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DEPARTMENT OF THE AIR FORCE  
WASHINGTON 20330



OFFICE OF THE SECRETARY

26 September 1968

MEMORANDUM FOR DR. FLAX  
GENERAL FERGUSON

SUBJECT: MOL IVS Ad Hoc Review Group

The MOL IVS Ad Hoc Review Group met at Valley Forge on 20 and 21 Sept. Members included: Dr. O'Brien; Dr. McMillan; Mr. McFadden; Mr. Crouch; Col Allen; and Dr. Yarymovych. Mr. Hubbard and Col Gandy served as their Secretariat. Members who could not attend included: Dr. Cannon (who provided a written summary of an earlier IVS review by him); Mr. H. Davis; and Mr. Lozier (BTL).

On the 20th, other than a brief overall MOL Program overview and status report by myself, the day was devoted to contractor presentations (GE, Itek, Goodyear, Hycon) and their discussions with the Ad Hoc Group. Systems Office and Aerospace participation was limited to answering questions appropriate only to the Government. The day ended at about 10 PM in the GE IVS test facility. The Ad Hoc Group spent the 21st discussing the situation (mostly in executive session) and drafting their report.

Attached is a second-draft version of their report. Because of commitments by the individual members, the final product probably will not be available before mid-October; however, it is not expected to change in substance. I would summarize the main points of their report as follows:

1. Either the Hycon or Goodyear IVS devices could be selected with a reasonably high degree of confidence of adequate target tracking.

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2. The Itek IVS device is not far enough along to be a serious contender in the present MOL Program and should be sent to the Avionics Lab for further testing (and possible other applications) when the Brassboard is complete.

3. Some of the IVS performance specifications seem unnecessarily high, but apparently have not resulted in undue complexity or undesirable trade-offs.

4. The Goodyear IVS device appears to be highly sensitive to simulator testing and great care must be exercised.

5. Some improvements can be made in the simulator test equipment at GE.

6. A much better understanding of the cloud problem and IVS performance in the presence of clouds is needed.

I was pleasantly surprised at the great progress made since the brief MOL PRC review in early June. Quite obviously, the concern expressed at the PRC, the subsequent visits by Program and Systems Office people, the establishment of Dr. O'Brien's Ad Hoc Group, etc., got everyone's attention. Goodyear and Hycon will deliver prototype engineering/production models for test on schedule next month. Itek's new brassboard model is not scheduled for delivery until mid-November and may be later than that. Itek's problems may be described as having first built brassboard hardware without really understanding the problem; they put a new team to work in July and now seem to understand the problem but are 6-9 months behind the other two.

We will implement all recommendations with regard to the Hycon and Goodyear IVS devices, pointing toward a selection of one in January (the O'Brien Group is quite willing to review the status again in January if we so desire). However, I need some advice with regard to the Itek Brassboard. By October 1, GE will have invested about \$1.6 million of MOL money in the Itek effort. Approximately \$150K additional will be needed to

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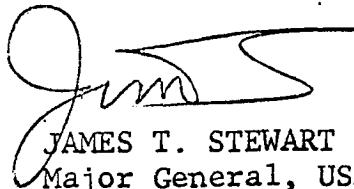
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complete and deliver it on time (late delivery could add another \$50K) as opposed to an October 1 termination. Mr. Crouch of the Avionics Lab would be delighted to have the Brassboard, indicating there are other possible applications. I suggest that Mr. Harry Davis and Dr. Yarymovych be asked to make an early determination as to the desirability of completing the Itek device and delivering it to the Avionics Lab (I assume the Lab is in fund trouble and MOL money would be used to complete the work at Itek).

The Ad Hoc Group was a well-balanced team and worked very hard. Since Gen Ferguson transmitted the charter to the Group, I will prepare appropriate letters of appreciation for his signature to each member.



JAMES T. STEWART  
Major General, USAF  
Vice Director, MOL Program

1 Atch:  
a/s

*copy to Mr. Hubbard*

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