

~~SECRET~~

Bye-89719-68

copy, 1 pg

16 JUL 1968

SUBJECT: MOL Monthly Management Report, 25 May - 25 June 1968

TO: J. T. Stewart

Attached is the monthly report of significant events, 25 May -
25 June 1968.

J. S. Blymeyer
J. S. BLYMEYER

1 Atch
Report

BYE-89719/68

1 N

S



EXCLUDED FROM AUTOMATIC
REGRADING; DOD DIR 5200.10
DOES NOT APPLY

DORIAN

~~SECRET~~

HANDLE VIA BYEMAN
CONTROL SYSTEM ONLY

11

~~SECRET~~

Bye-89719-68

*Atch 1
Cof 1, 5 page*

MOL Monthly Progress Report
25 May - 25 June 1968

Technical Progress

1. Significant milestones accomplished during June were:
 - (a) The Mission Module Forward Section was accepted.
 - (b) The LM Forward Structure for McDonnell was produced.
 - (c) Douglas shipped the MOLTOL Compiler to General Electric.
 - (d) McDonnell completed the Static Reentry #1 Structure.
 - (e) EK's Chamber I successfully passed its checkout test. (This chamber provides a 72 foot optical path for testing the quality of in process curved mirrors.)
 - (f) EK received the Engineering Model Camera Optical Assembly Structure on 9 May from DAC. By 27 May the structure had been inspected by EK's quality control office and put into the first phase of assembly.
 - (g) Construction was initiated on the VAFB MOL Support Facilities.
2. Aerospace completed a study of the requirement for displays on-board the Apollo Class Insertion ship which will be used for downrange tracking, telemetry, and voice coverage during the later portion of MOL Stage II flight. Based on this study, on-board displays are not required and may be eliminated.
3. On 25 June, the All Systems Test Equipment Group (ASTEG) CDR was initiated at Huntington Beach and should be completed in July.
4. Martin Company has completed the Phase I effort on POGO accumulators and has submitted a Phase II proposal. Aerojet has been directed to test the engines with the new POGO hardware to determine the effect on engine performance.
5. The use of Computerized Checkout Equipment (CAGE) on the T-IIID Program was officially cancelled in favor of conventional AGE. The MOL Program will now bear the total cost of this development effort.

DORIAN

1

EXCLUDED FROM AUTOMATIC
REGRADING; DOD DIR 5200.10
DOES NOT APPLY

~~SECRET~~

HANDLE VIA BYEMAN
CONTROL SYSTEM ONLY

~~SECRET~~

Bye-89719-68

6. The IVS Evaluation Report has been received from General Electric and reviewed by the Systems Office. The report provides a description of the three vendor approaches, a bench tester description, an open loop tester description, a description of test results, and a weighting matrix of spec requirements versus a requirements fulfillment percentage for the three vendors. A further discussion of the problem areas of the three vendors was presented. This report presented a good overall synopsis of this competitive effort to date.

7. Underwater Zero "G" Program: The Systems Office reviewed General Electric films of their underwater test activities (using a MOL structure) at the Virgin Island Facility. An underwater facility is presently under construction at Valley Forge, Pa. The contractor was requested to provide a cost estimate for this program.

8. General Electric presented plans to Aerospace and the Systems Office for their proposed construction of an Acoustic Test Facility at Valley Forge, Pa. General Electric is considering the construction of a large \$6.7M facility that will accommodate a vehicle 22' in diameter by 60' high. However, General Electric has not completed their study and no final decision has been made.

Program Management

1. The major Project Upgrade effort is now concerned with Statements of Work and Contractual Documentation. Following completion of the 25 May 68 SP/DR meeting, the procurement activity for Project Upgrade was replanned and the end date for the event "Distribute Definitive Pricing Document (S/A)" was identified as 2 Apr 69.

