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151 NATIONAL RECONNAISSANCE OFFICE

WASHINGTON, D.C.

THE NRO STAFF

September 22, 1970

MEMORANDUM FOR DR. MC LUCAS

SUBJECT: MOL Residual Computers

<u>Purpose</u>: To inform you of conflicting requirements for MOL residual computers.

Background: In his memo to the Secretary of Defense on October 6, 1969, Dr. Seamans stated that the MOL Mission Simulator was to be the subject of a study by NASA for possible use in the Apollo Applications Program. You will recall that the study was completed in March and the decision made to proceed with turnover of the Simulator to NASA, including the associated computers -- an IBM 360/44, SDS 930/Beckman 2200, and a TR-48N. Of these computers, only the IBM 360/44 was specifically mentioned in Dr. Seamans' letter. Also included in the study and turnover decision was the use by NASA of two 4 pi airborne computers designed to control the Acquisition and Tracking Telescope Mirror. These computers are not required as part of the Simulator, but would be required if NASA flies a telescope similar to the Acquisition and Tracking Telescope in the SKYLAB Program. Since we arranged to turn over the elements of the Telescope, turnover of the 4 pi computers was a logical step and NASA did want them.

The office of the Director of Data Automation--in their role of determining the best reutilization of computers--has questioned the propriety of the transfer of MOL residual computers to NASA. Specifically, they have identified validated Air Force requirements for 4 pi computers, and have placed a hold order on transfer of the 4 pi computers we offered to NASA. This hold order is a challenge to the





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original decision; however, as we prepared to respond we found that NASA in fact has no firm plans to use the 4 pi computers and there is a good chance that they will not be able to use them in the future. Thus we do not have a good argument to support retention by NASA, and NASA has readily offered to forego them. We propose, with your concurrence, to make these two 4 pi computers available to the Air Force; we can handle the details with NASA easily and at a low level.

It is possible that the decision to turn over the SDS 930/Beckman 2200 and the TR-48N with the Mission Development Simulator may also be questioned. We intend to maintain a firm position on the transfer of these computers to NASA, on the valid basis that they form an integral part of the Simulator. In order to formalize the details of the transfer, we are proceeding to process an after-the-fact waiver to DOD Directives on computer reutilization. We will be pleased to discuss with you any details you may desire.

<u>Recommendations</u>: That you concur with releasing the 4 pi computers to the Air Force.

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FREDERICK L. HOPMANN

Major, USAF

29 Sep 70, he directed that we proceed with withdrawal

of the 4 Pi computer from NASA for application against

Othe Air Torse requirement— He said that this attion could

be taken without further consultation with the Mc-Sucar.

Mr. Schtereer Shows & suggestion

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DEPARTMENT OF THE AIR FORCE OFFICE OF THE SECRETARY

MEMORANDUM

October 1, 1970

NOTE FOR DR. NAKA

SUBJECT:

Notes for Your Meeting With Gen Smart

We understand that Gen Smart will want to discuss with you the current status of disposition of materials under the Studies.
Attached is a resume of current status and our concerns about these studies, which you may wish to use as a talking paper.

Reduck A. Hofmann FREDERICK L. HOFMANN Major, USAF

Attachment Talking Paper

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TALKING PAPER FOR MEETING WITH GENERAL SMART OCTOBER 1, 1970

The MOL simulator has been transferred to NASA following completion of the Study, and there appears to be no problems in this area. The telescope and associated equipment are in the final stages of transfer to NASA. This is a calculated risk operation, and if the equipment is applicable to SKYLAB and represents significant costs savings or technological capability, the risk is acceptable. This will also provide some side benefit to the NRO by lending limited financial support to ITEK. In fact the only positive outgrowth of this exchange to date has been the use of ITEK as a consultant to the Martin Company on a tracking scope they have proposed for the first SKYLAB.

We have been informally told by NASA, however, that they do not expect to be able to use the acquisition and tracking scope. If this is the case, and the equipment cannot be effectively used by NASA, it should be destroyed.





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With the destruction of the equipment, the paper work which is presently in the process of being rewritten from the BYEMAN system to make it unclassified, should also be destroyed. We believe that the risks associated with NASA maintaining the acquisition and tracking scope but not using it are unacceptable.

