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MINUTES OF MEETING 66-2

AIR FORCE MOL POLICY COMMITTEE

Friday, April 29, 1966

Room 4E871, Pentagon

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Attendance:

Committee:

Hon. Harold Brown, Secretary of the Air Force, Chairman  
Hon. Norman S. Paul, Under Secretary of the Air Force  
Hon. Alexander H. Flax, Asst. Secretary of the Air Force  
(R&D)  
Hon. Leonard Marks, Jr., Asst. Secretary of the Air Force  
(FM)  
\*General William H. Blanchard, Vice Chief of Staff, USAF  
General B. A. Schriever, Commander, AFSC  
Lt General James Ferguson, DCS/R&D

Secretariat:

Colonel Richard L. Dennen, SAF-SL, Asst to Executive Secretary

Proceedings:

1. The meeting was called to order at 0930 hours. It was agreed that the major item on the agenda, MOL Costs and Schedules, should be considered last.

2. General Evans presented a status report on the Wholly Unmanned Dorian System Study being conducted by SAFSP. This study was generated in response to a BOB request for comparative development and operational costs, and differences in effectiveness of the MOL mission, manned and unmanned. The study, being conducted both in-house by SAFSP and under contract with Lockheed and General Electric, covers the following points:

a. Wholly unmanned system to provide the same quality and quantity of reconnaissance - intelligence information as MOL

\*Alternate for General McConnell

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- b. Assess difficulties and risks, determine costs of obtaining this information wholly unmanned
- c. Compare wholly unmanned performance with unmanned version of MOL
- d. Compare operating effectiveness on basis of equal target coverage, and ability to select or discriminate between target systems
- e. Assess ability to circumvent weather

The study is being managed apart from the MOL Program Office except for required technical inputs and compatibility with MOL planning projections. Preliminary results are expected the third week in May, and the report is due to Dr. Foster June 6, 1966.

3. Secretary Brown noted that BOB is continuing its interest in this subject, but has not acquired much sympathy from either DOD or Dr. Hornig. He stated that he and Dr. Flax had discussed with Secretary McNamara the BOB request, and the cost effectiveness of MOL compared with Gambit<sup>3</sup>. Secretary Brown stated that while an unmanned photographic system to operate for 30 days may be feasible, it would be costly. Secretary Flax supported the possibility of an unmanned system to do certain tasks, and agreed a 30 day capability would be much later in time. He stated that as the subject is investigated, it becomes more evident that man is a neatly packaged system to do many tasks. General Schriever stated that the desired capability can be attained sooner with the present approach. He also noted that while an unmanned system may be shown as cost effective for periods up to 30 days, man can perform for longer periods. Secretary Brown stated his belief that neither Secretary McNamara nor Dr. Hornig are against a manned system. He stated that Secretary McNamara wants the data, and only questions the best way to get it. Secretary Brown noted that cost increases or schedule slips could change the current bias favoring man.

4. Dr. Yarymovych presented the results of an in-house study on the potential use by NASA of Gemini B/MOL/Titan III hardware or the substitution of Titan III for Saturn IB to meet the objectives of the Apollo Applications Program (AAP). The subject was raised in a BOB letter requesting NASA to include certain items in the NASA program memorandum for budget preview. The specific study was requested by Dr. Foster in anticipation of a NASA request for DOD inputs. Conclusions reached are as follows:

- a. MOL/T-III hardware is capable of conducting AAP experiments
  - (1) 5-segment T-IIIM from ETR could perform low inclination missions

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(2) 7-segment T-IIIM from WTR could perform high inclination missions.

b. AAP hardware atop T-III creates costly facility and spacecraft AGE modifications for 7-segment at ETR, and costly spacecraft AGE at WTR.

c. Unknown problems of bulbous payloads on Titan, plus technical interface problems and facility modification costs, are not favorable to AAP hardware on Titan.

5. Dr. Brown noted that most countries of interest to NASA, for photographing economic conditions such as crops, are at low latitudes and hence can be overflowed by launching from ETR. He stated that such downward-looking missions could be construed to support administration programs and should be retained in NASA's program. Secretary Flax stated that the only way such missions in space are justified is to have multi-sensors, or if the territory is denied to us. He stated that aircraft are more cost effective, if we have overflight rights.

6. Dr. Yarymovych presented a short report on NASA's proposal for their S-IV-B Workshop Experiment. This proposal involves the use of a spent S-IV-B stage for shirtsleeve experimentation for a period of 14 to 30 days. The configuration would include an airlock with existing life support and power subsystems, such as Gemini spares, in the LEM adapter. It would provide a large free volume (20 X 30 feet) in the hydrogen tank. An early date, mid-1968, may provide an attractive possibility for MOL support experimentation. An Air Force Ad Hoc working group has been formed to define specific AF experiment objectives. It is planned to submit an AF expression of interest to the newly constituted Manned Space Flight Experiments Board (MSFEB) on May 24, 1966. Dr. Yarymovych stated that Dr. Mueller considers the NASA proposal a high priority effort.

