MEMORANDUM FOR GENERAL STEWART

SUBJECT: Convertibility in the MOL Program

Attached is a study of convertibility in the MOL program which was initiated at General Evans' direction. The study is the result of joint endeavors of SAF-SLS and SAF-SLM. It is based on information obtained from Systems Office and contractor personnel.

As defined in the study, convertibility means changing the mode of any MOL flight from manned to unmanned, or vice versa. This study responds to the need for an examination of conversion possibilities on baseline flights 6 and/or 7; it also addresses the subject in the larger perspective of a follow-on MOL program.

The MOL program does not now have a conversion capability. The desire for a capability to convert flights 6 and/or 7 from unmanned to manned stems from the possibility that the results of manned flights 3, 4 and/or 5 may dictate the necessity for additional manned flights. Such a contingency can be met only by recognizing the requirement and providing the funding necessary to achieve a conversion capability. The conclusion reached in the attached study is that the program should include a conversion capability for both flights 6 and 7 -- to be funded primarily with early follow-on program funds. FY 69 is the first year funds would be required for this flight 6/7 capability, and since the needed funds are only about $2.0 million, they could easily be absorbed in the baseline program.

The study points out that a realistic conversion capability based on module substitution, and predicated on a mixed manned/unmanned follow-on program, will enable changes from one mode to the other as late as 5½ months before launch without slippage. By going to complete Orbital Vehicle (Gemini/LM/MM) substitution in the follow-on program, decision time could be reduced down to 50 days before launch with no launch delay; lack of availability of additional mission payloads precludes use of this approach for flights 6 and 7.

The study shows that the most cost-effective way to achieve convertibility in the total perspective (baseline plus follow-on) assumes a mixed-mode follow-on program. This fundamental assumption appears reasonable, and on this basis the study recommendations should be acceptable whenever they are presented to Dr. Flax and the OSD hierarchy. Since there is no real funding impact from the recommended method of conversion until FY 70 (the initial $2.0M in FY 69 being manageable in the baseline), it appears that a proposal need not be made to Dr. Flax until early 1968.

SIGNED

WALTER W. SANDERS
Colonel, USAF
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Study

cc: Dr. Yarymovych
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