



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

SEP 24 1979

M. Aycock
(AM)

NOTE TO: A. Thadani, Task Manager, TAP A-9
FROM: F. Cherny, Section Leader, Mechanical Engineering Branch, DSS
THRU: *N* R. J. Bosnak, Chief, Mechanical Engineering Branch, DSS
SUBJECT: ADDITIONAL INFORMATION REQUIRED FOR EVALUATION OF COMPONENT
STRUCTURAL INTEGRITY AND ACTIVE VALVE OPERABILITY FOR COMBINED
LOAD CASE OF ATWS PLUS OBE

Reference: Your Sept. 18, 1979 Note To S. Hanauer

Per your request in the referenced note, I have prepared an additional information request for the Load Case of ATWS plus OBE for Alt. #4 plants and ATWS plus 20 yr. Earthquake for Alternate 3 plants.

I have written this request in the form of a modification or clarification of the structural integrity and operability questions which appear in section VIII.B.1 of the attachment to the February 15, 1979 Mattson letter.

I assume that you will be drafting an appropriate transmittal letter explaining the need for combining these loads. I suggest that we also acknowledge that in March we had at least verbally agreed that these loads did not have to be combined for mechanical components.

It must be recognized that for some plants, possibly many plants, the addition of the seismically induced load will require, as was defined by the February 15 questions, more detailed stress analyses i.e., because many more components than were previously thought will be exposed to stresses higher than those permitted by Service Level C. Also it must be recognized that at least for PWR's, plant modifications may be more extensive than previously had been estimated. I would say that that is a certainty for Alternate 4 plants and a strong possibility for Alternate 3 plants.

Another thing that should be recognized as we embark on this is that seismic loads are totally plant specific. The concept of generic analyses, the "cornerstone" of the early verification program, I believe will only serve to unduly penalize individual utilities as far as their ATWS "fixes" are concerned. If we try to base hardware fixes on results of stress analyses performed using enveloping, high seismic site type loads, plants in low seismic areas would undoubtedly be required to install unneeded hardware.

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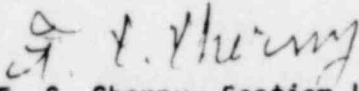
A. Thadani

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In spite of all this I believe, based on our recent meeting with R. Jackson et.al that we have no alternative but to proceed and send out the attached request.

I recommend a meeting with Steve ASAP to discuss what appears to be an unfortunate but necessary perturbation on the resolution of ATWS.


F. C. Cherny, Section Leader
Mechanical Engineering Branch
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cc: w/att:
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ATWS - ADDITIONAL INFORMATION
REQUEST - COMBINATION
OF ATWS AND OBE LOADS

When evaluating the structural integrity and operability of reactor coolant system components as required by item VIII.B.1 of the attachment to R. Mattson's February 15 letter, components shall be evaluated for the combination of ATWS and seismic loading which would result in highest stress and deformation to the component. The seismic loading used for the evaluation shall as a minimum be that which would result from:

- 1) Alternate 3 Plants - An earthquake whose frequency is realistically estimated to be once in 20 years.
- 2) Alternate 4 Plants - The OBE.