At the time of turnover of equipment under the Study, we turned over two 4 pi airborne computers. This turnover was handled rather informally from the standpoint of obtaining clearance from the Automatic Data Processing Equipment people on the Air Staff. As a consequence, the Air Staff challenged the decision. In preparing to respond, we checked with NASA and found that in fact they were not going to be able to use the 4 pi computers. We are therefore in the process of withdrawing the two 4 pi computers from NASA and returning them to Air Force inventory. We have worked with Mr. Hubbard on this re-transfer.

Following completion of the Study, we agreed to store the DORIAN optics for NASA at the Eastman Kodak facility. The approximate monthly storage cost is \$5,250,



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and there is a one time disposal charge of \$50,000 if NASA does not want the equipment. NASA funds previously furnished for the storage have now been expended. NASA has been asked--informally, so far--to furnish more funds for additional storage. In response, NASA has recalled a statement by Dr. McLucas to Dr. Newell, that perhaps the NRO could fund for additional storage. We are not presently prepared to take a position on this matter with NASA, for we feel that Dr. McLucas should be queried to determine his present intent regarding funding for storage. Lt Col Walecka is handling this matter for the Comptroller.

The transfer of the DORIAN optics to NASA--if this is to occur--is extremely sensitive, and we have grave reservations about the subject. If it is determined that this is in the best interests of the government, there are certain steps that must be taken prior to initiating a transfer for action. These include:

a. A definite statement by NASA as to intended use, and whether or not the hardware would be modified or left in the original or near original configuration.





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- b. A decision by NASA whether they want the DORIAN optics, and Eastman Kodak as a contractor, or whether they are interested in only the optics or only Eastman Kodak.
- c. A rational history and explanation must be established for both optics and/or Eastman Kodak expertise.

We recall that at a previous meeting between

Dr. Newell, Dr. McLucas and Gen Allen several other

subjects were included. Among these were the use of

U-2 aircraft by NASA, the possible revival of ERTS C/D

satellites (which might involve a new request for NASA

for CORONA vehicles), and possible joint use of the

NASA has appeared quite interested

in the use of the in recent weeks.





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15) NATIONAL RECONNAISSANCE OFFICE

WASHINGTON, D.C.

THE NRO STAFF

October 2, 1970

MEMORANDUM FOR THE RECORD

SUBJECT: Talk With Mr. Schedler on MOL Residual Computers

On October 1, Lt Col Walecka and I discussed the turnover of MOL Residual Computers to NASA with Mr. Schedler. We explained to him a little of the history behind the decision to turn over the mission development simulator to NASA, along with the turnover of two 4 pi computers. We related to him that the 4 pi computers were not included in the Dr. Seamans' October, 1969 briefing to Secretary Laird, but that we had elected to turn them over to NASA based upon the results of the Study. We then told him of the hold action placed on the turnover of 4 pi computers resulting from the Air Force requirement to use them on the AWACS Program, and our subsequent actions to have them returned to the Air Force inventory. He agreed with our actions.

We then explained to Mr. Schedler that in addition to the IBM 360/44 computer, the mission development simulator contained other computers; namely, an SDS 930/Beckman 2200, and a TR-48N. Since it was the intent of the MOL Residual Disposition Board to turn over simulators as complete systems, including associated computers, we were going to proceed with the turnover of the complete mission development simulator to NASA. We explained that to satisfy DOD Directives, this would require the processing of after-the-fact waivers. Mr. Schedler agreed that the simulator including all computers should be turned over as a unit, and asked if we had discussed the matter with Gen Morris and Col McGovern. I stated that I had tried in the past to





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see Gen Morris, who was unavailable, and would welcome the opportunity to explain to him the actions we were taking.

Mr. Schedler asked that we furnish him a copy of Secretary Seamans' letter to the Secretary of Defense, dated October 6, 1969 and a copy of Dr. McLucas' letter to Dr. Newell in which he offered the MOL Residuals to NASA.

