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DEPARTMENT OF THE AIR FORCE
WASHINGTON, D. C. 20330

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6 MAR 1967

OFFICE OF THE SECRETARY

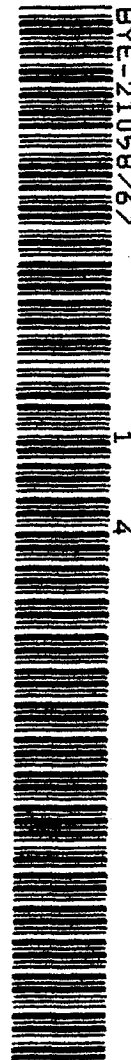
MEMORANDUM FOR THE SECRETARY OF THE AIR FORCE

SUBJECT: Manned Orbiting Laboratory Monthly Status
Report

The attached Status Report on the Manned Orbiting
Laboratory (MOL) Program covers activities through
February 28, 1967 and is submitted in accordance with
the February 13, 1967 memorandum from the Office of
the Secretary.

for *James P. Ferguson*
JAMES FERGUSON
General, USAF
Director, MOL Program

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a/s



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I. PROBLEM

A. MOL Schedule Adjustment

Government and contractor executive management on the MOL Program met in Los Angeles on February 15, 1967 to examine contractors' cost and schedule data with the objective of defining a revised baseline program which would correspond to anticipated government funding levels for FY 68 and FY 69. The severity of the problem facing the MOL Program results from the large disparity between the approved FY 68 budget of \$430.0 million and the contractors' FY 68 estimated requirements of \$811.0 million. Because of this disparity between funds availability and early year requirements, it is evident that the negotiated MOL contracts, which are essentially processed up to the point of government signature, will now have to be renegotiated to a new baseline schedule which can be supported with available fiscal year funds. Schedule slips of nine and twelve months are being examined as an initial effort toward reducing the FY 68 funding impact. The funding disparity in the early fiscal years is further compounded by our inability to obtain DX industrial priority for the program and the requirement to fund part or all of the contractors on a commitment, rather than on an expenditure, basis as intended.

Pending completion of the current schedule exercise and a firm program decision, the contractors have been directed to take action as necessary to stay within the FY 67 approved funding level of \$228.0 million and to adjust their buildup to phase into a FY 68 funding level of approximately \$500.0 million. All contractors have been participating in joint sessions with the Systems Office to establish integrated test flows and revised program schedules which more nearly conform to the anticipated funding levels for FY 68 and FY 69. The contractors submitted initial cost quotes on their revised schedules in late February and firm costs are due from the contractors during the week of March 6. Revised schedule and cost data will be ready for Secretarial review in Washington by mid-March.

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II. CHANGE PAST MONTH

A. Congressional

In preparation for potential MOL briefings for key Congressional Committee members and staff personnel, General Evans has presented a MOL status report and updating to selected individuals from NASC, OSD (PA), SAFOI, AFABF, and J-5.

B. SIVB Checkout System for use to Support MOL Flight's 1 and 2

A SIVB Checkout System currently located in the Saturn System Integration Laboratory at Douglas, Huntington Beach, had been declared excess to needs there. The use of components of the SIVB Checkout System would represent a savings of approximately one million dollars in support costs for MOL Flights 1 and 2. A request was made to NASA for this equipment.

NASA has replied that the particular set of equipment requested has been justified for use by Marshall Space Flight Center in the Apollo and Apollo Application Program. NASA has indicated, however, that there are other items of ground support equipment in the SIVB Program, not yet declared excess, which may be available. One of the problems in securing this equipment arises from the incentive structure of the Douglas SIVB contract. Douglas management has been reluctant to declare the equipment excess. NASA suggested that a meeting with Douglas management be called to see if Douglas can be persuaded to declare the equipment excess to the SIVB and available for MOL.

The Systems Office will schedule a meeting with Douglas management to discuss this matter; NASA is prepared to participate. A decision is expected in early March.

C. Flight Objectives Directive

MOL Program Directive 67-2 Flight Objectives for the MOL was issued on February 8, 1967. This document outlines the general flight objectives to be accomplished by the end of the MOL development program. The Deputy

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Director, MOL, will prepare and forward to the Director, MOL, for review and approval, the specific detailed objectives for each individual flight.

D. MOL Executive Council

MOL Program Office Instruction No. 2, MOL Executive Council Management Meetings was issued on February 25. This instruction creates the MOL Executive Council, a permanent Air Force/Industry advisory body constituted to provide a forum for periodic policy-level discussions between Government and Contractor management. Membership includes the Director, Vice Director, and Deputy Director, MOL Program; the Commander, Space Systems Division; the Director, Special Projects; and representation from each of the major MOL associate contractors.

E. MOL Astronomy Mission

The application of MOL to the performance of astronomical observations has been under consideration since mid-1966. NASA has examined the feasibility of conducting such activity with MOL under conditions of no modification, slight change and major redesign. In addition, NASA has considered the benefits that might accrue to NASA progress through the use of technology developed in the DORIAN sensor system.

