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DEPARTMENT OF THE AIR FORCE
WASHINGTON



OFFICE OF THE SECRETARY

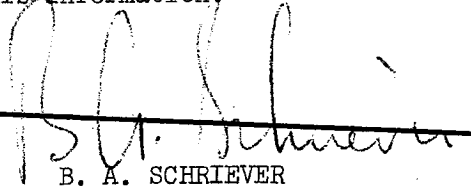
9 DEC 1965

MEMORANDUM FOR THE SECRETARY OF THE AIR FORCE

SUBJECT: Manned Orbiting Laboratory Monthly Status
Report

The attached Status Report on the Manned Orbiting
Laboratory (MOL) Program covers activities through
November 30, 1965, and is submitted in accordance with
the November 22, 1965 instructions from the Office of
the Secretary.

I am submitting an additional copy of this month's
report in anticipation that you might wish to forward it
to Dr. Foster, DDR&E, for his information.


B. A. SCHRIEVER
General, USAF
Director, MOL Program

1 Atch
Status Report

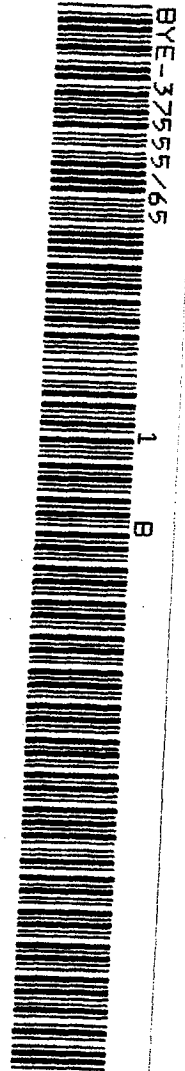
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I. PROBLEMS

A. Manned/Unmanned Considerations

A round-table discussion on DORIAN was held November 8, 1965, by the PSAC Reconnaissance Panel for the purpose of ensuring a better understanding of their desires concerning the manned and unmanned modes of operation. The views of the Reconnaissance Panel on the MOL development program were summarized in a paper dated November 22, 1965, from Dr. Hornig, Chairman PSAC, to Dr. Flax, DNRO.

"The Panel is convinced that a high resolution [REDACTED] [REDACTED] orbital reconnaissance system is a high priority national goal. Although the Panel concurs that the proposed manned MOL can attain such resolution and that the presence of a man on board the spacecraft can enhance certain aspects of the mission, the Panel concludes that a properly designed unmanned system can, in an equivalent time, attain the same resolution with acceptable mission reliability The Panel foresees a future requirement for operational missions on a continuing basis and considers it likely that in such an operational program the unmanned system will show advantages for the routine missions, and manned system for situations which require special capabilities." Toward this objective, the Panel observed "that a properly planned development program can accommodate identity between major elements of the system (primarily the optics, certain subsystems, the lab module, and booster) if the requirements of both manned and automated missions are fully considered in the initial systems design."

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The above guidance, in greater detail, has been passed on to key participants on the MOL definition program. A status briefing on the progress and results of system analyses reflecting the Panel's guidance was given to the MOL Policy Committee on November 30, 1965. No specific impact on program costs or schedules resulting from this guidance is as yet known. The principal contractors, Douglas, General Electric, and Eastman Kodak, have been advised of this change and more definitive information is expected by mid-December 1965, when current studies and analyses are completed.

B. Funding

The approved level of funding for the MOL Program in FY 1967 is approximately \$375 million. The Air Force was advised in late November that the Office of the Secretary of Defense is proposing a 60 per cent cut in FY 1967 RDT&E funds for MOL from the approved level of \$374.4 million to approximately \$150 million. This drastic reduction will have a major impact on the MOL Program, resulting in an immediate schedule stretch-out of at least one year and in addition will require a major reorientation to the program.

Recognizing the objective of the Secretary of Defense to economize during FY 1967 in order to fund other national defense needs, the MOL Program Office undertook an exercise to reexamine the MOL schedule. By delaying the first manned flight date approximately six months from late 1968 until April 1969, it appears possible to readjust certain of the unmanned flight tests which precede the first manned flight in a manner which decreases the risk of meeting those unmanned flight

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dates. Also, an April 1969 date for the first manned flight is compatible with the availability of the primary optical sensor equipment. Such rescheduling of flight test activities could provide savings on the order of \$80 million during FY 1967, with a resultant requirement for \$300 million FY 1967 funds.

Funding at levels below approximately \$300 million and attempting to provide a somewhat balanced program, in each case results in further test schedule slippage and slippage of all elements of the program including the optical sensor.

Discussions on this issue are continuing in an effort to arrive at a satisfactory level of funding for MOL in FY 1967.

C. Unsatisfactory Performance by General Electric Missile and Space Division

Correspondence from Director of Special Projects, SAFSP, indicates an overall unsatisfactory condition which warrants immediate attention. The performance refers to GE's responsibilities in Programs 201 and 206. It is SAFSP's view that GE management is to blame for the present difficulties in Program 206 and prior difficulties in Program 201. The Director of Special Projects seriously doubts that GE can deliver the quality of performance essential to a successful MOL program and has recommended that appropriate steps be taken to assure that an option will exist which permits discontinuance of presently planned use for GE (MSD) in the MOL program at the conclusion of the present Phase I contracts. The Director, MOL has reviewed this matter and recommended to the Secretary of the Air Force that a survey team, under

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his direction, examine conditions at General Electric in order to permit him the opportunity to prepare a recommendation as to the appropriate course of action in this matter.

