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C O P Y

3 Oct 1966

Honorable Charles L. Schultze
Director
Bureau of the Budget

Dear Charlie:

The comparison studies between the present MOL Program and a similar development of a wholly unmanned system of equivalent resolution have been completed.

Comparisons have been made between a 30 day manned mission capability and a 60 day unmanned mission capability. These studies have focused on the achievement of resolution in each case and a weighing of reliability, time on orbit, quantity of intelligence take and development costs.

Improvements the man can make in quantity of pictures taken in a 30 day mission can be approximately equaled in the unmanned system by a 60 day mission. This point of equivalent quantity might occur as early as 45 days. It is clear to me, however, that the manned system offers maximum assurance that the development cycle can be minimized by using his on-orbit knowledge of system performance to rapidly converge on the precision subsystems problem areas which must be solved to attain resolution in the photographs.

The wholly unmanned system would require additional flights to bring it to equivalent reliability on resolution to the present MOL program. The development cost as estimated in the studies is \$1.5 billion for the 60 day system. The present MOL Program is estimated to cost \$1.818 billion for the combined unmanned and manned options. This difference of \$318 million in total program costs is offset somewhat by higher confidence in the present MOL Program definition costs which have been developed over the past 2 1/2 years.

Although contract negotiations have not been completed, it is my belief at this time that the MOL program as now defined will cost approximately \$2.0 billion. I am also quite certain that at least this difference of \$182 million would be additive to the wholly unmanned development, in the same way I am estimating it for the current MOL Program.

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My review of these studies have led to the conclusion that there is a 10 to 15% cost difference in favor of the wholly unmanned development. At this point in time, the confidence I have in man assisted achievements of [redacted] resolution is higher than I could have in the wholly unmanned development of achieving [redacted] resolution at the same pace because of the engineering development problems in precision subsystems.

I intend to proceed with the present MOL Program at the optimum engineering development pace as dictated by the development cycle required for the optical payload. The optical payload is presently on schedule for delivery of the first flight unit in last quarter of CY-1969. I will be glad to discuss my conclusions with you in more detail if you desire.

DORIAN

Sincerely,

SIGNED

BOB

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