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ATOMIC ENERGY COMMISSION

MEETING 1345

Saturday, March 22, 1958, 9:00 a.m.

Chairman's Office - D. C. Office

Present

Lewis L. Strauss
Harold S. Vance
John F. Floberg

K. E. Fields
W. B. McCool
Brig. Gen. Alfred D. Starbird

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High Altitude Shot - HARDTACK

Mr. Strauss recalled that this matter had been discussed the previous day and said that he had called this meeting to obtain Commission judgment on a very grave decision.

Related to this test shot, Mr. Strauss said, was the President's recent instruction to accelerate the firing of a specially equipped satellite now due up next week which would telemeter data on certain electronic phenomena important for defense purposes. The shortage of firing teams requires use of the same team for the forthcoming high altitude TEAK shot at Eniwetok as will be used in firing the satellite next week, and the importance of the data to our defense dictates no postponement in the firing of the satellite and the TEAK shot.

One phenomena of concern in the TEAK shot is the brilliant flash resulting from large thermal energy release at this elevation. Anyone looking directly at the flash during its duration (120 Milliseconds) would be permanently blinded.

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Messrs. York and Ogle, Dr. Dunham and General Starbird have now estimated that the size of the area over which this effect would occur is a circle with a radius of 350 miles. This means that if the shot is fired at the test site, the flash would cover the Test Site, Ronjelap and other islands and parts of the warning area.

The Commander, Joint Task Force-7, General Alvin R. Luedecke, believes he can provide adequate warning and protection, Mr. Strauss said, but, although the results of this test would improve the defenses of the free world, the matter before the Commission is the responsibility for making a decision which may endanger the well being of people who are not represented here.

General Starbird commented on the importance to our strategic defense of the data to be obtained from this test. It is expected to confirm a recently developed theory that, by establishing a magnetic field which holds electrons in bands around the earth, one can destroy enemy ICBM's or blot out radar. A side effect is interference with radio transmission through ionization of these bands which will then not bounce radio waves back to earth. Shooting the specially equipped satellite next week will place it in orbit in time to assure that the predicted effects of the TEAK shot on the satellite counters can be measured.

The Killian Committee, when informed of the implications of the desired information insofar as our defense is concerned, had been disturbed at the possibility of the Soviets orbiting a satellite at this time which could also confirm this theory. It does not appear, however, that they will be doing so and the Committee therefore urges all possible effort to shoot the U.S. satellite and the TEAK shot as soon as possible.

The flash from a night firing is expected to cover a 370 mile range in which 4000 natives are located. A day firing would cover a 220 mile range and 2000 natives. General Starbird said a night firing was preferable because more energy would be released and data measurements would be more accurate.

General Starbird said there were three questions which had been considered:

1. Should a lower yield shot be fired? This does not appear desirable because a reduction from the planned yield of 3.8 MT to 500 KT would decrease the flash area by only 25 percent. Additionally, replacement of rocket gear would be hurried and possibly result in a test failure;

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2. Should the shot be delayed? No additional information would be obtained by delaying the shot and it would delay information needed for strategic planning; and finally,

3. If the shot is fired, can we provide an effective system to warn and control all persons in the flash area? He considered this possible since most persons were located on 12 atolls, on some of which we have weather stations. The Commissioner of the Trust Territory has an excellent relationship with islanders and could obtain their cooperation and the airlines operating in the area would be cooperative. There would, of course, be the problem of controlling casual shipping but this should be minimal. His recommendations therefore were:

a. To proceed with plans to fire the high altitude shot at 250,000 ft. elevation on April 16.

b. To proceed with plans to fire the U.S. satellite during the week of March 24.

General Starbird added that there is some precedent for control measures such as would be required, since the AEC does stop cars on the Nevada roads outside the test site and turns people away from the test flash. He thought that, with ingenuity and good planning, we can assure adequate protection but this does not guarantee that no one would be injured.

Mr. Strauss commented that even though an intensive radar search was set up for casual shipping, we cannot avoid the possibility that one man in the area is not warned or ignores the warning and the unhappy fact that that man is not represented in this decision. An important consideration, however, is that we are concerned here with possible injury to one or perhaps more men in developing defense measures to save the lives of millions of men.

Although General Luedecke is discussing the problem with Trust Territory officials this week-end and will then take it up with the Department of State, Mr. Strauss said he intended to discuss it with Secretary Dulles today.

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Mr. Graham asked if it had been determined at what lower yield the shot could be fired without any substantial danger. General Starbird responded that if the yield were substantially reduced, the required defense data would not be obtained but that even if the yield were reduced to 40 kilotons, the flash would still affect some of the islands.

After discussing various protective measures, including the removal by ship of all native persons for a period of 24 hours, the Commissioners decided to resume the discussion at an afternoon meeting following their attendance at the Joint Committee hearing on the Pennsylvania Power and Light proposal.

W. B. McCool
Secretary

Approved by the Commission: Meeting 1385, June 25, 1958

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