



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

March 14, 1979

MEMORANDUM FOR: Executive Director for Operations  
FROM: John Ahearne *J Ahearne*  
SUBJECT: EARTHQUAKE CALCULATIONS

As a follow on to the recent events leading up to the shut down of four nuclear plants, I would appreciate receiving a briefing covering the following points:

- How do we determine design basis for earthquakes?
- What degree of conservatism is employed? For example, why do we use (if we do) an earthquake that is not likely to occur except once in every 10,000 to 1 million years?
- What amount of conservatism is incorporated into our earthquake design criteria?
- To the extent possible, describe the design basis earthquakes involved in the design requirements for the plants recently shut down.

I would appreciate receiving this briefing during the week of March 19.

cc: Chairman Hendrie  
Commissioner Gilinsky  
Commissioner Kennedy  
Commissioner Bradford  
Mr. Chilk ✓  
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