max W. Carbon  
Chairman