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NATIONAL RECONNAISSANCE OFFICE
WASHINGTON, D.C.

THE DIRECTOR

24 SEP 1969

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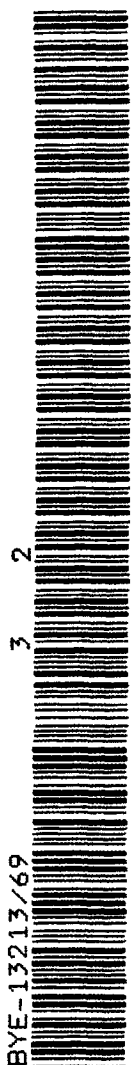
MEMORANDUM FOR DR. SEAMANS

SUBJECT: NASA Proposals to Study MOL ATS and DORIAN
Technology

NASA has proposed two actions related to continuing examination of their potential for using MOL developed hardware and technology. These are contained in their letters of 12 September 1969 (Atch 1 and 2). These actions involve the Acquisition and Tracking System (ATS) and the DORIAN optics technology.

Regarding the ATS, NASA desires to contract with General Electric Co. and possibly ITEK through the Air Force (SAFSP) to study the applicability of this hardware to their experiments program. This appears to be a straight forward first step and we agree with NASA's suggestion that the existing security guidelines remain in effect during such a study. To support this activity, we should inform the affected termination contracting officer of the need to freeze the ATS and related equipment pending completion of the study and/or transfer of the equipment to NASA. Required from NASA are the funds and a statement of work to form a basis for an SAFSP contract.

Preparation of the work statement might be expedited by providing NASA with the assistance of two or three Air Force officers, now in AFSC Headquarters and thoroughly familiar with the equipment in question. Such an arrangement would also facilitate establishing a DOD/Air Force position of interest and intent regarding the experiment.



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The question relating to the DORIAN optics technology appears equally straight forward and workable through the steps suggested by NASA. Arrangements have been made for a visit to the Eastman facility for the purpose proposed. Mr. Hubbard of the MOL Office will represent the NRO and accompany the party to Rochester.

In general, we feel it is most advisable to conduct all studies related to determining feasibility and desirability of using these equipments within the BYEMAN security system. At the appropriate time the pertinent policy questions will be addressed.

I have prepared a letter for your signature to Dr. Newell expressing our willingness to cooperate in both areas at least to the extent addressed in their request. It also suggests that steps be taken at the working level to prepare necessary work statements, arrange for transfer of funds, and proceed with the task. By separate means, I will enlist General King's assistance with contracting and related activities.

M.L.

2 Atch
a/s

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OFFICE OF THE ADMINISTRATOR

September 12, 1969

Honorable Robert C. Seamans, Jr.
Secretary of the Air Force
Washington, D. C. 20330

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Dear Bob:

We have been discussing with your staff the possible use of the Acquisition and Tracking System (ATS) and the ATS simulator from the MOL program in conjunction with the NASA Apollo Applications and Earth Observations Programs. It also appears there is some interest on the part of the Air Force in a manned experiment built around the same device.

Although we have already set in motion consideration of NASA interest in this MOL technology, we are not in a position now to make a final recommendation as to whether, or how, this asset should best be employed. In order to look into these possibilities with the thoroughness they require, however, we feel it would be wise to retain the MOL mission simulator in its existing condition for at least 60 days. This would permit NASA to evaluate the applicability of the ATS and simulation equipment to the Earth Resources Survey Program under the lead of Mr. Jaffe, and to examine the technical feasibility of carrying the ATS on board the orbital workshop under the lead of Mr. Schneider. These studies would be closely tied together and would require contractor support from General Electric and perhaps from Itek. We are prepared to fund this effort during the 60-day study period.

It might be simplest for NASA to fund the Air Force, who could, in turn, carry out the necessary contracting activity through SAFSP. We would assume this phase of the activity would remain highly classified.

During this same period, the DOD could further define any potential experiment objectives and requirements; if appropriate, NASA and DOD could combine forces and carry out the necessary studies jointly.

If, after completing the studies, it were found desirable to make use of the ATS or a derivative for an AAP experiment, there would be a number

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of classification and policy decisions to reach. For example, if the ATS were a NASA experiment, should we contract for it directly in the white? How should its prior history as part of an Air Force development be treated? Should there be constraints on the imagery returned or released? If the experiment were to be joint with DOD, there would be the additional question of NASA's image if any classification were required.

These questions do not, in our mind, require immediate resolution; they can be worked on concurrently with the critical tasks of experiment definition and technical analysis. I am aware of the great pressures upon you to terminate all MOL-related activity, but I feel that the suggested 60-day continuation and limited supporting effort is in the best interests of both agencies and would not impact Air Force funding requirements adversely.

Sincerely,



Homer E. Newell
Associate Administrator

✓ cc: Colonel Lew Allen, Jr., USAF

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OFFICE OF THE ADMINISTRATOR

September 12, 1969

Honorable Robert C. Seamans, Jr.
Secretary of the Air Force
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Dear Bob:

As you know, NASA's long range plans in space astronomy point toward the eventual development and operation of very large diffraction limited orbital telescopes. One step along the way that we are considering is a large stellar telescope (ATM-B) for operation with the second "dry workshop", planned for flight in 1974. We have, with the assistance of the MOL team, taken steps to have Dr. Aden Meinel of the University of Arizona and Messrs. Olivier and Waite from the Marshall Space Flight Center examine the existing MOL hardware at Eastman Kodak. Their purpose is to make a preliminary evaluation as to the suitability of this equipment for stellar astronomy, the steps that might be required to so modify it, and the probable compatibility of the system with the Apollo Telescope Mount and dry workshop. We expect to have their preliminary findings within several weeks.

In the event their report is positive, NASA would see the next step as a detailed technical feasibility study. Under the circumstances, this study would be classified and probably best contracted for by the DOD with reimbursement from NASA. We feel we can progress this far without any commitment being sought or implied as to the actual use of DORIAN systems or technology by NASA.

If the feasibility study were to show significant advantages of such utilization, we could then come to grips with the security and program policy issues that this might raise.

In the longer term, we are vitally interested in the question of how NASA should move in the development and testing of very large optics,

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and what role the classified capabilities — technology and facilities — should play therein. This topic can await further elaboration until the more immediate questions of existing hardware have been resolved.

Sincerely,



Homer E. Newell
Associate Administrator

cc: Colonel Lew Allen, Jr. USAF

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