~~TOP SECRET~~ BAF-A2

HANDLE VIA BYEMAN CONTROL SYSTEM

~~1ST~~ NATIONAL RECONNAISSANCE OFFICE
WASHINGTON, D.C.

OFFICE OF THE DIRECTOR

April 11, 1969

MEMORANDUM FOR THE SECRETARY OF DEFENSE

SUBJECT: MOL and HEXAGON

Mr. Kissinger and Mr. Mayo met with the President on April 9, 1969, and recommended termination of the MOL and HEXAGON programs. Mr. Mayo has reported that the President tentatively agreed to cancellation of the HEXAGON program and a reduction of the FY 70 budget for the MOL from $525M to $360M.

The MOL is a manned photo reconnaissance satellite development program with a first manned launch in the middle of 1973, intended to provide very high resolution photographs of targets of high interest in denied areas. It will produce a best resolution of [redacted], whereas the unmanned GAMBIT-3 spotting camera satellite system can be improved to give [redacted] at best. This MOL higher resolution will provide many critical fine details which will allow us to determine a number of performance characteristics of emerging weapons systems well in advance of test demonstrations. This capability should be of considerable value in any arms control limitation.

In FY 69 and prior years $1.2B has been spent. The present FY 70 budget is $525M. The total development, including four manned launches, is $2.9B.

By Monday we will have assessed the impact of a reduction in FY 70 to $360M. It would introduce at least a one year delay into the schedule of first flight and increase the total cost of the program by $300M or more. It would seriously impact the industrial base we have established.

The issue of HEXAGON termination has been a subject of debate for a considerable length of time. BOB states that the additional intelligence information provided by HEXAGON photography is not sufficient to justify its significant cost. DOD and CIA have consistently supported the program as justified by the value of improved intelligence collection.

~~HEXAGON CORONA GAMBIT DORIAN~~
HANDLE VIA BYEMAN CONTROL SYSTEM

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HEXAGON, starting in late 1970, will provide significantly better coverage than available today:

a. It will provide a best resolution of 2.5 feet, whereas the present CORONA search system offers a best resolution of 7 feet. The HEXAGON covers 4 to 8 times more area than the CORONA.

b. It will frequently cover specified small areas (surveillance) at high quality. This type of photography is now obtained by our spotting system, GAMBIT, which has higher resolution than HEXAGON but views much smaller areas.

If we do not develop HEXAGON and if we maintain our current level of coverage, then we will need six CORONA and five GAMBIT launches per year to achieve a coverage comparable to that achieved today. If we replace CORONA with HEXAGON, then we plan four HEXAGON and four GAMBIT launches per year.

The current inventory of 13 CORONA search systems is planned to be launched at a rate of one each two months. Since the lead time for delivery of additional CORONA vehicles is estimated to be 24 to 26 months, we would need to order additional CORONAs soon if HEXAGON is to be discontinued.

Taking all these factors into account, photo reconnaissance costs would be as follows:

($ in millions)

	FY 69 & FY 68	FY 70	FY 71	FY 72	FY 73
Continue HEXAGON	889	376	357	327	293
Cancel HEXAGON	887	282	257	242	232
Savings	2	94	100	85	61

BOB ascribes cost savings to HEXAGON termination which do not agree with these assessments. BOB stated that five year savings would be obtained in the future of $905M, whereas the actual savings in the same context as discussed by BOB would be between $285M and $400M. Our assessments of future costs are considered reasonably accurate. Cost increases due

to unprogrammed changes may of course still occur. Although the development is not yet to the stage where we can define costs with complete accuracy, we do not expect major program slippage or major increased costs.

Within the NRO, the CIA manages the sensor system, and the Air Force directs the overall system. The principal contractors are Perkin-Elmer for the optical sensor and Lockheed for the basic spacecraft and overall integration. The development of the HEXAGON system has progressed satisfactorily since program start in March 1967. If the program is terminated on April 15, 1969, about $450M will have been obligated. Since we believe that the major developmental tasks are proceeding according to plan, there is confidence in the development program.

The Director of Central Intelligence and the USIB have consistently and strongly supported the need for HEXAGON. Within DOD, we believe that HEXAGON will significantly improve our intelligence in three ways:

a. It will improve our ability to search more thoroughly the Soviet Union and China for new activity. The HEXAGON resolution, compared with CORONA, allows detection and identification of many significant objects such as trucks, radars, and artillery pieces.

b. It will significantly improve our intelligence on ground forces, including faster and better intelligence on force readiness, redeployment of Soviet and Chinese forces, and force deployment in crisis areas such as the Middle East and the Indian-China border.

c. It should help us to discover and count mobile forces including ICBM's, IRBM's, and tactical offensive and defensive missiles.

In addition, CIA emphasizes the value of HEXAGON in policing arms control agreements.

BOB feels that our current collection capability is adequate now. Major improvements are programmed in SIGINT and COMINT collection while photographic systems have shown

steady improvement in efficiency and quality. Therefore, BOB feels the incremental intelligence value added by HEXAGON does not justify the added cost while DOD and CIA strongly support the program.

John L. McLucas

Mel, this has been coordinated with DDR&E
M.L