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HEADQUARTERS ⊕ AIR FORCE SYSTEMS COMMAND
UNITED STATES AIR FORCE: ANDREWS AIR FORCE BASE
WASHINGTON, D.C. 20331

Office of the Commander

12 JUN 1965

General J. P. McConnell
Chief of Staff
United States Air Force
Washington, D. C.

Dear General McConnell:

    I have recently reviewed in detail the proposed
program which has resulted from the MOL studies of the
past eighteen months. As you are aware, the specific
objectives of this program are now heavily oriented
toward an early operational capability in reconnaissance
and other missions of military significance. I am sure
you agree that this program is of unparalleled impor-
tance to the Air Force and that every action must be
taken which will contribute to its success.

    Our studies have shown that the development task
is clearly feasible. It is also clear that this task
is a complex one which will demand the very best talent
and experience in the industry. The Air Force must
assemble the most competent and experienced overall
team to conduct this development effort, employing
unique capabilities wherever they exist.

    I have reviewed the report and findings of the
MOL System Source Selection Board and concur in the
recommendation of the Board and of the Commander, Space
Systems Division that contractor A be selected to
conduct the program definition phase. While contractor
A clearly offers the best overall technical program and
management approach, the proposal of contractor D is
superior in a few important respects that bear on mission
capability. Comparing contractors A and D, one finds
that contractor D's design study strongly complements
that of contractor A. This suggests that it may be
particularly advantageous to the government to include
contractor D in the program in those areas where his

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capabilities will strengthen the development team.
Examples of areas where contractor D's capabilities
may be advantageously employed are:

a. Data retrieval. This is a key element in
the reconnaissance mission requiring the best of
existing technology and capability.

b. Engineering design of the experiment module
and interface with the optical payload. Existing
experience can assist in early achievement of the best
optical performance.

c. Drive mechanism for the alternate optical
system. As you know, there are two candidate
optical configurations, each with specific advan-
tages and disadvantages. In one alternative, the
optical system is mounted vertically in a separate
module which is stabilized and controlled from the
laboratory vehicle by a drive mechanism. Mechanisms
of the size required for MOL will require the best
capability and experience in the design and operation
of attitude stabilization and precise control of large
space vehicles.

d. Certain aspects of the command and control
of the orbital vehicle. Here also existing experi-
ence will promote early achievement of the best
system performance.

The resulting team will combine the contractor
who has provided an outstanding management and cost
control plan with a contractor who has current
experience and understanding of space vehicle opera-
tion, as well as expertise in handling a complex
interface with large optical subsystems. In addition,
these contractors together possess the most extensive
aggregate of existing testing facilities that are
available for support of the program.

If you agree with the potential advantages of
this course of action, I will develop a plan and
management approach for allocating specific tasks.
Action can then be taken to initiate discussions with
the two contractors involved.

Sincerely,

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HEADQUARTERS AIR FORCE SYSTEMS COMMAND
UNITED STATES AIR FORCE: ANDREWS AIR FORCE BASE
WASHINGTON, D.C. 20331

Office of the Commander

25 June 1965

General John P. McConnell
Chief of Staff
United States Air Force
Washington, D.C.

Dear General McConnell:

In accordance with my letter to you of 12 June
(Byeman 36185-65), the allocation of specific tasks
in the Manned Orbiting Laboratory Program to con-
tractors A and D has been examined, together with the
management interfaces involved. The primary
objective of this review has been to define the
strongest and most responsive industrial team to con-
duct the development and test program. The purpose
of this letter is to summarize the results of this
effort and to emphasize that further progress will
require discussions with the contractors involved.

The tasks to be accomplished divide most readily
into three major categories dealing with the
laboratory vehicle, the sensor module, and the pay-
load or sensor package itself. A table identifying
the most significant tasks in each category is
attached. Contractor A would, of course, be the
laboratory vehicle contractor and Contractor D would
be assigned responsibility for the sensor module.
The specific roles and responsibilities of each of
these contractors and the sensor contractor are as
follows:

a. The <u>laboratory vehicle contractor</u> will be
the system integration contractor. He will be
responsible for structural analysis of the entire
system through the launch phase and the successful
operation through the 30-day mission of all elements
except those actually contained in the sensor module.
He will be responsible for system documentation,
integrated testing, and launch site management.

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b. The sensor module contractor will be responsible for receiving requirements from the sensor designer and the System Program Office. He will define, design, and engineer a discrete structural carrier for the sensor package and associated crew displays. He would also assemble and test the sensor module elements and prepare them for launch. The sensor module contractor would provide interface requirements to the laboratory vehicle contractor for his own equipment as well as those from the sensor contractor.

c. The sensor contractor will be responsible for the design, fabrication and test of the sensor elements and package. The sensor contractor will interface principally with the sensor module contractor.

