

DEPARTMENT OF ENERGY (D/E)	DATE: 10-97
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AUTHORITY: OACDC CACD OADO	1. CLASS
NAME: <i>P. Lyons</i>	2. CLASS
2ND REVIEW DATE: 10-23-97	3. CONT.
AUTHORITY: ADD	4. CONF.
NAME: <i>W. Lyons</i>	5. CLASS
	6. CLASS
	7. OTHER

of UCRL to forego in certain of the larger shots the detailed diagnostic information, which in the past has been generally considered necessary, it is agreed that reconsideration of the use of Taongi is appropriate.

On the basis of preliminary reports of the Task Force Weather organization and Taongi's geographical location with respect to populated islands in the Marshall Islands, it seems quite obvious that firing from Taongi should be appreciably easier than from Bikini or Eniwetok. Shots can be detonated at Taongi under normal wind conditions, whereas at Bikini it is necessary

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to REDWING as being overly optimistic. A detonation schedule, even using Taongi, averaging less than three days per shot is questionable. Also, their estimate of damage to result from a 25 - 40 MT shot is open to question. Past experience leads to the conclusion that damage estimates have been both over and under in the results.

We believe that the HARDTACK support requirement of Task Group 7.5 and other Task Force elements will amount to a 25% or 35% increase over REDWING. This is based on a 31-shot series for HARDTACK vs. a 17-shot series for REDWING. However, it is agreed that there will be some offsetting advantages to increased TG 7.5 support requirements for Taongi as a result of decreased evacuation demands at Bikini.

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3. Offsetting these advantages are the additional costs in dollars of developing the site; procuring, outfitting, and operating a diagnostic ship; additional weather and other operational support.
4. While the Board agrees that Taongi cannot be considered essential, its use would be advantageous.
5. The Board reaffirms that an early decision on Taongi is necessary.

These conclusions were the result of at least six hours of extensive deliberation by the Board.

Permanentizing Site Nan:

Any development of a permanent base camp at Site Nan should not be predicated on Taongi operations. Rather, this is premised on the separate real estate operations concept. There is good reasoning in the UCRL-LASL desire to separate their operations, indeed, as their laboratories are separate. Operational efficiency and elimination of conflicting interests in site and area utilization would result. We therefore suggest that this subject be considered as separate and apart from the Taongi proposal.

Diagnostic Ship:

It is our opinion that the diagnostic ship should be acquired and controlled by the AEC. There should be no strings on making

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...to savings resulting from a shortened operational period based upon REDWING experience of incremental costs of proving ground operation and maintenance. We have also included a factor to cover the potential loss of our investment in Han temporary camp facilities in the event the HARDEACK program includes any high yield shot (at Bikini instead of Taongi) of sufficient magnitude to destroy the Han facilities. Currently there is no information available as to operating cost of the diagnostic and firing ship. We have therefore estimated \$550,000 per year, based on \$2,500 a day during an operational period and \$1,000 a day during the remaining interim period. The computation anticipates that the ship will be in operational status approximately 125 days.

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Brig. General Alfred D. Starbird - 5 -

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Beachhead	\$ 12,000
Temporary Camp (or Auxiliary Personnel Barge).....	325,000
Access Channel.....	586,000
Communications	243,000
Seadrome	96,000
Airstrip	560,000
Construction Equipment	1,023,000
Operational Equipment	35,000
Weather Station Facilities	170,000
Engineering and Surveys	<u>100,000</u>
Total Test Construction	\$3,250,000
Support at Taongi (Buildup Period)	<u>\$ 750,000</u>
COST OF TAONGI DEVELOPMENT	\$4,000,000
Outfitting of Diagnostic and Firing Ship	1,750,000
Cost of Operation of Diagnostic and Firing Ship	<u>550,000</u>
TOTAL EXPENDITURE	\$6,300,000
Potential Savings: 3 weeks of operational and maintenance expense	\$2,300,000
non- Possible/loss of Nan Camp facilities	\$1,400,000
TOTAL POTENTIAL SAVINGS.....	<u>\$3,700,000</u>
ADDITIONAL COST OF TAONGI	\$2,600,000

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Additional Cost Implications:

- a. Bikini evacuation would be on a contingency (emergency) basis, with transfer of the larger shots to Taongi.
- b. Logistical support would be increased. Full-time operational period LSD support would require two ships, with the part-time support of a third LSD. The operation of the proposed diagnostic ship and its re-supply would be additional. Elimination of evacuation, re-entry, and recovery of Taongi shots, which would be required at Bikini, will offset any boat pool, liaison aircraft, and support cost occasioned by use of Taongi.
- c. The Air Operations of Task Group 7.4 (including the Sea Air Rescue Elements), and the surface operations of Task Group 7.3 would obviously be expanded.
- d. We concur that an airstrip at Taongi is a necessary incidental to original construction and for medical evacuation and should be of future value for emergency

Landing of operational aircraft and to facilitate future Taongi condition surveys. Amphibious aircraft landing and take-off at Taongi are hazardous and uncertain. Movement of equipment and materials ashore is difficult.

The evaluation of the proposal is necessarily one for DMA and Commission decision. Except for our comments and estimates, insofar as they may differ with the UCRL paper, we concur with the statements contained within the proposal.

Of all the arguments presented in favor of using Taongi as a major firing site in future Pacific operations, it seems obvious that the most compelling one is that of increased safety to both Marshall Island inhabitants and test participants. Now that UCRL has satisfied itself that they can obtain the minimal required diagnostic measurements necessary for their use, the fundamental technical and operational reasons for not having used Taongi in the past no longer exist. It seems to this office that the AEC would be in an almost indefensible position should an

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Recognized that its ultimate approval will not be immediately available, and the following recommendations are submitted on this assumption.

Recommendations:

1. It is recommended that this office be directed to obtain the detailed review and comments of all major participating agencies of the UCRL proposal for ultimate consolidation and submittal to the Planning Board for its consideration.
2. It is recommended that all Pacific test participating organizations be directed to proceed with their planning of HARDTACK on the basis of the use of Taongi.
3. It is recommended that AIO proceed with joint surveys; arrangements for a temporary weather observation station at Taongi; procurement of common use materials; exploration of availability of a suitable diagnostic ship; and preliminary plans and estimates for its procurement and reconfiguration; preliminary arrangements for its re-activation and docking at suitable location.

It is felt that AIO must proceed with all possible action on the supposition that DMA and Commission approval will be received.

We shall execute any further desired action on your advice.

Enclosure:

Cy 1/16A UCRL ltr dtd 2/19/57
w/cy 1/20A Proposal

CC: Dr. A. C. Graves, LASL, cy 3/9A
Dr. G. W. Johnson, UCRL, cy 4/9A
P. W. Ager, Asst Mgr for Adv Plan, cy 5/9A

DMA, cys 1/9A & 2/9A
M&R, cys 6/9A & 7/9A
Test, cys 8/9A & 9/9A

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