II. CHANGE PAST MONTH

A. By Secretary of the Air Force memorandum dated November 9, 1965, Dr. Alexander H. Flax in addition to his other duties as Assistant Secretary of the Air Force (R&D) was delegated the authority to act for the SAF on all Air Force matters associated with the NRO including the MOL reconnaissance payloads.

B. A presentation was made to the Director, MOL, on November 5, 1965 on the source selection criteria to be used in selecting major subsystem contractors for the laboratory to assure that competition is being used to select the best subcontract structure.

C. A press conference, introducing the MOL pilot selectees to the public media, was held in Los Angeles, 1100 PST, November 12, 1965. Meeting was intended for low-key publicity and the results would indicate that this was accomplished.

D. A Hqs USAF selection board, chaired by General Page, was convened at Randolph during the week of 15 November to perform preliminary screening of the final increment of MOL Aerospace Research Pilots.

E. A MOL Program Management Review was conducted on the West Coast on November 15-16. Discussed at that time were the following items with the decisions and actions relative to each:

Flight Schedules and Alternate Mission Payload ✓

The first manned MOL flight scheduled for late 1968 will be

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flown with as complete an optical system as possible. It is recognized that owing to lead-time required, this will not include the large primary and flat mirrors.

Apollo Insertion Ship

The Apollo ship problem was examined from all aspects. It is clear that NASA does not wish to permit MOL the use of their ships if the Apollo schedule is in any way compromised. As an alternative to use of the Apollo ships, the NRD is examining what support can be given to meet MOL requirements. NRD recommendations will include consideration of the use of aircraft if practical to meet requirements.

MOL Abort Recovery

The use of Henderson Island (UK) would considerably reduce the number of ships and aircraft required. Action is being taken to determine the resources and timing required to provide an airstrip with minimum support for use as a recovery deployment site.

F. Mr. Herbert Roback and Mr. Daniel W. Fulmer were briefed on November 17, 1965 by General Evans and the MOL Program Office personnel on status of the MOL program. This briefing was given at the SECRET classification level and focused on the area of management and support, including the facilities and contract arrangements to be used.

G. The fourth meeting of the MOL Policy Committee was held on November 30, 1965 from 1000 to 1130 in 4E871. A status report was presented on the issues pertaining to manned versus unmanned capabilities. In addition, a review of the currently approved MOL funds to meet

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directed program requirements and the schedule impact of the proposed 60 per cent reduction in MOL FY 1967 RDT&E funds was covered with members of the MOL Policy Committee.

III. CURRENT STATUS

A. Subcontracts

(1) Communications System. Douglas invited eleven companies to bid on the Laboratory Communications System: RCA, Collins Radio, Philco, Hughes Aircraft, TRW Systems, ITT, ECI, GE, Northrop, Motorola, and IBM. Collins Radio, Philco, and RCA were the major contenders who responded with bids and proposals. Based on management, technical competence, and cost factors the award was given to Collins Radio on November 11, 1965.

(2) Attitude Control and Translation Control System. Douglas invited ten firms to bid on the Laboratory Attitude Control System: Bendix, Sperry, Honeywell, GPI, American Bosch, Autonetics, TRW Systems, RCA, Northrop, and IBM. Bendix, Honeywell, and Sperry were the major contenders submitting bids and proposals to Douglas. The successful contractor was Honeywell.

(3) Power Supply System. Douglas received bids on the fuel cell power supply system from General Electric and Pratt and Whitney. Selection of the single contractor to do this effort will be made in early December.

(4) Data Management System. Request for proposals for this system went to RCA, Hughes, IBM, Raytheon, TRW Systems, Honeywell, Litton, Univac, Autonetics, GPI, Nortronics and GE. Douglas has received

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bids from RCA, IBM, Raytheon, Honeywell, Univac, Autonetics and GE. The final decision and selection of a subcontractor for this system is being withheld pending further analysis by the Systems Office and Aerospace on total data system requirements.

(5) Laboratory Navigation System. Twelve companies were initially invited to make proposals on the Navigation System. Upon closer examination by the MOL Systems Office and Aerospace on the requirements for an autonomous navigation system, the decision was reached to drop further consideration of this system for the immediate future. Douglas has informed the prospective bidders of this decision.

(6) Environmental Control and Life Support System. The AiResearch Division of Garrett Corporation and Hamilton-Standard were the two companies competing for this subsystem. Based on management, technical competence, and cost factors, the award was given to Hamilton-Standard.

IV. FORECAST FOR FUTURE

A. At the request of the NRO staff, Mr. Arthur W. Barber, Deputy Assistant Secretary of Defense for Arms Control, will be given a special MOL briefing at the DORIAN level on December 1, 1965.

B. Information on the selection of the pointing telescope versus the in-line tracking approach should be available by mid-December. An early decision is necessary in order to permit total effort to be placed on the selected configuration during the remainder of the CDP with Eastman Kodak and General Electric.

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C. Additional information should be available by mid-December on the impact of the recent guidance from PSAC concerning the design on the unmanned optical sensor system.

D. The results of the Titan III/MOL booster configuration studies will be completed by the end of December.

E. December 20, 1965 is the scheduled date for the December MOL Program Review meeting at SSD.

V. DUE DATE FOR NEXT STATUS REPORT

Next monthly MOL Program Status Report to be submitted January 5, 1966.

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