FREDERICK L. HOFMANN Major, USAF

October 5, 1970

M/R On October 2, I handcarried to Secretary Schedler the correspondence he had asked for, explaining that it could readily be sanitized. After reading the papers, he confirmed the results of our conversation on the previous day, that the MDS and associated computers would be transferred to NASA.

He retained a copy of the letter from Secretary Seamans to Secretary of Defense dated October 6, 1969.

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451-NATIONAL RECONNAISSANCE OFFICE

WASHINGTON, D.C.

THE NRO STAFF

October 5, 1970

MEMORANDUM FOR THE RECORD

SUBJECT: Discussion With General Morris

On October 2, I discussed with General Morris the turn over of MOL Residuals to NASA, at the request of Secretary Schedler. I explained to General Morris that we were releasing the 4 Pi Computers to the Air Force and proceeding to document the turn over of the mission development simulator. General Morris explained his interests as being sure that we keep the Secretary and Assistant Secretaries "honest" -- i.e., making sure that we inform them of the actions and waivers necessary to implement their decisions. He said, and later reiterated, that he wanted to be informed of the disposition of computers, in this case the 4 Pi and MDS Associated Computers.

Major, USAF

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- IST NATIONAL RECONNAISSANCE OFFICE

WASHINGTON, D.C.

THE NRO STAFF

October 6, 1970

MEMORANDUM FOR THE RECORD

SUBJECT: MOL Residual Computers

At Secretary Schedler's request, I briefed Col Thomas McGovern, Assistant for Data Automation, Office of the Principle Deputy Assistant Secretary (Financial Management) today. I briefly reviewed for him the events leading to the decision to turn over the Mission Development Simulator, its associated computers, and the 4 Pi Airborne Computers to NASA. I told him of the events that had transpired since then, leading to our decision to turn back the 4 Pi Computers to the Air Force. Col McGovern said that Mr. Schedler supported our position, provided that the Mission Development Simulator Computers could be retained by NASA legally. The remainder of our discussion was devoted to the Mission Development Simulator.

Col McGovern said that because of the way other MOL Residual Computers had been handled the request for a waiver to permitato retain the MDS Associated Computers would undoubtedly receive extremely close scrutiny from DSA and GSA. As a starting point, we should contact Col Burkett, AFACDC, and determine from him whether or not there is a validated need in the Air Force for any of the MDS related computers. The answer to this question will determine our next course of action. If there is no validated Air Force requirement, then we will probably prepare a memorandum for Secretary Seamans' signature to DSA, stating the compelling reasons why we should turn over



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the MDS computers for NASA use. At some point, GSA enters the act, since they and not DSA are the computer releasing authority for all government agencies outside of DOD.

In order to be fully prepared to support the turnover to NASA we need to know the answers to certain questions. Prime among these are the degree of modification of the computers themselves, that make them peculiar to the MDS. Specific questions that need answers are:

- a. Is the IBM 360/44 modified in any way, and if so to what extend?
- b. Is there anything peculiar in the software for this computer that would preclude substitution of another computer in its place? It appears that the IBM 360/44 is a fairly limited machine, and many computers with greater capacity could be used in its stead. Software specifically written around this machine, however, could preclude its replacement.
- c. The interface between the SDS 930/Beckman 2200 is another area that needs investigation. If the program is written in such a manner that neither of these computers can be substituted then we may have a case for turning them over as a unit.
- d. If removal of a component, e.g., the core of the IBM 360/44 would render the remainder of the simulator vertually useless, this may be a reason for requesting turnover of the simulator as a unit. The latter point may bear investigation, since there is presently a validated requirement by SAC for an additional core unit for their IBM 360/44 computer--the only other IBM 360/44 in the Air Force inventory.





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The outlook for turning the MDS computers over to NASA is not particularly bright. Several other MOL Program Residual Computers have already been returned to the Air Force for redistribution, from such places as Florida State University and the Army at Huntsville. Col McGovern said that Secretary Seamans and Dr. McLucas had been informed of this--or soon would be--and that he had prepared a talking paper on this subject for Mr. Schedler to use. Finally, Representative Sikes of Florida maintains a strong interest in the computer field, and may be expected to question the re-use of these MOL computers.

FREDERICK L. HOFMA Major, USAF

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