

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
UNITED STATES ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

March 31, 1965

Honorable Glenn T. Seaborg
Chairman
U. S. Atomic Energy Commission
Washington, D. C.

Dear Dr. Seaborg:

The design of nuclear reactor plants to withstand earthquakes has recently been the subject of growing attention. Considerable difficulty has arisen in achieving a consensus of expert opinion as to the maximum earth motion and accelerations to be expected at any given site.

These are not easy problems to resolve, and the problems will take on increasing importance as more and larger nuclear reactors are built. The Advisory Committee on Reactor Safeguards recommends that a panel composed of especially well-qualified scientists and engineers drawn from academic, industrial, and governmental institutions be established, and that this panel be asked to generate a meaningful evaluation of the present knowledge about earthquakes, and to provide a basis for determining earthquake protection requirements in a general way, if possible. The panel could also be expected to recommend a long range research program designed to add to our knowledge of seismic phenomena and our ability to establish earthquake protection needs.

The Advisory Committee on Reactor Safeguards would like to make one further recommendation pertaining to the seismic problem at this time. There is some chance that in the future a large earthquake may occur in the vicinity of some operating reactor. This particular reactor presumably will have been designed to withstand a ground acceleration having a certain amplitude-frequency relationship. If no record of the actual seismic effects at the reactor site is made, doubt may arise as to whether or not some vital, but inaccessible, component of the reactor complex has been subjected to dangerous forces. The likelihood that such a circumstance will arise could be reduced considerably if appropriate instrumentation were provided and

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used routinely at each power reactor site. The Committee recommends that the feasibility of such monitoring be investigated, and that such a program be instituted, if it is found to be practical.

Sincerely yours,

/s/ W. D. Manly

W. D. Manly
Chairman