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DEPARTMENT OF THE AIR FORCE  
WASHINGTON 20330

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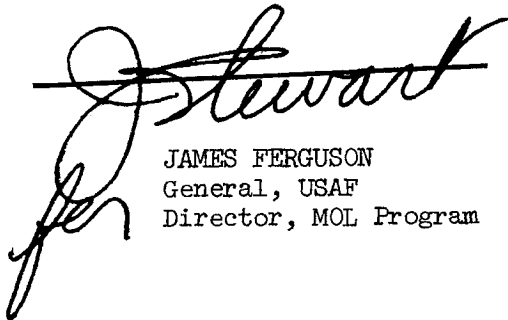
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OFFICE OF THE SECRETARY

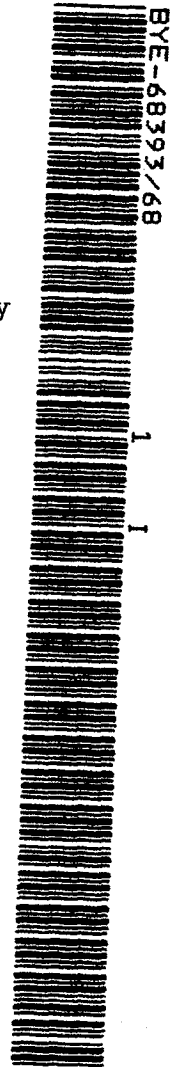
MEMORANDUM FOR THE SECRETARY OF THE AIR FORCE

SUBJECT: Manned Orbiting Laboratory Monthly Status Report

The attached Status Report on the Manned Orbiting Laboratory (MOL) Program covers activities through August 31, 1968 and is submitted in accordance with the August 15, 1968 memorandum from the Office of the Secretary.

  
JAMES FERGUSON  
General, USAF  
Director, MOL Program

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Page 1 of 6 pages  
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I. PROBLEM

Schedule and Funding Problem Associated with Acquisition of  
Secure Communication Hardware for MOL

The Office of the Secretary of Defense has deferred the FY 1968 and FY 1969 funding needs to initiate procurement of the Operations and Training Evaluation Facility (OTEF) and MOL Mission Control Center Secure Communications. This interface equipment must be operational by March 15, 1971, nine months before the first manned flight. The normal procurement cycle for the equipment is thirty months from initiation of RFP activities until hardware production and acceptance is complete. As this schedule indicates, it is not possible to delay procurement activities until the start of FY 1970. To meet need dates, FY 1969 funds required to support this effort are estimated at \$1.25 million. We are presently re-examine - ing the problem to find an alternative which will permit immediate procurement of the engineering design work with FY 1969 MOL funds, and without damage to the schedule, slip the hardware buy to FY 1970 monies. If feasible, this alternative would not only save the schedule, but also reduce the FY 1969 fund requirements.

II. CHANGE PAST MONTH

A. Easter Island - Implementation Agreement

The Joint Search and Rescue Agreement that was negotiated and signed July 26, 1968 by representatives of the Chilean and U S Air Force does not become effective until the Chilean Minister of Defense (MOD) informs the U S Embassy of his concurrence. As of September 1 the Embassy had not received notification of approval.

B. FY 1969 Budget and Program Realignment

The effort required to realign the MOL Program to the NOA of \$515 million in FY 1969 and \$600 million in FY 1970 is completed. A revised System Performance/Design Requirements Document reflecting the changes will be published on September 2, 1968. The new flight schedule resulting from the above exercise is:

Flight #1	December 1970	Flight #5	October 1972
Flight #2	July 1971	Flight #6	March 1973
Flight #3	December 1971	Flight #7	August 1973
Flight #4	May 1972		

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Page 2 of 6 pages  
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C. Product Improvement Study

On August 22, 1968, General Stewart was briefed on the initial status report of the DORIAN Optical System Product Improvement Study being done at EKC.

The primary purpose of this Phase I Study is to examine all reasonable approaches toward achieving even better resolutions from the present basic camera design and to identify any necessary technology efforts associated therewith.

III. CURRENT STATUS

A. Funds

Of the initial FY 1969 fund release of \$155 million received by the MOL Program, \$150.14 million has been released to the Systems Office and other operating agencies. Early in September the remaining funds will be released. Also early in September, a request to DDR&E will be prepared asking for the release of \$145 million for second quarter funds; it is planned to return to the normal practice of providing funds to the Systems Office on a quarterly basis when Congress completes FY 69 appropriation actions.

B. Recompetition of MOL Fuel Cells

On August 19, Douglas tendered an industry wide invitation to bid on a capillary matrix fuel cell for MOL. Allis-Chalmers, Pratt-Whitney, General Electric and Union Carbide picked up data packages required to prepare proposals. Proposals are due at Douglas on September 16. Douglas source evaluation will be forwarded to the Systems Office on October 15. Systems Office recommended position is expected November 1.

C. IVS Status

An invitation to Dr. Brian O'Brien to chair an IVS Review Committee on September 20 and 21 is in the process of being issued. The review will be conducted at General Electric, Valley Forge. The group is expected to include; Dr. Brockway McMillian, Dr. Michael Yarymovych, Mr. Harry Davis, Colonel L. Allen, Mr. Leonard Crouch and Mr. J. McFadden.

