



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

Generic Task Action Plan A-9

NOTE TO: S. Hanauer

On Sept. 17, I met with J. Knight, R. Jackson, L. Reiter, P. Sobel, K. Desai, and F. Cherny to discuss the frequencies of different intensity earthquakes and the resultant impact on structural integrity of equipment such as the condensate storage tank and the associated piping in LWRs. As a result of this meeting it appears that (a) site-specific data would be required to estimate earthquake frequencies with intensity equal to or less than the OBE, (b) the estimates may have large uncertainties, (c) two man-days/plant effort would be required to make these estimates; (d) insufficient manpower is available to perform this task.

It seems to me that if one believes the Appendix F (NUREG-0460, Vol. 3) type of risk analysis, the level of protection achieved for Alt. #3 plants is  $\sim 6 \times 10^{-6}/RY$  for BWRs,  $\sim 2 \times 10^{-5}/RY$  for B&W, C-E plants, and  $\sim 10^{-6}$  for W plants, and further if we believe that the likelihood of failure to scram on demand is  $10^{-4} \sim 10^{-5}$ , one perhaps does not need to look at transient initiators beyond those occurring at a frequency greater than  $10^{-1}/RY$ . If one were to follow this line of reasoning, one would require:

- (a) Industry to evaluate impact on equipment which may initiate a transient and/or be needed for ATWS mitigation as a result of an earthquake of an intensity equivalent to that resulting from an earthquake whose frequency is realistically estimated as

once in 20 years for Alt. #3 plants  
OBE for Alt. #4 plants

Frank Cherny and K. Desai should, of course, develop a question on the type of structural information that would be considered adequate.

- (b) Combine the appropriate earthquake and ATWS loads unless a convincing argument can be presented by the industry that the duration of the earthquake and the timing of the maximum load resulting from ATWS are such that these loads need not be combined.

I would appreciate your recommendation on this issue and should you concur in the above approach, I believe we need to write a letter to the industry requesting the required information.

  
Ashok C. Thadani

cc. R. Mattson  
T. Speis  
ATWS Task Force

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