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

OFFICE OF THE SECRETARY

5 APR 1967

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  
March 31, 1967 and is submitted in accordance with  
the March 10, 1967 memorandum from the Office of  
the Secretary.

*for J Stewart*  
JAMES FERGUSON  
General, USAF  
Director, MOL Program

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a/s



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I. PROBLEM

Titan IIIM Funding

Direction was issued at the March 10 MOL Meeting to renegotiate and fund the MOL contracts on a commitment rather than an expenditure basis. The impact of this direction on the Titan IIIM was immediate and was the subject of a Redline Presto Report from the Titan III Program Director.

Obligating authority issued to the Titan III SPO is sufficient to cover the Titan IIIM development on an expenditure basis through FY 67 for a 12-month schedule extension to the baseline program. To go to a commitment basis will require an additional \$15.3 million OA during FY 67.

As an interim solution to the Titan IIIM problem, the decision was made to use available monies to stay on a commitment basis through mid-April. Before mid-April a further scrub down will be made of the commitment requirements for the overall program, including the Titan IIIM. At that time the complete commitment requirements will be known and a decision on the Titan IIIM can be made in consonance with, and not independent of, the total system funding requirements.

II. CHANGE PAST MONTH

A. Schedule Adjustment Guidance

A MOL Management Meeting was convened at Andrews Air Force Base on March 10, 1967 to review the results of the funding and schedule effort undertaken by the MOL associate contractors and the MOL Systems Office in response to guidance received from the Director, MOL. The guidance asked for a rework of the program schedules and associated costs for a 9 and 12-month schedule slip.

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The conclusions derived from the exercise were that the 9-month slip involved high risk, extremely tight integration schedules and unacceptable fiscal year costs. The 12-month slip was a much more acceptable schedule from the standpoint of program integration, but the FY 68/69 costs exceeded the guideline figures of \$500/\$600 million stipulated by Dr. Flax at the February 15 Management Meeting.

As a result of these determinations, and subsequent discussions with Dr. Foster, the MOL Program Office has initiated action to derive new schedules and costs subject to the following constraints:

- FY 68/69 funding levels of \$480/\$620 million respectively.
- Commitment funding of all contracts.
- DO industrial priority.

These constraints probably would result in a slip of at least 15 months for the first manned flight. Alternatives aimed at a lesser slip are being investigated by the Program Office; these will be discussed at the April MOL Management Meeting.

B. Advanced Planning Directive

MOL Program Office Directive 67-4, dated March 1, 1967, has been issued. Two advanced planning studies are now in progress in accordance with the provisions of the directive. The first is an effort to determine what system studies and technology projects would be required before initiating development of an improved optical/camera system capable of resolution at [REDACTED]. This analysis, including schedules and cost estimates, is to be available by April 10, 1967. The second study under the terms of the directive will provide a detailed analysis of the technical, operational, schedule and cost implications of long-duration operations. Mission durations on the order of one year are envisioned, with both reconnaissance and biomedical R&D mission modes being considered

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C. MOL Priorities

During the March 10, 1967 discussions on adjustment of MOL schedules and costs, Dr. Flax agreed to support an interim action to upgrade the MOL position on the DOD Master Urgency List (MUL) to Category S(Brick-Bat other than .01), pending a final OSD decision on Category S(Brick-Bat .01) designator for MOL.

A Director, MOL, memorandum to Dr. Flax, dated March 22, forwarded a proposed memorandum for the Secretary of Defense recommending the interim upgrading. The memorandum to Dr. Flax further proposed internal Air Force action to improve the MOL USAF Precedence Rating from 3-70 to 1-7.

D. Briefings for Secretaries Charles and Marks

On March 3, The Vice Director, MOL gave Secretary Charles and Secretary Marks a DORIAN briefing on MOL Program Status. Emphasis was placed on the fiscal year funding problem, the exercising of current baseline schedules, and contract status.

Secretary Marks was briefed by SAF-SL again on March 14 and informed of the latest information resulting from the March 10 MOL Meeting with Dr. Flax and General Ferguson.

