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

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OFFICE OF THE SECRETARY

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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 December 31, 1966 and is submitted in accordance with the December 16, 1966 memorandum from the Office of the Secretary.

for JAMES FERGUSON
General, USAF
Director, MOL Program

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I. PROBLEMS

A. FY 1967 Funds

The total of funds released to the MOL Program since program approval in August 1965 has been approximately \$213.2 million through December 31, 1966. This amount includes \$50.0 million of FY 67 funds and \$163.2 million of prior year funds. The funds released to date are sufficient to cover contractor requirements only into January 1967. Documentation has been prepared to secure the approvals and release of the DoD deferred funds in the amount of \$178.4 million. These funds are required by the MOL Program to cover contractors' expenditures through June 30, 1967.

B. Easter Island

the use of the cold mix asphalt.

Diplomatic clearance approval for the Easter Island MOL Abort Recovery Operation is urgently required. Repeated State/Defense requests for expedited action have been made, but as of January 3, 1967, approval had not been received. MOL requirements necessitate a change to the airfield construction program currently in progress by a Chilean contractor. Authorization to discuss construction changes with the Chilean contractor is urgently required before construction proceeds beyond the point where changes can be made without serious delays and cost increases. \$450K has been made available to the hot asphalt paving of the total runway length and increased taxiways and parking areas, as required for MOL operations. Because of the restriction on Chilean contractor communications, cold mix asphalt has been procured in accordance with the original plans and is scheduled for shipment to Chile in mid January 1967 with runway construction completion scheduled for March 1967. A cold mix asphalt runway will not support the C-130 recovery aircraft. The diplomatic clearance to permit

contractor negotiation is most urgent to preclude

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II. CHANGES PAST MONTH

A. Contract Negotiations

Between December 15th and 20th, contract negotiations were satisfactorily concluded with Douglas, General Electric and McDonnell. The contracts remaining to be negotiated are with United Technology Center and Aerojet Corporation and these are expected to be negotiated before January 31.

The Douglas, McDonnell and Martin Company and associates are fixed price incentive fee, the Eastman Kodak is a cost plus fixed fee, and the GE is a cost plus incentive fee arrangement.

A briefing is being developed by the MOL Program Office to describe the particulars of the incentive arrangements for each of the contracts. The briefing will be presented to appropriate Washington area offices.

B. Program Plan and Funding Requirements Document

The document was updated to reflect the results of the Phase II contract negotiations and the resulting definitive fund requirements and baseline schedules. OSAF, DDR&E and MOL Policy Committee members have been provided copies of the document, or have been advised of its availability.

C. Titan III Management Review

Because of the concern about the substantial T-IIIM fund requirement increases, the Vice Director, MOL has asked the Commander, AFSC, to conduct a thorough management review of the total Titan III Program. Its purpose is to examine all aspects of management relationships and procedures, financial and costing procedures and technical requirements control for the overall Titan III Program and to assess the distribution of development efforts and costs among Titan IIIM and the other Titan configurations.

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Handle via BYEMAN Control System Page 2 of 7 pages Copy / of /0 copies SAFSL BYE 21002-67 The Commander, AFSC, has designated a group of senior officers, primarily from Hq AFSC but including representatives from the MOL Program Office and SAFSS, to develop specific recommendations, where applicable, for management and financial improvements to the Titan IIIM and the other Titan III programs. This group, has visited the Titan III Systems Program Office, the MOL Systems Office and SAFSP on the West Coast, and is now engaged in visiting certain of the Titan IIIM associate contractors. It is anticipated that the results of the review will be presented to the Commander, AFSC by mid-January. It is also planned to brief the results of the review to Dr. Flax and the MOL Vice Director.

D. Phase II Negotiated Contract Review

In response to General Keeling's request, a technical review was made of the Douglas, General Electric, T-IIIM and McDonnell contracts. A review team was designated by General Evans and was comprised of personnel from the MOL Program Office and AFSC. All of the review team members were proficient not only in the technical baseline of the major program segments, but in related functional areas as well.

The documents reviewed included the Systems Performance/Design Requirements, Statement of Work, contractual exhibits, and specifications for contract end items. These documents were found to be complete and specific in defining the work to be accomplished. There is no duplication of effort among the contractors and program coverage is complete. Those hardware and software items not adequately defined, or in the process of resolution are to be definitized for negotiation by June 1967.

Based on the report of the technical review team, the MOL Program contracts were judged to be complete and adequate. A copy of the report and recommendations was sent to General Keeling.

E. Subcontractor Selections

The MOL Program Office reviewed and concurred with the General Electric subcontractor selections of the Standard Kollsman Instrument Company for the star tracker, Nortronics Division of Northrop for the rate

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Handle via BYEMAN Control System Page 3 of 7 pages Copy / of /0 copies SAFSL BYE 21002-67 gyro, Bell Aerosystem for the low "G" accelerometer, Raytheon for the mission data adapter unit and the Vector Manufacturing Company of United Aircraft for the PCM telemeter.

III. CURRENT STATUS

A. Flight Objectives Directive

A proposed "Flight Objectives Directive for the MOL Program" has been drafted. It describes the general flight objectives to be accomplished by the end of the MOL Phase II development program. It is directive in nature and will be used as a guide to the implementation of the entire flight test program. It is intended to serve as a basis for the detailed flight test program as to content, relationships, and test philosophy. Preparation of the detailed flight test objectives for each individual flight is the responsibility of the Deputy Director, MOL but approval by the Director, MOL is required prior to publication.

The proposed directive is being coordinated with affected activities prior to seeking its approval from the Office of the Secretary of the Air Force.

B. MOL Follow-on Program Options

A study is now in progress to define and compare several follow-on program options based on the use of MOL baseline configuration hardware. The purpose of the study is to make available basic data describing cost, schedule and facility load factors for combinations of manned and unmanned flights which might follow the last flight of the presently planned program. The study will also address cost, schedule and technical considerations involved in conversion from manned to unmanned configurations, and vice versa, at various phases in the vehicle production and checkout sequence. Results of the study are to be available by February 1, 1967.

IV. FORECAST FOR FUTURE

MOL Management Meeting

The next management meeting will be held in Washington on January 5, 1967. The agenda is included

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V. DUE DATE FOR NEXT PROGRESS REPORT

The next monthly MOL Progress Report will be submitted February 7, 1967.

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AGENDA

FOR

MOL MANAGEMENT MEETING

January 5, 1967

Washington, D. C.

MORNING SESSION

0940 0001 - 0760 1000 - 1020 0160 - 0060 - 0160 Lt/Colonel Skantze Colonel Dietrich Colonel Randall General Evans TIME - COST PROGRAM OPTIONS Status of FY 67/FY 68 Funds -Optimum Time to Recognize Slippage if Funds are Limited CONTRACTUALLY DEFERRED ITEMS SCHEDULE FOR DEFINITIZING INTRODUCTION SATURN IVB

Participation in NASA Program

Reevaluation of Air Force

Mr. Strong Review of MOL Implementation Plans for a Read-out System WIDE BAND READ OUT

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Mr.	tyer	1
ACQUISITION AND TRACKING SCOPE Studies on Enlarged Scope BREAK	Sampson	1430 - 1500 1500 - 1515
SIMULATION STUDIES AND PLANNING For Exploring Astronaut Capabilities and Time Lines	Bernstein	1515 - 1545

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