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## MEMORANDUM FOR THE PRESIDENT

SUBJECT: High yield nuclear weapons

I rofer to National Socurity Action Momorandum No. 245, dated May 21, 1963, which requested that the Department of Defense and the Atomic Energy Commission recommend the question of development of a very high yield nuclear weapon and also consider the question of developing a high yield warhead to be delivered by presently programmed missile systems.

Department of Defense studies which have been carried out in response to NSAM No. 245 indicate that while a C bomb is significantly superior to a for attack of very hard targets, it offers only a slight margin of superiority over the equivalent bomba. A z, although these would not be delivered on one target by the same aircraft at the same time due to effects interference. The are already in the stockpile and are compatible with Further, since a -ba tog bluow [ vance appreciably the nuclear state-of-the-art, the effort and expenditure of resources for its development would be better riented toward the advancement of the state-of-the-art directed toward the attainment of very high yield weapons with advanced technylogy, were and higher rield for aircraft for the contractions delivery and/or missile delivery. Accordingly, I do not at this time recommend we proceed with the development of the proposed C ) for the (

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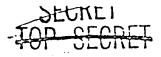
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The Department of Defense and the Atomic Energy Commission have also examined the possibility of high yield warheads for dolivery by presently programmed missile systems. Again, I do not believe that sufficient increase in ampability can be realised to warrant a high yield warhood program for present missiles. The TITAN II is the only presently programmed missile system capable of delivering large payloads to ICBM ranges. The TITAN H sould, without atmospheric testing, be increased in yield from the present . In addition to the warhead development, a new re-entry vehicle and an extensive misoils qualification flight tost program would be required. I do not recommend these programs at this time. There are larger boosters potentially available which could provide a capability to deliver very high yield workeads. The facilities for missiles such as ATLAS F and TITAN II conceivably could be modified to accept such large boosters. This potential justifies effort to continue advancing our technology in very high yield weapons, should it later be determined to utilize these boosters for warhead delivery.

While developing or Savailable from present technology does not appear attractive, we are not able to assess accurately the military worth of future, even higher yields. The magnitude of the effects from very high yield detonations is poorly known, both with respect to vulnerabilities of our own system to Soviet explosives, and to our own ability to inflict damage on a potential enemy weapon complex. Thus, it is important for the Atomic Energy Commission to conduct a vigorous program of research, experimentation, and underground testing directed toward the advancement of the state-of-the-art to the extent possible under the Limited Test Ban Treaty for the development of very high yield weapone in the order of . As part of the safeguards program, we are developing the ability to obtain effects information from high yield tests if atmospheric tests are resumed. The program would also shorten the load time to production of very high yield weapons should circumstances later indicate that we should produce them.





The Atomic Emergy Commission has indicated that one aspect of this research and test program rowiness ground and airborns operations with large ballistic on so as the last test aircraft at Kirtland Air Force Base. Albuquerque, New Menico. Those large chapes would be visible to the public during take-off. Slight and delivery, and could possibly lead to some conjecture. However, the proposed tests may aborten the preparation time for testing high yield devices by as much as nine menths to one year. In fact, the Atomic Energy Commission has advised me that in order to meet a three-menth readiness posture for nuclear tests of high yield devices, authority is urgently required to carry out the ground and airborns operations mentioned above. A research and test program of this nature is also in accord with two of the Test Ban Treaty "cafeguards"--readiness to resure testing and vigorous laboratory programs.

I believe this proparation to be of sufficient importance to make the risk of public conjecture acceptable and, with your approval, the Department of Defense and the Atomic Energy Commission will proceed with this test proparedness program.

The contents of this memorandum have been discussed with the Chairman. Atomic Energy Commission, and he has indicated concurrence with this approach.

Signed
CYRUS R. VANCE
Deputy Secretary of Defense

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