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15 March 60

M.R. 1/2

NOTE TO GENERAL STARBIRD
THRU Colonel Hood *Feb 2/10*
Captain Houston *[Signature]*
FROM CDR P. F. Bankhardt, USN
P.F. Bankhardt
Deputy Chief, Test Branch

*Is there any shelter
our people
into which they can be
captured by
nose cone? What does
this "kill" probability mean?*

SUBJECT: BRIEFING ON PLANS TO IMPACT ICBM AT ENIWETOK (U)?

A briefing was held in the Joint War Room Annex in the Pentagon on the Warhead Demonstration program, unclassified code name TICTOCK. L/Col. Eckram of HQ SAC made the presentation which included a slight change in schedule and an explanation of safety factors or kill probability.

At a previous briefing, in January, the computation of kill probability presented by STL for use of Mack tower as ground zero was considered unsatisfactory. Standard methods of computation have now been used and the ground zero has been moved about 4 nautical miles northwest (as mentioned in my note of 25 Feb 60), resulting in a reduction in kill probability to 7.7 in one million, 1/3 of the accepted kill probability for usual missile launchings. An impact point another mile NW might be preferred due to shallower water (for nose cone recovery). Use of that GZ would further reduce kill probability to 6.2 per million; however, errors are expected to be "overs" in range so the target will not be moved to that point.

Accuracy for these shots from Vandenberg AFB is predicted to be ± 600 ft. and prediction of impact time to be within 1/10 second.

Accuracy of 17 previous ATLAS firings was reviewed. 9 impacts were considered to have been within a one nautical mile circle. There was one shot 9 nautical miles over, due to failure to cut off the fuel at the indicated time, and an Atlantic shot was 275 miles short due to fuel cut-off by a down range station 10 seconds too early. (Lack of down range stations eliminates this danger on PMR.) Maximum error in azimuth has been less than 2 nautical miles.

Use of Bikini was not covered but the question was raised whereupon Brig. General J. K. Hester directed that cost figures more complete than those given by H&N (\$25,500 + \$10 per man day to reactivate Nan camp for 25 men for 30 days) be computed to be available should use of Bikini have to be reconsidered.

After the briefing, I discussed possible AEC objections and asked what is the minimum error detectable by the safety monitor at Vandenberg AFB. This was not known but appears to be well over the error necessary to hit Fred Island. This discussion revealed that the missile body does not completely burn up on re-entry. Retro rockets operate at time of separation of the

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warhead but the body follows closely behind and extra splashes in the Atlantic target area indicate that large components such as pumps are not consumed.

was
In the briefing it/indicated that the AEC is participating by providing instrumented warheads which telemeter reliability of operation and provide some check on outer space testing instrumentation.

The proposed firing schedule is as follows:

On April 6, the first missile will be fired at the Wake Island splash net (where the kill probability is 1.58/million).

Thereafter, Eniwetok would be used on 4 May, 29 June, 27 July and 21 September.

At a later date they would hope to fire a fifth shot at the Eniwetok target.

The proposal is to be presented to the Air Force Deputy Chief of Staff for Operations, hopefully tomorrow. If approved, it would then go to the Chief of Staff of the Air Force, the Air Force Secretary, the Secretary of Defense and then to AEC, through MLC.

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