E. Results of Solid Rocket Motor (SRM) Competition

The source selection board findings on the 5-segment SRM competition for the Titan III C and D programs were briefed to a select Hq USAF Staff on March 14 and to Dr. Flax on March 15. The winner of the 5-segment competition will be announced in early April. This selection is important to the MOL Program as it could impact on the cost for the 7-segment SRM for the Titan IIIM program.

F. Source Selection - ACTS/Propellant Tankage

On March 24, 1967, Douglas Aircraft Company presented to the MOL Systems Office the results of

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their source selection for the attitude control and translation system propellant tankage. The Rocketdyne Division of North American Aviation was chosen by a DAC Source Selection Board, using procedures similar to those of Air Force Source Selection Boards. The MOL Program Office and Systems Office have concurred with the DAC selection. With this selection, all DAC major subcontractors have been chosen.

G. MOL Facilities Visit by Government Officials

Mr. Barfield, OSD (DDR&E) and Mr. Linder, Strategic and Space Systems Division of the Bureau of the Budget, visited General Electric at Philadelphia, Martin Denver, the MOL Systems Office, Douglas Missiles and Space Systems Division, Vandenberg AFB, Aerojet-General at Sacramento and McDonnell Aircraft. The primary purpose of their visit was to familiarize themselves with the contractor effort and activities in support of the MOL Program.

In response to their specific request they were provided briefings by company officials on contractor management and organizational structure, the program technical requirements and factory to pad flow, major milestones, and special facility requirements. They also examined hardware mock-ups at Douglas, GE and McDonnell.

H. Astronaut Training

A two-week indoctrination program for the MOL astronauts is being presented by the National Photographic Interpretation Center (NPIC). The purpose of the program is to introduce the astronauts to the general subject of photographic intelligence and to provide them with an initial background in target recognition prior to their participation as subjects in Active Target Indicator Mode Simulation.

The first group of four astronauts started the program on March 20; the second group of three will start on April 3.

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The NPIC presentations have been attended and monitored by Program Office personnel. The NPIC program has been an unqualified success both in enhancing the motivation of flight crews and in preparing them for future activity in the DORIAN mission area. The quality of overall NPIC cooperation, program preparation, and program presentation has been superb.

I. Funding Responsibility for Operation of Recovery Forces in Support of MOL Missions

The Department of Defense Manager for Manned Space Flight Support Operations has been requested to negotiate a funding responsibility agreement covering the MOL Program and the DOD agencies providing recovery forces. This agreement will probably be patterned on the existing policy governing funding responsibilities of the users and operators of the National Ranges. Under this concept the responsibility for funding for the operation of recovery forces in support of DOD manned space missions would be assigned to the DOD agency providing the support forces, on the condition that user requirements are stated in time for the support forces to include the cost estimates in their normal budget submissions.

The MOL Program will continue to budget for non-recurring costs to meet requirements peculiar to the MOL Program such as the development and procurement of special handling equipment and training aids. No funds have been included in the MOL budget estimates for augmentation or modification of ship and aircraft forces which may be necessary to support the national manned space recovery mission beyond FY 1968.

J. Titan IIIM Contract Awards

The Titan IIIM Phase II contract with the Martin Company was distributed on March 21. Target price is \$148,401,500. The Phase II contract with AC Electronics for TIIIM guidance was distributed on March 17. Target price is \$24,925,000.

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K. Congressional Activities

A "Congressional Briefing" has been prepared for use in discussions on MOL that may be requested by Congressional Members or their Staffs. On March 7 General Evans reviewed the briefing for Dr. Flax who concurred, with the proviso that funding problems be held as backup and not volunteered.

On March 14 a briefing on MOL and other space systems was given to Mr. Price of the House Armed Services Committee. On March 28, the MOL briefing was given to Senator Symington at his request.

III. CURRENT STATUS

A. Funds

No funds were released during March by the Director, MOL Program. When the program adjustment is completed in early April, the \$38.0 million (FY 67) retained by the Director will be released. At that time the release of the remaining \$58.446 million (FY 67) retained by DOD will be requested.

B. MOL Astronomy Mission

Following NASA's recommendation that planetary observations be conducted on MOL flights (on a non-interference basis), a detailed feasibility and impact study has been initiated by the MOL Systems Office. The study is predicated on no interference to the primary mission and no modification to the MOL vehicle. Results of the study are to be presented to the Program Office on April 10, 1967.

