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J. Hartoeb 5/10/76  
REVIEWED BY DATE

December 9, 1958

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MEMORANDUM FOR SECRETARY QUARLES



Subject: Review of HARDTACK II Seismic Data

On his return from Geneva last week Dr. Bacher informed me that a preliminary analysis by AFOAT-1 of seismic data from the HARDTACK II series indicates that the conclusions on underground tests in the report of the Geneva Conference of Experts may have to be substantially revised. According to this new data it will be much more difficult to identify a seismic event as a natural earthquake. In addition, it appears that the number of earthquakes equivalent to a given low yield is considerably higher than previously estimated. These two factors would have the effect of substantially increasing the number of events above a given yield equivalent which could not be identified as being of natural origin and, hence, would substantially increase the number of inspections required. This is particularly significant since any major increase in the inspection requirements of a control system would in effect result in an upward revision of the practical yield threshold of the system as presently visualized.

I discussed this problem with Mr. McCone on Saturday, and we agreed that a Board of senior seismologists should be convened as soon as possible in order to assess the validity of these new conclusions. This review should be scheduled for completion by about the 19th of December so as to permit the development of a firm position on this question and its implications on our overall position prior to the reconvening of the Geneva Conference on 5 January after the Christmas recess. In view of the importance of this question, the Board should make a formal report which would specifically answer the following question: Having reviewed all available data from HARDTACK II, are there reasons to revise the conclusions on the detection and identification of seismic events as set forth in the report of the Conference of Experts?

Mr. McCone and I agreed that the following individuals, together with any personnel you might suggest, might well be included on this board of seismologists: Dr. Byerly, University of California; Dr. Press, California Institute of Technology; Dr. Benioff, California Institute of Technology; Dr. Romney,

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AFOAT-1; Dr. Carter, Coast and Geodetic Survey; Dr. Oliver, Columbia University; and Dr. Griggs, University of California.

Together with Mr. McCone, I would appreciate it if you would request AFOAT-1 to proceed with the organization of a Board to review this problem along the lines indicated.

[(Signed) J. R. Killian, Jr.]

J. R. Killian, Jr.



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