

~~SECRET~~

Transmitted via DORIAN
Aerial System

AUG 28 1968

MEMORANDUM FOR DEPUTY DIRECTOR, MOL PROGRAM

SUBJECT: MOL IVS Ad Hoc Review Group

The purpose of this memorandum is to forward to you a copy of the Charter for the IVS Review Group for your comments and a copy of my status memorandum to Dr. Flax on the subject for your information.

Also, I would like to request the services of Colonel Gandy to act as secretariat for the Group along with Mr. Sam Hubbard.

SIGNED

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

2 Atch
a/s **first draft*

Cys to:
SAFSL - Chron File
SAFSLP - Official File
SCG Read

Col Ford/SAFSLP/50945/26 Aug 68/shw

BYE-68385/68

2 K



DORIAN

Page 1 of 1 pages
Copy 2 of 5 copies
SAFSL BYE 68385-68

~~SECRET~~

102

~~SECRET~~

Handle via BYEMAN
Control System

CHARTER

FOR

MOL IMAGE VELOCITY SENSOR (IVS) REVIEW GROUP

OBJECTIVE: To conduct an independent and critical review and assessment of contractor work to date on the MOL IVS.

BACKGROUND: The concept of an image velocity sensor in the MOL Program assumed critical importance at the time the decision was made to proceed with an unmanned version of the DORIAN payload. While this device is highly desirable in the manned configuration of MOL to reduce demands on the astronauts time, it is essential for system performance in the unmanned configuration. The purpose of the IVS is to passively sense errors in the ground tracking rate of the tracking mirror and produce useable correcting signals of specified value to the tracking mirror drive to contribute to the reduction of the photographic image rate at the center of the film format to within system specifications. In view of the criticality of the IVS to system performance and the difficulty of the technical task, three separate technical approaches were undertaken by three different subcontractors to General Electric who is the associate contractor responsible for this task. For the afore mentioned reasons of criticality

Handle via BYEMAN
Control System

DORIAN

~~SECRET~~

Page 1 of 2 pages
Copy 7 of 10 copies
BYE 68388-68

~~SECRET~~

Handle via BYEMAN

Control System

and complexity coupled with the obvious need for fixing on the most feasible and promising approach at an early date, an independent assessment of the current status of the IVS work is deemed desirable.

SUGGESTED APPROACH: Review and analyze MOL system design and performance requirements for the IVS. Examine the programs of each of the subcontractors analyzing the responsiveness of their approaches to system requirements; their design approaches; theories of operation; rationales for selecting their approaches; performance limitations; suitability of performance trade-offs; test programs; major problem areas; and proposed fixes. Examine the General Electric test program for each of the vendors' items for adequacy, pertinence, and technical competence. Evaluate each of the vendors with respect to each other and the overall conduct of the work by General Electric.

RESULTS DESIRED: A written report summarizing the views of the Review Group which evaluates each of the vendors' programs; the General Electric program; and expresses a level of confidence for each of the vendors and the overall program. A welcome addition to the Review Group's evaluation would be their recommendation for alternative technical approaches, modifications of the current approaches and the identification of additional desirable development activities.

Handle via BYEMAN

Control System ~~SECRET~~

~~SECRET~~

2 2
7 10

BYE68388-68

AUG 23 1968

BYE-68387/68

7 R



MEMORANDUM FOR DR. FLAX

THRU: Mr. Davis
Dr. Yarymovych

SUBJECT: Ad Hoc Review Group on the MOL Image Velocity
Sensor (IVS)

The purpose of this memorandum is to provide you a status report on preparations to date for the Ad Hoc Review Group on the MOL IVS. I met with Dr. Brian O'Brien at Andrews on August 19 and outlined our tentative plans to conduct the review at General Electric, Valley Forge on September 19 and 20. We briefly discussed the IVS problem and the composition of the Ad Hoc Group. He seemed quite enthusiastic about participating as Chairman of the group and concurred with my outlined plan.

I have discussed the composition of the Ad Hoc Group with a number of individuals with the view of obtaining the right mixture of expertise and skills for the purpose of insuring an adequate technical balance with a small number of people. It appears that Dr. Cannon will not be able to participate due to other schedule commitments. At the moment the tentative organization of the group is as follows:

Dr. B. O'Brien, Chairman
Dr. Brockway McMillan (not confirmed as yet)
Mr. Harry Davis
Dr. M. Yarymovych
Colonel L. Alien
Mr. L. Crouch (WADG)
Mr. J. McFadden (Dyametrics)

DORIAN

Handle via ~~SECRET~~
Control System

~~SECRET~~

Page 1 of 2 pages
Copy 7 of 10 copies
SARSA Control BYE 68387-68

~~SECRET~~

The general format proposed for the meeting will consist of one day of briefings and a second day for discussion and preparation of the report. Generally, the briefings will include a brief review of the overall MOL Program; a summary of General Electric's IVS responsibilities; a review of the IVS requirements; presentations by the three vendors, following a prescribed format in which the vendors discuss their understanding of the requirements, their design approaches, theories of operation, rationales for selecting their approaches, performance limitations, suitability of performance trade-offs, test programs, major problem areas, and proposed fixes. At the conclusion of the vendors' presentations, General Electric will then present the content of their test program of each of the vendors' items. This will be followed by the MOL Systems Office/Aerospace evaluation of the program to date and a brief discussion of the operational concepts for employment of the IVS.

Following the presentations, the group will go into executive session for the purpose of producing a written report which evaluates each of the vendors' programs, the General Electric program and expresses their level of confidence for each of the vendors and for the overall program. Additionally, they will be asked to express their views on alternative technical approaches, modifications to the current approaches, and the identification of additional desirable development activities.

From a long range view, I am now planning, and I will consult with the group, to reconvene them in about six months for a follow-up session. I will ask Dr. Cannon to participate at that time.

As soon as the specifics are defined, I will provide for your approval, a charter for the group, and a letter for your signature to Dr. O'Brien formally requesting him to Chair the group.

Cys to:
SAFSL - Chron File
SAFSLP - Official File
SCG Read
Col Ford/SAFSLP/50945/
23 Aug 68/shw

DORIAN

SIGNED

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

Handle via ~~SECRET~~
Control System

~~SECRET~~

Page 2 of 2 pages
Copy 7 of 10 copies
SABOL Control BVE 68387-68