



~~JUL 1965~~

MEMORANDUM FOR GENERAL BLANCHARD

SUBJECT: MOL Contractor Information

As a result of meetings held on 30 June 1965, the following instructions were received from Dr. Flax concerning information to be provided to Secretary Zuckert.

Dr. Flax indicated that the Secretary had asked the following questions:

- a. What does the laboratory vehicle contractor do?
- b. What was contemplated in the RFP for the preliminary design studies as to the tasks that the laboratory vehicle contractor would perform?
- c. What are the tasks now contemplated, i.e., what has changed since 25 January 1965?

The answers to these questions are incorporated in TAB A.

Secretary Zuckert then asked that two cases be prepared by the Source Selection Board:

- a. The arguments for contractor "A".
- b. The arguments for contractor "A" as the prime laboratory vehicle contractor with contractor "D" cast as a subcontractor to contractor "A".

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Our instructions were that these two cases should be prepared as affirmatively as possible by advocates of the two arrangements outlined above. These cases are appended as TAB B and TAB C.

SIGNED

HARRY L. EVANS
Brigadier General, USAF
Special Assistant for MDL

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a/s

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Dr. Flax

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TAB A

QUESTION: What does the laboratory vehicle contractor do?

ANSWER:

The laboratory vehicle contractor does the following:

1. Detailed systems engineering of the laboratory vehicle.
2. Prepare system and end item design/performance requirement specifications.
3. Systems integration, assembly, checkout of the orbiting vehicle (the composite of the laboratory vehicle and the Gemini B).
4. Design, tool for, fabricate, and build the laboratory vehicle.
5. Design, tool for, fabricate, and build the associated ground equipment of the laboratory.
6. Provide such system simulators and trainers as are required for the laboratory vehicle.
7. Develop and perform assurance testing, qualification testing, reliability testing of all components and subsystems of the laboratory and in addition responsible for the integration of the Gemini B and transtage (if used) in a complete environmental and thermal checkout prior to delivery to launch site.
8. Flight test operations of the MOL vehicle including the major subsystems inherent in the vehicle structure which include such things as navigation equipment, power supply, life support, attitude control, computers, data display and control, and payload integration. During on-orbit flight he would be responsible for successful operation of the on-orbit vehicle during its orbital life.
9. Participation as an associate contractor in the launch operation. (Martin Company will be the launch conductor.)
10. Responsible for tying in such equipment and instrumentation as are necessary in the orbiting vehicle to provide adequate communications telemetry, tracking and control during on-orbit life.

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11. Quality control, reliability, value engineering; tasks as are identified with the above responsibilities.

12. Laboratory vehicle system management including cost control, schedule, reporting, documentation, configuration management.

QUESTION: What tasks were contemplated in the RFP?

ANSWER:

The tasks outlined above were contemplated in the RFP which was issued on 25 January 1965 and were also covered in the work statement issued the same date for the preliminary design studies to be accomplished. The tasks were broadly stated and included integration of the experiments identified as P-1 through P-15 as well as scientific and technological experiments for DoD and NASA. The MOL concept at that time contemplated the laboratory vehicle as an all purpose experiments carrier. The contractor was not given sensitive information concerning optical reconnaissance and was not informed that the primary objective of the MOL program was high resolution photographic manned reconnaissance.

QUESTION: What has been the change in concept since the original laboratory vehicle RFP?

ANSWER:

At this time the concept for the MOL has been modified to this extent:

1. It appears that the transtage will not be required during the on-orbit flight. Transtage will be used for injection into initial orbit only.

2. The initial objective of the MOL program is to develop and demonstrate an operationally useful high resolution manned reconnaissance system. The flight test objectives for the first three flights are aimed toward this objective. There will be an associate optical system contractor who will, during Project Definition, work with the laboratory vehicle contractor to provide further engineering on two possible sensor systems:

a. A tracking mirror with its attendant expanding structure and environmental control.

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b. A complete sensor pointing system including a large gimbal, power gyros, expanding structure and equipment control.

A decision on which sensor approach is to proceed into Phase II will be made late in CY 1965.

Additional military missions in areas of SIGINT and Ocean Surveillance are of secondary priority. No specific flight test program for these has been defined.

DeD and NASA scientific experiments are of tertiary priority. No specific flight test program for these objectives has been defined.

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TAB B

RATIONALE FOR SELECTION OF CONTRACTOR "A"

Selection of contractor "A" for the PDP and follow-on Phase II for the MOL program is based on two general considerations:

1. The merits of his preliminary design study.
2. The advantages to accrue to the program during PDP and Phase II as a result of his selection.

Analysis of the evaluation of the competing preliminary design studies shows that contractor "A" is clearly the winner by a formal System Source Selection Board competitive evaluation, for the following reasons:

1. Contractor "A" provided a markedly superior management plan.
2. Contractor "A" had the outstanding cost analysis and cost control plan.
3. Although second overall technically contractor "A" had the best laboratory vehicle design. This is the principal hardware item he is to produce.
4. Contractor "A" has the finest and most complete facilities for conducting the program, all company financed.
5. Contractor "A" provided the most comprehensive suggestions for revision to the USAF system design specifications, indicating the clearest understanding of the program objectives.
6. Of all the design studies, contractor "A" had the fewest areas requiring correction, and is competent to do the job.

The following advantages will accrue to the program by selecting contractor "A" as the winner now:

1. Earliest program definition.
2. Provides the opportunity for the DoD to make early and uninhibited technical and management decisions.
3. Allows early commitment of complete contractor resources support to the program - people, facilities, and money.

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4. Earliest selection of most competent development team available.
5. Minimizes interfaces, simplifies management structure.
6. Most effective use of limited DoD technical and managerial people.
7. Directs management attention on the higher risk sensor development, and is consistent with the lesser risk in the laboratory vehicle.
8. Avoids wasting time, money and talent in duplicate engineering for existing qualified components. A preponderance of the tasks under PDP fall into this category.
9. Allows laboratory vehicle contractor to get in step with Titan III, Gemini B. contractors.
10. Maximizes opportunity for progress toward fully structured incentive contract during PDP, including most realistic cost projection.
11. Simplifies security control.

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TAB C

RATIONALE FOR TEAMING CONTRACTORS "A" AND "D"

The advantages of selecting contractor "A" as the winner and augmenting his capabilities with those of contractor "D" are:

1. Preserves the essential advantages of having selected contractor "A" now (see TAB B).

2. Provides a strong team by augmenting the capabilities of contractor "A" with the complimentary capabilities of contractor "D". For example:

a. Contractor "A" provides:

- *The best laboratory vehicle design.
- *Extensive integration experience on major programs.
- *Strong, vertically oriented management organization.
- *An excellent AGE Development Plan.
- *The outstanding Phase I and II program plans.
- *The best cost analysis and cost control plan.

b. Contractor "D" provides special complimentary capabilities such as:

- *Reconnaissance data retrieval.
- *Experience in engineering design of optical payload modules.
- *Expertise in stabilization and attitude control requirements imposed by optical systems.

3. Exploits the unique operational experience of contractor "D" in current unmanned programs of a similar nature.

4. These contractors possess the most extensive existing test facilities among the competing contractors.

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5. Contractor "D" provides a pool of specially cleared people, allowing immediate action on interface problems with sensor contractor.

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