

THE SECRETARY OF DEFENSE
WASHINGTON, D. C. 20301

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29 JUN 1974

MEMORANDUM FOR THE PRESIDENT

You recently expressed interest in knowing about our high energy laser weapon research progress and what prospect there may be for significantly accelerating developments in laser weaponry.

Progress has been remarkable in the laser weapon program in recent years. Developments have reached the point where we can express cautious optimism about the possible outcome. Experimental lasers of several differing types have been built and operated at weapon power levels. Field demonstrations of weapon system feasibility, using engineered versions of these experimental lasers, will be carried out over the next three years. All of the supporting subsystem technology needed to produce laser weapon systems seems to be falling into place, although a number of gaps in our understanding of propagation and damage phenomenology remain to be settled. The principal remaining technology problem is to reduce the size and weight of the laser devices themselves. We are funding the entire program at about the \$100 million level in FY 1974.

A number of military missions may benefit from the extraordinary weapon potential of lasers. For example, we believe lasers may revolutionize short range air combat. They will almost certainly play a future role in air defense on the earth's surface as well, both for our high value ships and our field armies. Even some future role for laser weaponry in space is not out of the question. Nevertheless, laser technical developments are still in a primitive stage, and vast improvements in this technology remain as a high priority R&D goal.

In response to your direction, I have reassessed our plans for the coming fiscal year. I find that, because of recent success in our exploratory development efforts, there are a number of technological opportunities which could be further exploited. Therefore, I have added \$22 million to the current planned program level of \$128 million for a total of \$150 million in FY 1975. Our goal will be to make a substantial breakthrough in laser efficiency and reduced size within three years. All of the technical groundwork for achieving such a goal appears to be at hand. Success in this venture will hasten the day when one or more laser weapon system prototypes can be placed under development.

H. P. Clements
Deputy

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SUBJECT TO GENERAL DECLASSIFICATION SCHEDULE
OF EXECUTIVE ORDER 11652. AUTOMATICALLY
DOWNGRADED AT TWO YEAR INTERVALS.
DECLASSIFIED ON 12/31/87

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1 (3) an effective International Seabed Authority to
2 regulate orderly and just development of the mineral
3 resources of the deep seabed as the common heritage of
4 mankind, protecting the interests of both developing and
5 developed countries;

6 (4) conservation and protection of living resources
7 with fisheries regulated for maximum sustainable yield,
8 with coastal zone management of coastal and anadromous
9 species, and international management of such migratory
10 species as tuna.

11 SEC. 2. The Senate commends the United States delega-
12 tion to the Seabed Committee preparing for the Law of the
13 Sea Conference for its excellent work, and encourages the
14 delegation to continue to work diligently for early agreement
15 on an ocean treaty embodying the goals stated in section 1.