2. Interface Technical Signoff Meeting (TSOM) No. 5 was held the week of 10 June at GE. This series of TSOMs are being conducted to achieve technical resolution of interfaces between the Lab Module and the Mission Module. Participants include DAC, EK, GE and the MOL SO. Of the 132 interface items scheduled for signoff, 127 were completed. The next TSOM in this area is scheduled for the week of 12 August at GE.

3. The implementation of the Deputy Director's letter of 22 May 1968, subject: MOL Associate Contractor Roles and Responsibilities for Operations at Vandenberg AFB, has resulted in the following actions:

(a) Martin Marietta and the McDonnell Douglas Corporations have developed a Joint Operating Agreement (JOA) which identifies their roles and responsibilities as Launch Support Contractor and Mission Support Contractor respectively.

DORIAN

2

~~SECRET~~

HANDLE VIA BYEMAN
CONTROL SYSTEM ONLY

~~SECRET~~

Bye-89719-68

(b) The Systems Office, considering the acceptability of the JOA, has asked each contractor (MMC and MDD) for a proposed Work Statement covering the Vandenberg AFB effort. Conceptually, the test and operations effort will include Martin Marietta integrating the Flight Vehicle, serving as custodian of SL-6, and providing the general program control support to the 6595 Aerospace Test Wing (these activities will be all "white"); and McDonnell Douglas will integrate the Orbiting Vehicle, provide appropriate "white" inputs to MMC, and provide the "black" program control support to the 6595th.

4. On 26 June the McDonnell Douglas Corporation announced the formation of a new company which consolidates McDonnell Astronautics Division and Douglas Missile and Space Systems Division into the McDonnell-Douglas Astronautics Company. Principal officers of the new company are C. Able, Chief Executive Officer and Chairman; W. Burke, President and MOL Program Manager; R. L. Johnson, West MOL Operations; and R. L. Pepping, East MOL Operations.

5. Phase II cost negotiations with United Technology Center (UTC) continued. The contractor has made minor reductions from his initial position. The Systems Office is presently evaluating these modifications and re-evaluating the technical, cost and incentive positions. Major differences presently exist which must be further examined by both parties before a mutual agreement results.

6. General Electric has selected Bell Aircraft Co., Buffalo, N.Y., as subcontractor for the Low G Accelerometer. A Source Selection briefing will be presented to the Systems Office in July.

7. TRW briefed the Systems Office on a revised proposal for the Ascent and Reentry Ground Software effort. (TRW's first proposal was rejected due to the proposal's overall cost, \$9.84M.) TRW's proposed methods for reducing the cost of this effort appear acceptable. The present cost is estimated at \$6M. TRW will submit a detailed proposal, based on their briefing, the first week in July 1968.

8. Long Duration Studies: Representatives of North American Rockwell briefed their study effort to design a rendezvous logistics vehicle for follow-on applications utilizing the Apollo Command Service Module (CSM) 56-day vehicle being developed for NASA. Assuming their financial data to be accurate, they are financially competitive and have somewhat of a technical advantage. However, future success depends on continued NASA funding.

9. SAMSO Advanced Plans: The Aerospace Corporation presented their plans for SAMSO's Synchronous Orbit Space Station. This would be a 2-6 man space station launched by an up-rated T-IIIM. The missions planned include communications relay, [REDACTED] and satellite repair. This is an in-house effort to determine the feasibility of a Synchronous Orbit Space Station in the late 1970s.

