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ATOMIC ENERGY ACT 1954

THE SECRETARY OF DEFENSE

WASHINGTON

December 10, 1958

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Dear Mr. President:

I am pleased to forward herewith the progress report on the Anti-Ballistic Missile Weapon System Program for the quarter ending 15 October 1958.

During this period our supporting research programs yielded substantial contributions. Our confidence in the radar designs for the NIKE-ZEUS defense system and the Ballistic Missile Early Warning System has increased as a result of experiments performed as a part of the HARDTACK nuclear test series. Theoretical considerations indicated the possibility that radars would be unable to penetrate the nuclear cloud associated with a weapon detonation. Preliminary test data indicate that some attenuation of radar signals will occur but this attenuation is not sufficiently serious to require a redesign of the radars in question.

The construction effort on the Ballistic Missile Early Warning System Radar sites in Greenland and Alaska is continuing as scheduled. The third radar site location, in Great Britain, is being studied. Construction of forward acquisition radars for range testing is making excellent progress at Trinidad.

The active defense portion of our ballistic missile defense program, the NIKE-ZEUS system, is making scheduled progress. Results of recent tests of developmental warheads, booster, and sustainer motors for the missile have been quite promising. Design and development of launching equipment, local acquisition radars, missile track radars, and guidance command equipment is proceeding. Construction is starting on ground support facilities at the White Sands Missile Range.

A problem remains of providing adequate testing facilities at the missile ranges for testing the NIKE-ZEUS missile against simulated and real targets. While the Atlantic Missile Range appeared to be suitable from the viewpoint of having targets available from our ICBM/IRBM program, we are having difficulty in finding a suitable base. The Pacific Missile Range may be the only alternative, but this plan would require extensive additions to range facilities to make this possible. The White Sands Missile Range will also be utilized to the greatest extent feasible for testing purposes during the early phases of the program.

With great respect, I am,
THE DIVISION OF CLASSIFICATION, U.S. ENERGY
RESEARCH AND DEVELOPMENT ADMINISTRATION, HAS
DETERMINED THAT THIS DOCUMENT CONTAINS NO
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ERDA HAS NO OBJECTION TO ITS DECLASSIFICATION.

Faithfully yours,



Donald A. Quarles

ACTING

John H. Harbo 10/7/75
REVIEWED BY DATE
Attachment

The President
The White House

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