A number of alternate management arrangements involving associate and subcontractor roles have been considered. The laboratory vehicle and sensor contractor will be associate contractors. The advantages to be gained in dealing with the sensor module contractor as an associate far outweigh any disadvantages attributable to an additional associate in the contractor structure. In addition to a rapid start-up capability, this approach allows the Air Force to apply existing special technical capability and experience directly to mission objectives. The resultant well-defined interfaces will allow the Air Force significantly more flexibility as other MOL missions are defined and other payload contractors brought into the system. Finally, it permits that compartmentalization necessary to minimize the number of sensitive clearances required and enhance security control.

In summary, further review and analysis has confirmed the potential advantages of including contractor D in the program to perform specific tasks which take full advantage of his special capability and experience. Moreover, it is clear that this arrangement can be implemented effectively.

Further definition is contingent on management discussions with the contractors involved. These

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discussions may indicate that some adjustment in
the responsibilities described above is desirable.
I am prepared to initiate such discussions as soon
as the identity of the contractors involved is
announced.

Sincerely,

Lt Gen, USAF

B. A. SCHRIEVER
General, USAF
Commander

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MOL CONTRACTOR TASKS

LABORATORY VEHICLE	SENSOR MODULE	SENSOR
Over-all Systems Specs	Mission Module Requirements (Mech, Elec, Thermal)	Optical System
Flight Test Operations	Operational Requirements	Payload Operational Modes
Telemetry Tracking & Control	Payload Data Handling (Data Link) (Re-entry Vehicles)	On Board Film Processor and Viewer Film Cassetts
Lab Structure System Simulator MOL AGE System Tests MOL Control Station	Recce Simulator Mission AGE Payload Integration Tests Payload Control Station (Pointing Tracking Scope-Payload Integration) (Data Display and Controls)	Recce Simulation Requirements Payload AGE Payload Tests Pointing and Tracking Scope
Computer Navigation Equipment Power	Computer Programming	Programming & Computer Req. Alignment Equipment Camera(s)

Point with Tracking Mirror	Point Sensor Module	Point with Tracking Mirror	Point Sensor Module
	Large Gimbal	Tracking Mirror Drive	TV Link
	Powered Gyros Control Cab	Optical Relay	
Expanding Structure Environment Control	Expanding Structure Environmental Control		

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H E A D Q U A R T E R S
AIR FORCE SYSTEMS COMMAND
UNITED STATES AIR FORCE
ANDREWS AIR FORCE BASE
WASHINGTON, D.C. 20331

REPLY TO
ATTN OF: MSF-1

4 JUN 1965

SUBJECT: Source Selection Board Activities

TO: General Schriever

1. Attached is a suggested letter which has been
prepared in accordance with your instructions. Its
preparation has involved discussions with General
Maxwell, Dr. Leonard, General Ritland, General Keeling,
General Carter, Colonel Hedrick, and Colonel Carter.
General Ritland, Colonel Carter and I, however, are
the only ones who have seen this letter in final form.
I believe I appropriately reflect the view of all three
of us when I recommend that this letter be used as a
talking paper instead of being transmitted formally to
General McConnell. My reasons for this follow:

   a. The idea of integrating the two strongest
contractors into a single team is indeed attractive.
Its implementation may be quite difficult. One example
is as follows. Contractor A is strong in management
and cost control; contractor D is strong in certain
technical areas. Hence, it seems logical that contractor
D be a subcontractor to contractor A. Contractor D may
not care much for this position; at least he has not in
the past. Further, this could make direct access between
the SSD/Aerospace SPO and contractor D quite difficult.

   b. Another point to consider is that contractor D
may not in fact be the best contractor in the country
to perform the particular tasks that we have outlined in
the accompanying letter.

   c. As a result of General Maxwell's briefing to the
Air Council, a small group of cleared people is being
established to "review the documentation of the Source
Selection Board." Apparently this group will be composed
of me as Chairman, Colonel Snavely (DCS/S&L), Mr. Fine
(Comptroller), Mr. Ross (SAFRD), and representatives from
Assistant Secretary Charles and Assistant Secretary Marks'
offices, as yet unnamed. At this point it is not clear
exactly what this group is to do or to whom they report.

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d. Dr. McMillan has indicated that Dr. Brown's view of one solution to the two versus one laboratory contractor is not to announce a winner but to enter into negotiations with the top two contractors with the intention of selecting the better deal for the government and proceeding with a single contractor for the definition phase.

2. With all of the above clutter appearing on the scene, I feel that further discussions may be appropriate prior to your actually dispatching a letter such as that appended.

HARRY L. EVANS
Brigadier General, USAF
Dep Comdr for Space (MOL)

1 Atch *NOT W/THIS CY*
a/s