D. Laboratory Module Acoustical Qualification Testing

A detailed review of the Laboratory Module Acoustical Qualification Tests was conducted and it was concluded that the test should be deleted. The basic purpose of the system level qualification test

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is to verify that the vehicle can sustain the ascent environment without a failure either during ascent or the subsequent simulated orbital operating periods. As an alternative to the system level test (complete Laboratory Module) the components will be qualified at vibration levels determined from the Dynamic Test Structure (complete with mass simulation of components) which will be acoustically tested to qualify the structure and component supports. It was determined that the costs and schedule impacts of a system level test is disproportionate to the additional confidence it affords.

E. Executive Council Meeting (EXCOM)

A MOL EXCOM was convened at the McDonnell Douglas Astronautics Company, St. Louis, on the afternoon of August 28, 1968. This was the second such meeting of the year, the first having been held in January. The purpose of the EXCOM is to provide a forum for the free exchange of ideas, attitudes and judgments with respect to significant MOL matters, between high level military and corporate officials.

The major items of discussion at this meeting were a review of MOL financial and schedule history; the FY 69 budget reduction in context with other Air Force requirements; current program status and plans; the on-going NASA (AAP)/DOD (MOL) joint discussions and studies to determine if some of the individual program hardware and facilities can be used in both programs; and contractor employee motivational programs to insure the reliability and quality of MOL manned flight hardware.

A list of the meeting attendees is attached to this report.

F. NASA DOD Review of Manned Space Flight Program

The following guidelines are being used to identify, briefly describe, and schedule the completion of studies to be accomplished, by both NASA and DOD, with the objective of re-evaluating each of the agencies requirements for, and utilization of, manned space flight capabilities:

1. DOD will provide to NASA information on the MOL system and its capabilities exclusive of DOD classified experimental equipment.
2. DOD will study and provide to NASA cost and schedule associated with launching, on a joint basis, MOL hardware for AAP use from the Western Test Range.

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3. NASA will study the capability of the Saturn IB to launch the DOD/MOL from Eastern Test Range.

4. NASA will study the capability of modules of follow-on manned Orbital Workshop to meet projected DOD manned military requirements in the mid-1970's.

Mr. Luskin (NASA) and Mr. Palley (DDR&E) have been briefed on the results of the two DOD studies. Summary brochures covering these two efforts will be forwarded to Drs Foster and Newell in early September.

The ultimate goal of these activities is to bring NASA and DOD into a position of greater commonality in manned space flight activities.

G. DORIAN Briefing for BOB Representatives

On August 27, 1968, Colonel Ford gave Mr. Richard Stubbins of BOB a complete MOL Program DORIAN level briefing. Mr. Stubbins replaces Mr. Linder in the BOB Strategic and Space Systems Division.

IV. FORECAST FOR FUTURE

MOL Bioastronautics Review for the SAB Aerospace Medicine/  
Biosciences Panel

The non-mission related bioastronautics efforts of the MOL Program will be reviewed with the SAB Aerospace Medicine/Biosciences Panel on September 26 and 27, at the Headquarters Aerospace Medical Division, Brooks AFB, Texas.

The review will summarize the environmental/life support provisions, the medical operations concepts and the medical-physiological assessment programs being made to meet the 30-day weightless mission. The review is being provided as an update for the panel membership in preparation for their participation in a technical critique of the MOL bioastronautics program and later as a baseline reference for the individual panel member as he provides assistance to the research team carrying out the MOL-sponsored preflight ground studies. These ground studies are directed toward gaining understanding of the crew adaptative processes which will be active during a 30-day weightless mission and will prepare the inflight regimen required to limit the adaptive processes to an operationally acceptable level

V. DUE DATE OF NEXT REPORT

The next Monthly MOL Program Progress Report will be submitted October 7, 1968.

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August 28 Executive Council Meeting Attendees

Military

General James Ferguson  
General James T. Stewart  
General Joseph S. Bleymaier  
General John L. Martin, Jr.

Aerospace Corp

Dr. Allen Donovan  
Dr. W. W. Williams

Industry

Mr. James McDonnell, President, MDAC  
Mr. Walter Burke, President, MDAC(WD)  
Mr. Ben Bromberg, Vice President, MDAC(ED)  
Mr. Robert Johnson, MOL Pgm Mgr, MDAC(WD)  
Mr. Arthur Simmons, Vice President, EKC  
Mr. Herman Wagershauser, Vice President, EKC  
Mr. Mark Morton, General Manager GEMSD  
Mr. Dan Finkø, General Manager, GESSO  
Dr. Mike Malkin, MOL General Manager, GE  
Dr. B. P. Blasingame, General Manager, ACED  
Mr. R. B. Young, Vice President, Aerojet General  
Mr. Barney Adelman, President, UTC  
Mr. William Purdy, General Mgr, Martin Marietta  
Mr. Jeremy LaFrance, T-IIIM Pgm Dir., Martin  
Marietta

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