

CRITERIA TO BE EMPLOYED
By the MOL Evaluation Group for Evaluation of MOL
Preliminary Design Studies

1. Introduction - Evaluating Areas of Capability. Evaluating a space system requires the input of the most highly qualified people available. Many of the factors to be evaluated are of major concern, and require the simultaneous and integrated application of specialized and technical knowledge. For greater ease in managing this evaluation, the factors to be evaluated are organized into these three areas of capability:
 - a. Technical Area (Paragraph 3).
 - b. Management Area (Paragraph 4).
 - c. Cost Area (Paragraph 5).
2. General Consideration - Contractor's Correction Potential. Throughout the evaluation, the Air Force must consider correction potential - the contractor's present competence and the probability of his successfully overcoming outstanding problems in meeting his proposed time schedule. An item in one study that is deficient, but which can be easily and readily rectified, shall lower the contractor's over-all rating less than an item in another study with a similar deficiency, that would require a major reorientation of the proposed design or concept.
3. Technical Area - The following criteria are to be used in assessing the contractor's study. These criteria fit the requirements given in the

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Statement of Work forwarded to the contractor by Request for Proposal (RFP) No. RFP SSD-04-695-65-151, 25 Jan 65. The study is the basic and primary source of data for evaluation purposes, but not the exclusive source; other pertinent data will be considered as appropriate

a. Systems Analysis. Evaluate the validity and extent to which the contractor has provided quantitative evidence and analysis underlying his approach towards making the compromises that lead to an optimized total configuration meeting the technical requirements for this system. The flexibility and growth potential inherent in the design approach will be assessed. Where alternate approaches are described, the technical "pro-con" factors expected to be involved in making a final selection will be evaluated. This area of evaluation will include all aspects of the interfaces of the basic MOL vehicle with the Gemini, the transtage, and the Titan III. Moreover, it will cover the integration within the laboratory vehicle between and among the other technical areas. For instance, the evaluation of a technical compromise between the "Experiment Accommodation" and "Crew Provisions and Human Factors" areas would be a function of "System Analysis."

b. Major Laboratory Vehicle Elements. Evaluate the technical approach associated with but not limited to the laboratory vehicle, its structural integrity and dynamics, and the subsystems involving secondary power, stabilization and control, communications, navigation, data transmission, and data retrieval, environmental control, test and checkout, and

AVE, etc. Interfaces and trade-offs between and among these elements will be a prime function of this area. Interfaces external to this area will be evaluated under "Orbiting Vehicle Analysis and Definition."

c. Crew Provisions and Human Factors. Evaluate the adequacy of the analysis for the sustenance and maintenance of the crew; the design approach planned for integrating the crew into the orbiting vehicle and experimental operation; the approach to measure and assure the status of the crew health; the vehicle design approach to provide safe transfer of the crew and provide for servicing of large structures; the orbiting vehicle design approach to insure safe emergency escape during all phases of the flight operation including prelaunch through recovery.

d. Experiment Accommodation. Evaluate the offeror's approach for achieving maximum efficiency in accommodating the "experiments" described in inclosure of the RFP to include the logic employed in arriving at this payload grouping.

e. Large Structures. Evaluate the technical approach associated with, but not limited to, large structures proposed, their structural integrity and dynamics, test and checkout, servicing, etc. Interfaces and trade-offs between these elements and the MOL vehicle will be a prime factor to be considered.

4. Management Area. In evaluating the items described below, general consideration is to be given to the realism of data in contractor's proposal, and confidence in his proposed performance. However, in

addition to the proposal, any other pertinent facts needed to reach a sound conclusion should be considered in the evaluation process.

The specific items are:

a. Organization and Resources. Evaluate the specific management organization proposed for the program by the offeror. Analyze the proposed organization's relationship to the present management structure to determine if alignment is functional or project oriented. Examine existing or proposed statements of functional responsibility and authority. Examine the experience the offeror has in similar or related work. Determine other work offeror is now performing or negotiating for similar or related effort with other Government organizations or Government contractors. Analyze both the industrial background and R&D background of the offeror. Examine available evidence of quality of products.

b. Program Planning. Evaluate the planning and time phasing of the proposed effort as distributed among the major tasks. Analyze the time distribution (monthly for Phase I, quarterly for Phase II) of the phased buildup of manpower for each task specified in each statement of work in the following categories:

- (1) Scientific
- (2) Engineering
- (3) Engineering Support
- (4) Management and Administrative

(5) Shop and Production

(6) Other

c. Program Control. Evaluate the contractor's system of management control for the development, production and support of this system.

This includes both schedule and fiscal control.

5. Cost Area. Evaluate the total program cost by Phase and task by the BSD/SSD Cost and Price Analysis Form 23 submitted by the offeror. Analyze both commitments and expenditures by fiscal year as well as profit pattern proposed by the offeror. Evaluate the completeness of coverage, realism, and validity of the cost estimates for all segments of the offeror's program, including the effectiveness and applicability of the techniques and the methods by which they were derived; this includes:

a. The identification and description of major cost deficiencies and their causes.

b. Planned expenditure rates for separate program segments to be related time-wise and cost-wise, to determine efficient dollar utilization.

Identify and evaluate adequacy of contractor-owned and leased facilities offeror plans to use in support of this effort, or any additional facilities contractor plans to provide/modify for this program. Identify Government facilities in possession of offeror that are proposed to be used in this program, including any modifications or updating required for this work.

Analyze any need projected by the offeror for additional Government facilities and reasons why it is inappropriate to be provided with corporate funds. Analyze adequacy of machine tools, production and processing equipment, laboratory and test equipment, portable tools, material handling, automotive equipment, etc., proposed to be used by the offeror. Examine need for acquisition of land, if proposed.

6. How to Assign a Score in an Evaluation:

a. In evaluating scoring, a numerical rating is assigned to each item in the "Criteria To Be Employed." These are:

- 10 - Excellent
- 8 - Very Good
- 6 - Good
- 4 - Fair
- 2 - Poor
- 0 - Unacceptable

b. Each item to be rated will cover a broad area; to arrive at the numerical rating, consider all factors that should influence the rating of that item. First, you must identify all the factors that affect the numerical rating for an item; each of these factors is, in turn, evaluate as follows:

- + Above Normal
- / Normal
- Below Normal
- O Unacceptable
- N Insufficient information for evaluation

Note: Normal is defined as "that quality of design, approach to the problem, planning, contractor capability or economy that meets the minimum USAF requirements."

c. Some of the factors rated on an item are more important than others and, therefore, deserve more weight. In such circumstances, a simple arithmetic calculation, adding up the number of +, /, -, O, and N ratings, will not suffice; each must be weighed in accordance with its importance.