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February 19, 1957

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Brigadier General Alfred D. Starbird
Director of Military Application
U. S. Atomic Energy Commission
1901 Constitution Avenue
Washington 25, D. C.

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THRU: Mr. K. F. Hertford, Manager
Albuquerque Operations Office
U. S. Atomic Energy Commission
P. O. Box 5400
Albuquerque, New Mexico

Subject: Proposed Development of Taongi as a Weapons Test Site

Dear General Starbird:

For several months UCRL has been studying the possible use of Taongi as a weapons test site during Operation HARDTACK. In making the evaluation of the advantages as compared with the costs and operational aspects enthusiastic assistance was provided by Commander, JTF-7, the 7.1 Staff, Commander Dan Rex of the JTF-7 Meteorological Center, and the 7.5 Task Group Staff. Reports on the latest considerations were provided by Dr. G. L. Felt on operational matters (memo to A. C. Graves from G. L. Felt, Cite: J-15G-190 dated 4 February 1957); Commander Dan Rex on the expected meteorology (Climatology of Taongi, JTF-MC, 2 January 1957); and Mr. Sam Howell of Holmes and Narver on costs of development of the site (letter to Mr. J. Sanders, Test Division, AEC, ALOO, dated 30 January 1957). Opinions on fallout were obtained from Dr. Vay Shelton. Using the material provided from these sources and in consideration of the presently proposed shot program for HARDTACK, comprising 25 to 30 events with yields up to 40 MT, a general analysis has been prepared by Mr. W. Gibbins and is included as an attachment.

In Mr. Gibbins' report two schedules are developed based on the assumption, in one case, that only Bikini is available and the other in which both Bikini and Taongi are available as shot sites. In preparing the schedules it was assumed that for the operation as a whole dual capability for megaton shots would exist. It was proposed that the operation would start May 1, 1958, so weather was examined only for the summer period.

Without enclosure



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The conclusions and special requirements pointed out in the study may be summarized briefly as follows:

1. The use of Taongi and Bikini would shorten UCRL operations overseas by about 7 weeks, over that time required if only Bikini were available. The effects on shortening the operation as a whole is not fully known but it would likely amount to three weeks to a month.
2. Taongi would be used only as a barge site. All diagnostics and firing would be accomplished from a ship. Use of the ship will permit flexibility in operation and will further reduce the time of stay of technical personnel overseas by about one month, since installation and dry running of equipment can be accomplished while the ship is still at San Francisco. The ship will need to be diverted soon in order to provide adequate time to fit it out. It is estimated that fitting out of the ship will cost about \$1,200,000.
3. The cost of site development on the basis proposed is estimated at \$3,000,000.

In view of all of the stated considerations it is our recommendation that the Taongi site be developed for use during HARDTACK. As a corollary requirement, a weather station should be established at Taongi now, even if ship-borne initially, to collect meteorological data through the present year.

Sincerely yours,

G. W. Johnson

G. W. Johnson
Test Division Leader

GWJ/wl

Attachment - COL-57-11

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