On February 7, 1967, Dr. Newell advised the MOL Program Office of the results of NASA's investigation of MOL in an astronomical observation role. One conclusion was that planetary photographs could, and should, be taken on a non-interference basis in the presently approved MOL program; however, with respect to stellar and solar observations, NASA has concluded that the MOL vehicle requires increased pointing, tracking and stabilization capabilities, along with the addition of suitable astronomical observation equipment (detector, recorders, etc.). A Program Office Directive concerning the application of MOL to astronomical observation activity has been drafted and is now in coordination.

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F. Acoustic Testing

After extensive discussions and study, several decisions have been made by Dr. Flax and General Ferguson on the approach to be taken on acoustic testing of the MOL Laboratory Vehicle segments. One complete flight configuration Mission Module will be subjected to acoustic qualification testing at qualification levels which will leave this module non-reusable. As part of this decision, an acoustic test facility capable of qualification levels will be built at Eastman Kodak. Acoustic qualification testing also will be performed on the Laboratory Module. It will be tested to flight levels. This may require the procurement of an additional Qualification Laboratory Module. No firm determination has been made as to where the Laboratory Module testing will be performed. Facility modification requirements at Douglas Santa Monica and at NASA-Houston are being investigated. No decision has been arrived at on development or acceptance testing.

G. MOL Atmosphere Briefings

Briefings on the MOL atmosphere selection process have been presented to staffs of the House Committee on Science and Astronautics and the Senate Committee on Aeronautical and Space Sciences. Prime areas of interests included:

1. Atmosphere makeup selected;
2. Rationale leading to this selection;
3. The timing of the decisions that led to the present atmosphere makeup.
4. The areas of study presently underway as a result of the recent fires.

The information exchange appeared to be satisfactory to the staff members involved.

III. CURRENT STATUS

A. Funds

Funds in the amount of \$5.0 million were released to MOL operating activities during February, leaving a balance

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of approximately \$38.0 million retained by the Director, MOL Program. Funds currently available will cover program requirements through April 1967. A memorandum will be prepared during March requesting DoD release of the \$58.446 million (FY 67) now held in deferred status.

B. Review of Decision on MOL Subsystem Testing at NASA Sacramento Test Facility

The ad hoc Group, established February 3, 1967 to provide findings and recommendations which can serve as a basis for re-evaluation by the Secretary of the Air Force of the decision to test two MOL subsystems at Sacramento Test Facility, has completed its task. The Vice Director, MOL Program, and a group of NASA Office of Manned Space Flight senior officials have concurred with the report. It was forwarded to the Secretary of the Air Force through the Assistant Secretary for R&D on February 28, 1967.

C. SIVB Orbital Workshop Experiment Integration Costs

On February 7, 1967, Dr. Mueller responded to a letter from Mr. Fink, ODDR&E, which had suggested that NASA re-evaluate a decision to bill DoD for integration costs for the five DoD experiments planned for the SIVB Orbital Workshop. Dr. Mueller stated that because of the new mission plan for the Orbital Workshop, integration costs for the DoD experiments will be nominal and largely NASA "in-house". Under these circumstances NASA will assume integration costs for DoD experiments.

D. Follow-on Program

The analysis of options for a follow-on MOL program has progressed to the extent that funding implications have been identified for several assumed program configurations. These assumptions relate to variations in funding procedures, MOL vehicle configuration mixtures (manned and unmanned), and the baseline MOL Program schedule. On the basis of recent developments and decisions concerning the present program funding and schedule, the follow-on options analysis is to be reevaluated by the Program Office before further coordination and presentation is effected.

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E. Easter Island

Use of Easter Island as a staging base for MOL Powered Flight Abort Recovery Forces is to be governed by the terms of an agreement between the Chiefs of Staff of the United States and Chilean Air Forces. An exchange of correspondence between the Chiefs of Staff is presently being staffed. The details of the agreement will be negotiated by parties designated by both Air Forces. The Commander of the Aerospace Rescue and Recovery Service has been tasked to negotiate this agreement. He will be supported by representatives from appropriate agencies.

The asphalt paving equipment has arrived on site. The cold mix asphalt now available will be used for initial runway surfacing, permitting light air traffic until the hot mix surfacing is applied approximately mid-1967.

IV. FORECAST FOR FUTURE

A. Secretarial Review of MOL Schedule Adjustment

MOL revised program schedule and cost data will be presented to Dr. Flax and General Ferguson on Friday, March 10. This review will present the Air Force and Contractors' position resulting from the funds and priority limitations established at the Program Executive Session on February 15. Tentative plans call for presenting a program recommendation to Dr. Brown on March 14.

B. MOL Management Meeting

The monthly Management Meeting for March, 1967, is tentatively scheduled for Tuesday, March 28, in Los Angeles. Agenda items include: Contract and Funding Status; Cer-Vit Test Results; Acoustic Testing; Astronaut Training; Readout; and an evaluation of a suitable source for the 7-Segment Solid Rocket Motor effort in light of the selection of a 5-Segment SRM contractor.

V. DUE DATE OF NEXT STATUS REPORT

The next Monthly MOL Report will be submitted April 7, 1967.

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