C. MOL Target Model

A target model for use in MOL engineering and software development, system simulation, and operational planning is being developed. This is necessary since current operational target lists are not compatible with

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the DORIAN field of view nor do they utilize additional capabilities of the MOL system. The approach being used to generate the model is to select a representative sample of targets from a current operational target list, obtain detailed intelligence information and photo requirements for these targets, and then expand this sample into a complete, representative target model. The sample targets should be available the first week in May. The expansion into a complete target model will take approximately one month.

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

In a letter dated March 9, 1967, the Secretary informed Senator Anderson that transfer of MOL subsystem tests from the NASA Sacramento Test Facility to the NASA White Sands Test Facility could not be justified on a cost basis. The MOL Systems Office was informed of the Secretary's decision on March 20, and was directed to continue work and planning aimed toward testing at Sacramento.

E. SIVB Checkout System for use on MOL Flights 1 and 2

A meeting was held at Douglas, Huntington Beach, on March 8 among representatives of NASA, MOL Program Office, and Douglas to review the list of available equipment and to make disposition arrangements.

It was agreed that two PAM/FM/FM telemetry ground stations and two single sideband ground stations were in excess to the needs of the Saturn Program and would be made available for use on the MOL Program to support flights 1 and 2. Other equipment may become available later, depending on the NASA decision on the need for refurbishment of the test stand at Sacramento which was damaged by an explosion.

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F. MOL SIGINT Studies

The flight test portion of the Aircraft Test Program was completed on March 21. All planned profiles were flown and evaluation of the data is underway. Data tapes will be delivered to NSA and Sylvania-EDL for final analysis on April 5, with a final report expected June 30, 1967.

G. NASA Gemini Hardware for MOL

In order to optimize use of residue support hardware from the NASA Gemini program, an agreement was signed in July 1966 between the NASA and DOD providing for transfer, at no cost to DOD, of the surplus NASA Gemini support hardware to the MOL Gemini B Program. Transfer of the majority of this equipment was efficiently accomplished by late 1966. However, of the items desired by the MOL Program, about sixteen items totaling about .5 million value were withheld by NASA for support of Apollo programs. Four of these sixteen were specifically identified by the agreement for transfer. Correspondence with Dr. Mueller, NASA, has culminated in his decision to withhold transfer of all these items and to recommend replacement procurement by the MOL Program. Special arrangements have been effected between NASA and DOD to allow loan to MOL of the several critical long lead procurement items until delivery of the new procurement can be effected. The MOL Systems Office has taken action to fund the procurement through McDonnell Aircraft Company.

IV. FORECAST FOR FUTURE

A. Systems Office Activity Schedule

In response to guidance received from SAF-RD following the March 10 presentations, and subsequent discussions with OSD (DDR&E), the MOL Systems Office has established the following schedule for contract negotiations:

March 27-29 - Joint meetings to develop integrated schedules and hardware exchange agreements.

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- March 31 - Receive ROM costs from contractors.
- April 3 - Receive firm costs from contractors.
- April 10 - Start negotiations.
- April 30 - Conclude negotiations.

B. MOL Management Meeting

The Monthly Management Meeting for April 1967 is scheduled for Friday, April 14. The meeting will convene at 9 A.M. at Hq AFSC, Andrews Air Force Base. The tentative agenda is attached.

V. DUE DATE FOR NEXT PROGRESS REPORT

The next Monthly MOL Progress Report will be submitted May 5, 1967.

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MOL MANAGEMENT MEETING  
AGENDA  
14 April 1967

0900	Titan IIIM Status	Col Kniss
0930	Revised Baseline Schedules	Col Kester
0950	Funding Status	Col Kester
1010	Aerospace MTS Requirements	Col Kester
1030	BREAK	
1045	Contracts Status	Col Dietrich
1115	Acoustic Testing	Mr. Tennant
1145	LUNCH	
1300	Weight and Power Status	Mr. Tennant
1315	Wide-Band Data Link and Data Recovery Vehicle	Mr. Tennant
1400	Astronaut Training Program	Lt Col Torosian
1430	Operational Recovery Plan	Lt Col Paige
1500	BREAK	
1515	██████████ Simulation	Mr. Bernstein
1545	Cer-Vit Status	Cmdr Geiger

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