7. General Schriever noted the difficulty in making such a configuration suitable for manned operations. Secretary Flax emphasized the possibility that NASA has underestimated the complexity and cost of the proposal. General Evans stated the proposal was presented to the MOL Policy Committee because of its possible impact on the MOL Program.

8. The proposed briefing on MOL priorities was cancelled. Secretary Brown stated he had earlier agreed to support a DX priority for MOL, replacing Program 437 on the DX list. He concurred in the procedure of sending a memorandum from the DNRO to Secretary Vance on this subject, and stated that some specific examples of need for priority will likely be required for approval.

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9. The status report of MOL cost and schedule problems was presented by General Evans. Contract Definition Phase studies have pointed up two major factors affecting the MOL Program:

a. Development and production of the camera optical system is the critical pacing item. The first flight model system is not expected to be available before April 1970. It has been established by study with Eastman Kodak that a minimum of 37 months from approval of facilities to completion of the first flight model optics is required. An additional 11 months is required before launch of the first MOL vehicle for integration and systems testing.

b. Fiscal year 1967 funding constraints appear to dictate rescheduling to minimize FY 67 fund requirements.

The results of an in-house task force study were presented in the form of alternative schedules and cost comparisons. The past progression of MOL schedules was put into perspective as follows:

a. The original program of August 1965 called for the first manned flight in October 1968, and the first flight with mission optics in February 1969. This schedule was optimistic in that the Titan III up-rating and optical system development had not been critically analyzed.

b. The current schedule and addition of two flights in December 1965 after determination of the feasibility of an unmanned configuration to achieve [redacted] photo resolution. This schedule option which calls for the first manned flight in June 1969 and first all-up system flight in October 1969 is the current baseline schedule that is being costed by the contractors.

Four other schedule options were presented, two which retained 9 flights, and two which were designed to save money by deleting 1 and 2 flights respectively. Arguments were presented in favor of a 7 shot program with 2 unmanned flights in April and August of 1969 and the first manned flight in April of 1970. Although this option would increase program risk by eliminating a manned flight prior to the all-up flight, it would result in lower total program costs than other alternatives.

10. The Committee discussion covered the following:

a. Secretary Flax cited some of the reasons for the Eastman Kodak schedule slip from that originally proposed: non-availability of facilities, oversight in the time to check out these facilities, and slip

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associated with factory-to-pad flow. He stated that, on the other hand, the E-K manpower burden had been eased by the assignment of certain responsibilities to General Electric. He expressed concern that E-K may be planning for contingencies. It was the consensus of the Committee that it would be desirable to move the April 1970 date to at least December 1969. Secretary Flax and General Schriever indicated their plan to meet with E-K management to discuss overall program implications. Secretary Brown concurred that, because of the interim nature of the cost and schedule estimates, a decision on program schedules was not appropriate at this meeting.

b. In the discussion on costs associated with the options, General Evans emphasized the variance between contractor estimates and the lower SPO estimates. He stated that the suggested option would be affordable, but that the increase in FY 1968 fund requirements would pose a major problem. He noted that firm program costs will not be known until completion of contractor negotiations in August 1966. Secretary Brown and General Schriever suggested that a close look at contractor estimates for FY 1967 would be in order. General Schriever stated that the SPO and contractors have established excellent contractor interfaces for testing and factory-to-pad flow. This has resulted in relatively firm cost estimates for these phases. General Schriever noted that Martin and McDonnell contracts could be fixed price; Eastman Kodak cost-plus-fixed-fee; and General Electric and Douglas should be whatever type contract is best for the government. In response to a question by Secretary Brown, Secretary Flax stated that Eastman Kodak would have a legitimate problem with a cost-plus-incentive-fee contract because they do not control vendors for items such as blanks.

c. With regard to the issue of a public posture to explain a schedule slip, Secretary Brown noted that a slip of the first manned flight to mid 1969 has already been indicated to Congress. He stated that he, Secretary McNamara and Secretary Flax have testified before Congress that the slip is a slip in the payload. He averred that they have not and will not give public briefings on this subject. The Committee agreed that no unclassified announcement will be made of possible schedule adjustments at this time. If queries are received on possible MOL schedule changes, the response should indicate that during contract definition various alternative schedules are examined, and that no decision has been reached on a firm MOL flight schedule.

11. The Committee concurred in the following actions:

a. A briefing will be presented to the MOL Policy Committee on approximately May 20, 1966 which contains the program recommendations of the Director, MOL, for their approval.

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b. Secretary Flax and General Schriever will meet with Eastman Kodak management prior to May 20 to discuss the feasibility of meeting the Committee's desire that the first manned flight occur late in CY 1969.

The meeting adjourned at 1045 hours.

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APPENDIX

MOL POLICY COMMITTEE

April 29, 1966

Other Attendees:

[REDACTED]

Brigadier General Harry L. Evans, Vice Director,  
MOL Program

Michael I. Yarymovych, Technical Director, MOL Program

Colonel Paul J. Heran, Assistant Deputy Director  
for MOL

William Sampson, Aerospace Corporation

Major David C. May, Jr., MOL Program Office

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