~~SECRET~~

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, D.C. 20310

9 FEB 1966

MEMORANDUM FOR THE ASSISTANT SECRETARY OF THE AIR FORCE (R&D)

SUBJECT: Manned Orbiting Laboratory (U)

References: a. Preliminary Experiments Data for the Manned Orbiting Laboratory System (MOL) Program, March 1965.

b. Report Number SSD-TR-65-20, Volume I.

On 14 August 1965, Brigadier General Evans, Vice Director of the Manned Orbiting Laboratory (MOL) Program, briefed the Chief of Staff, U. S. Army, and key members of the Army staff on the MOL. As a result of this briefing and informal contacts with the MOL Systems Office at Space Systems Division, three areas for Army participation in the MOL program have been identified. These are:

a. Tactical positioning, surveillance and geographic support. The activities included in the MOL program are potentially useful for the collection of information for tactical military intelligence (including target locations and characteristics), technical intelligence of primary interest to the Army, military geographic intelligence, locating or positioning Army units, and site selection for river crossings, airfields or other installations in the field. There is also interest in evaluating the usefulness of man in space to support Army responsibilities associated with national disaster (e.g., flood, hurricane and earthquake) and civil defense. The planned MOL experiments for the acquisition and tracking of ground targets, direct viewing of ground targets and electromagnetic signal detection (referance a) are examples of activities which will have a direct impact on Army operations and responsibilities. For this reason, it appears appropriate that the Army participate actively in the development and conduct of the MOL program to assure maximum operational application of this important DOD program. In addition, Army experience and capabilities in the use of satellite data can contribute to the activities planned for the MOL program.

b. Signal intelligence (SIGINT). The Army is particularly interested in the potential of planned MOL activities to develop SIGINT capabilities such as: improved direction finding and target location capabilities over land areas, using a single platform; greater responsiveness to varying signal densities in a given frequency band or bands as a function of geography, time of day or (most important) as a function of actual activity; emphasis on the higher radar frequencies (S-band through K-band) with particular Army interest in intercept capabilities at the highest frequencies) [redacted]

~~SECRET~~

SUBJECT: Manned Orbiting Laboratory (U) BYEMAN

[redacted] Active Army participation in the MOL program would insure coordination of Army interests with other MOL SIGINT development activities and would make Army experience in this field, particularly that of the Army Security Agency, available to contribute to the MOL program.

c. Communications. The operation of the MOL system will require an extensive network of surface communications terminals. In particular, full use of information from MOL-based systems will require communications/data links from the spacecraft to a ground environment which includes terminals suitable for Army field use. Further, the large antenna experiments (reference b) in the MOL program have applications to tactical satellite communications using very small ground terminals which are of particular interest to the Army. Army participation in the communications aspects of the MOL program is necessary both to insure full exploitation of MOL developments and to use the Army's capabilities, developed for the ground environment of the Defense Communications Satellite Program, to support the MOL program.

For each of the activities described above, it is proposed that an Army officer be designated to work in the MOL Systems Office at USAF Space Systems Division. For positioning, surveillance and geographic support activities an officer will be designated from the U. S. Army Geodesy, Intelligence and Mapping Research and Development Agency; for SIGINT an officer will be designated from the U. S. Army Security Agency; and for communications an officer will be designated from the U. S. Army Satellite Communications Agency. Although these officers will remain assigned to the appropriate Army agencies, they will perform their duties as full-time working members of the MOL Systems Office at Space Systems Division. Such an arrangement will permit these Army representatives to maintain close contact with interested Army agencies while making substantial contributions to the MOL Systems Office. Officers selected for these assignments would, of course, be well qualified in their areas of interest. The Space Branch, Office, Chief of Research and Development, Department of the Army has been designated as the Army point of contact for actions with the MOL Program Office in Washington, D. C.

If you agree, we will proceed to establish more specific arrangements with the MOL Program Office and to designate the Army officers who will work at the MOL Systems Office at Space Systems Division. I believe it would be useful if you would assist in obtaining the necessary clearances for the Army personnel both at Space Systems Division and in the other Army organizations which will be directly involved. Additional discussions of this subject can be arranged, if you desire them.

Willis M. Hawkins

Willis M. Hawkins
Assistant Secretary of the Army (R&D)

Copies furnished
Asst Dir (Space Tech), ODDR&E
Dep Dir, DIA

BYE 43009/66