MEMORANDUM FOR: General Andrew J. Goodpaster

SUBJECT: Project CORONA

1. Herewith is a revised estimate of the cost of Project CORONA which I promised to prepare for you. Its primary purpose is to explain how and why cost estimates have changed since submission of the original outline (COR-0013 and COR-0014) on 16 April.

2. Dr. Killian has been over this memorandum. Copies of it will be made available for information to Mr. Quarles and to Mr. Stans. In addition to the foregoing, who were present when this matter was discussed in Dr. Killian's office on 5 August, I am sending a copy to the Director, Advanced Research Projects Agency.

RICHARD M. BISSELL, JR.
Special Assistant to the Director

Attachment:
Copy #1 of COR-0064
PROJECT CORONA

1. Under date of 15 April 1958 an outline (document number COR-0013) of the above Project, including an estimate of its cost, was submitted for the approval of higher authority after discussion with the senior officers of the organizations concerned. The desired approval was granted and was accompanied with the specific instruction that all funding for development and procurement of hardware for CORONA must come from (a) the Central Intelligence Agency, and (b) the Advanced Research Project Agency. Partly as a result of this instruction and partly because the assumptions underlying the final estimates in the Project outline were incorrectly stated, it appears desirable to present a revised estimate at this time.

2. The Project outline contained the following estimates and statements with respect to financing:

   a. That covert procurement of the payloads for twelve CORONA vehicles would require about $X which would be provided by the CIA.

   b. That twelve Thor (first stage) boosters and Lockheed second stage vehicles would cost approximately 24 million dollars, on the basis of a rather arbitrary allowance of 2 million dollars per completed vehicle.

   c. That this procurement of vehicles would be financed for the most part by ARPA through the Air Force but that there was some question concerning the allocation of the cost of the Thor boosters.

   d. That in any case the whole cost of the basic vehicles (but not of the payloads) would be funded within then approved programs.

3. The following are the specific circumstances that now require revision of the foregoing statements:

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a. The allowance quoted in paragraph 2, b, above of 2 million dollars per unit for the cost of the vehicles was incorrect. This figure was furnished for inclusion in the Project outline on the assumption that the Air Force would absorb the cost of Thor boosters. Two million dollars is the unit cost of the Lockheed second stage vehicle only. That of the Thor is approximately 1.5 million dollars. Accordingly, the true cost of each completed vehicle, including first and second stages (but excluding payload) amounts to 3.5 million dollars.

b. The instruction referred to in paragraph 1, above ruled out the absorption of any part of these costs by the Air Force. Accordingly, the cost to ARPA of 12 completed vehicles will be 42 million dollars instead of 24 million dollars as stated in the Project outline.

c. In addition to the 12 Thor/117L vehicles which will be equipped with CORONA recoverable reconnaissance payloads, some 7 additional launchings of the same basic vehicle are programmed. Two of these will be instrumented vehicles for second stage propulsion and guidance tests; two will have as their primary purpose the testing of the recoverable capsule and recovery procedure but will carry small animals; and three will be biomedical vehicles carrying primates. The last named group of three are believed justified without reference to CORONA for the contribution they will make toward the Man-in-Space program but they will also serve significantly to improve the cover for the CORONA firings. The Thor test firings are essential to CORONA but will also flight test the second stage vehicle, which is essential to the basic 117L program. Thus some part of the cost of these seven non-CORONA vehicles could properly be charged to CORONA, since they are in varying degrees necessary for, or essential to, its success. On the other hand, any specific allocation of these costs would be arbitrary, since these seven firings also contribute or are essential to other programs in varying degrees.

4. It is understood that ARPA programs have been revised in the light of the above circumstances to include funds for 19 Thor/117L vehicles but that a problem may remain with respect to the cost of the biomedical recoverable capsules. This could affect CORONA since elements of the recovery system are common to CORONA and the biomedical program and part of its cost is being borne by the latter.