DORIAN

~~SECRET~~

3
HANDLE VIA BYEMAN
CONTROL SYSTEM ONLY

~~SECRET~~

Bye-89719-68

10. The Systems Office was represented at a meeting at which AEC and NASA presented plans for development of nuclear electrical power systems. Both agencies were interested in obtaining "requirements" from potential SAMSO users. An extensive discussion of MOL interests in advanced systems was held after the meeting, in which NASA and AEC attempted to determine the suitability of their development program to meet our requirements.
11. The Directorate of Bioastronautics (SL-10) presented a briefing on 18 June to Dr. Stuart Bondurant, Biomedical Panel Chairman, USAF Scientific Advisory Board, Maj Gen James Humphreys, Director Space Medicine, MSF, Hq NASA, and Brig Gen Jack Bollerud, DCS/Bioastronautics and Space Medicine, Hq AFSC. Briefings were given on (1) the current baselines for development and testing of MOL Environmental Control and Life Support Systems, including a demonstration of the MOL Pressure Suit, (2) bioastronautics participation in planning and design for launch and mission control operations, (3) the crewman's role and functions in the MOL mission and (4) AMD support of MOL development through research and testing.
12. Bioastronautics personnel attended meetings at NASA MSC on 5-7 June 68 to review surplus equipment and make necessary arrangements for the transfer of surplus Gemini spacesuit equipment from NASA to the MOL program. Arrangements have been made for the transfer of four pressure suits and numerous items of hardware and softgoods required to maintain Gemini pressure suits.
13. Information was received from the MOL Program Office that arrangements have been finalized with Hq NASA for participation of MOL Bioastronautics personnel in Apollo operations. It is anticipated that one of two Flight Surgeons and one Bioenvironmental Engineer will serve as members of the Mission Control Team in support of each manned Apollo mission. Valuable operational experience will be obtained by these personnel for application to the MOL Program.
14. The MOL CCB processed 44 ECP's; 24 were approved; one was disapproved and 19 were deferred for further evaluation. Contractor estimated costs of the major cost bearing ECP's approved by CCB action totalled \$1,238,000. Twenty-two new MOL ECP's were received during this reporting period.
15. The MOL CCB processed 11 SAFSL exhibit changes; 8 were approved; one was disapproved and 2 were deferred for further evaluation. The approved exhibit changes resulted in a credit of approximately \$473,000.
16. The T-IIIM CCB processed 63 ECP's; 19 were approved; 2 were disapproved and 42 were deferred for further evaluation. The contractor estimated costs of the major cost bearing ECP's approved by CCB action totalled approximately \$89,000. Twenty-two new T-IIIM ECP's were received during this reporting period.

DORIAN

~~SECRET~~

4.
HANDLE VIA BYEMAN
CONTROL SYSTEM ONLY

~~SECRET~~

Bye-89719-68

17. Ten Contractual Action Requests (CAR's) were processed and approved. The major cost bearing CAR's approved totalled approximately \$1,297,000 credit; they are:

- DAC 082 - Deletion of LV Transporter, \$225,000 credit
- GE 023 - Delete Requirement for Angular Accelerometer, \$3,196,000 credit
- GE 024 - Matrix Switching, \$250,000 credit
- GE 037 - MOL 3800 Orbital Flight Software Computer Program Integrator Contractor, \$2,400,000

18. MOL Manpower changes and status 25 May to 25 June 68 follow:

| A. | <u>AUTHORIZED</u> | <u>ASSIGNED</u> | <u>DIFFERENCE</u> |
|------------|-------------------|-----------------|-------------------|
| *OFFICERS | 175 | 147 | -28 |
| AIRMEN | 9 | 7 | - 2 |
| CIVILIANS | 106 | 98 | - 8 |
| HIGHGRADES | (35) | (30) | (- 5) |
| CLERICAL | (71) | (68) | (- 3) |
| | <u>290</u> | <u>252</u> | <u>-38</u> |

B. LOSSES (Military)

- Col Lewis S. Norman
- Maj Gordon L. Carpenter
- 2d Lt Leonard F. Kwiatkowski
- 2d Lt Grover A. Smith
- Sgt Joseph A. Bukowski

C. GAINS

None

D. NET GAINS/LOSSES

- Officers -4
- Airmen -1
- Civilians -1
- Highgrades (-2)
- Clerical (+1)

*MOL Flight Crew included. Six attached officers (3 Navy/Marine Flight Crew, 1 SAC and 1 MAC are not included).

DORIAN

~~SECRET~~