



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

OCT 25 1979

SECY
COMM
CORR

MEMORANDUM FOR: Commissioner John F. Ahearne

FROM: Demetrios L. Basdekas
Experimental Fast Reactor
Safety Research Branch, RES

SUBJECT: SAFETY IMPLICATIONS OF CONTROL SYSTEMS AND PLANT
DYNAMICS

On September 4, 1979 I sent you a memorandum on the subject matter, containing a number of recommendations including one to derate all operating nuclear power plants unless and until at least a preliminary review of their control systems is performed, including a Failure Mode and Effects Analysis (FMEA).

On September 17, 1979 the Director, NRR, prompted by reports received from Public Service Electric and Gas Company, operators of the Salem Plant, sent a letter to all utilities operating LWRs giving them 20 days to show why their operating licenses should not be "modified, suspended or revoked" based on the "potential" for "an unreviewed safety matter" related to "the effects of the environment on control systems resulting from high-energy line breaks inside or outside containment and the results of these effects on the required safety systems".

The September 17, 1979 letter from the Director, NRR has addressed only a small portion of the problem. Even in the traditional "band-aid" approach the letter failed to address, for instance, the effects of control system failures due to an earthquake. These systems are not seismically qualified. Isn't the staff concerned about that? Moreover, as far as I know, the staff has still to ask for an FMEA for each plant.

On October 22, 1979 the Director, NRR responded to my concerns and recommendations on the subject matter. Although I do not propose to go through his memorandum on a point by point basis at this time, I believe that it shows that business as usual of the "band-aid" approach is very much characteristic of the staff's direction. I disagree with its approach, arguments, and (non-)conclusions and I stand by and reinforce my recommendations to you of September 4, 1979.

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We cannot afford to limit our actions to just responding to "brush fires". Our mission is to prevent accidents; not to help explain them after they happen. One wonders if the Staff Management is aware of this.

Demetrios L. Basdekas

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Experimental Fast Reactor
Safety Research Branch

cc: Chairman Hendrie
Commissioner Gilinsky
Commissioner Kennedy
Commissioner Bradford
L. V. Gossick, EDO
M. W. Carbon, ACRS
H. R. Denton, NRR
S. Levine, RES
R. Minogue, SD
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