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DEPARTMENT OF THE AIR FORCE
LABORATORY, SYSTEMS PROGRAM OFFICE (OSAF)
POST OFFICE, LOS ANGELES, CALIFORNIA 90045

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SAFSL-4

23 August 1967

MEMORANDUM FOR GEN FERGUSON

SUBJECT: Monthly Management Report, 25 June - 25 July 1967

In the past, it has been usual to forward a rather detailed Monthly Management Report to you. In my view, they have become too routine and significant emphasis has been placed on insignificant events. I recognize that this report was meant to serve a dual purpose which is not only to apprise you of significant events or problems of the preceding month, but also is the source of information to the Vice Director's staff who have a need for deeper level information. To put these two purposes in proper perspective, I have taken the liberty of reorienting this report so that the basic memorandum, which is for your information, will be no more than two pages in length, touching on those subjects which I consider worthy of your attention. A more detailed report will be submitted as an attachment which will be of more value to the Vice Director's staff.

The 14th trial pressing of a 71" Cer-Vit lightweight blank in the Cer-Vit R&D series resulted in the first piece suitable for polishing on 19 July. Evaluation of the blank by Air Force, Aerospace, EK personnel and Dr. A. Meinel of the University of Arizona, led to a conclusion that the blank could be successfully polished. It will be delivered to the University of Arizona for working to approximately 1 wave length flatness. Subsequent finishing will be at EK. It is expected that three to four months will be required for finishing. Although this piece is not flight quality owing to slight back-face imperfections, it will serve very well for advancing Cer-Vit polishing techniques.

Two other blanks are presently in the annealing process and their quality will be determined on 15 and 18 August respectively.

One 27" ULE (Ultra Low Expansion) blank for the Newtonian Folding Mirror is being experimentally polished at Perkin-Elmer Corporation. The results should be known by 1 October. The same applies to one 23" blank for the Ross Folding Mirror position with the results expected by 1 September.

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Because of the brittleness and outgassing characteristics of Teflon-coated wiring, both undesirable traits for safety, Douglas changed to KAPTON wiring as the baseline within the pressurized compartment of the Laboratory Module. At the same time, they changed to Raychem 44, a material lighter and cheaper than KAPTON, within the unpressurized compartment. We have directed Douglas to use KAPTON throughout the Laboratory Module with an expected impact on cost and increased weight.

A summary assessment of the program is that there are no schedule or cost problems worthy of comment at this time. Every segment of the program is proceeding in pace with the master schedule. Prototype hardware is already being shipped between contractors in accordance with the agreed upon dates contained in the Master Hardware Exchange List.

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Detailed Report

J. S. BLEYMAIER, MajGen, USAF
Deputy Director, MOL

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J. S. Bleymaier
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DETAILED MONTHLY REPORT
OF SIGNIFICANT EVENTS

25 June 1967 - 25 July 1967

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1. Negotiations were completed 29 Jun on McDonnell Contract [redacted] six months remote site effort, 1 Jul through 31 Dec 67, at a price of \$665,500. The contractor's proposal cost was \$831,000.

2. Douglas Aircraft - Six months extension of test operations planning effort for the period 1 Jul - 31 Dec 67. Agreement was reached 25 Jul on a target price of \$2,608,500, which included a target cost of \$2,350,000 and a target profit of \$258,500 (11%). The ceiling price is increased by \$2,820,000 (120% of target cost).

3. Cost negotiations with GE on the six months extension of test operations planning effort were terminated 1. Jul when GE broke off negotiations. As a result of GE's abandonment of the negotiations, the Air Force has implemented the necessary effort by CCN with limitations on resources expended in performance of the work. GE has made another offer and has been requested to furnish the normal 633 type information with an aim toward settlement.

4. Fact-finding is presently going on with McDonnell Douglas Corp., St. Louis, and the NAVPLANTREPO to establish an Air Force position regarding the Unpriced Supplemental Agreement (Schedule Adjustment) and Non-Available AGE. The contractor's proposed costs are as follows:

Schedule Adjustment	\$20,703,930
Non-Available AGE #1	191,415

Negotiations are scheduled to begin on 14 Aug.

5. Negotiations for the Pressure Suit Assembly were completed 14 Jul. A pre-contract cost letter was issued to Hamilton Standard, Division of United Aircraft Corp., to commence work as of 18 Jul. Negotiated price was \$8.7 million; the contractor's proposal was \$10,812,000. Formal announcement of contract award is expected 1 Sep.

6. Negotiations for the Feeding System Assembly were completed 12 Jul at a price of \$192,000 for the development effort and an estimated maximum price of \$330,000, based on unit prices, for the estimated production requirements for the space food and related items. The prices for the development and production effort are for two years, with an option to extend the contract for up to two additional years. Notification will be made to the contractor of his selection approximately 1 Sep.

7. On 24 Jun SAYS-8 received from LTV Aerospace Corp., Missile and Space Division, Dallas, Texas, the Firm Fixed Price proposal for "Gemini B Abort Engineering Simulator Study of the Displays used for Fault Monitoring of the Titan IIIM" for a total price of \$172,084. Negotiations were completed on 14 Jul, with a price of \$167,500.

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8. As of 1 Jul, DORIAN procurement authority was transitioned from SAFSP to SAFSL.
9. Additional funds of \$6,600,000 have been requested for the period from 7 Aug through 30 Sep 67 on GE contract AF18(600)-2955 (EDP).
10. The EDS and SMG on GE contract AF18(600)-2906 are again being prepared for final inspection and acceptance by DD 250. It is expected the EDS will be bought off with deviations for Flicker, Resolution and Jitter on 4 Aug. The SMG requires additional work to bring the resolution up to Work Specification requirements and is scheduled for buy-off on 31 Aug 67.
11. An additional \$20 million has been obligated to run through 30 Sep 67 on the Eastman Kodak Co. Special Industrial Requirements, R&D and EDP, and Special Purpose Buildings (contract AF18(600)-2864).
12. An additional \$800,000 has been obligated to run through 1 Oct 67 on McDonnell Douglas Corp. contract AF18(600)-2956 (EDP).
13. SFO rejected the DAC cost proposal for the revised telemetry on Flights 1 and 2. A revised set of requirements for Flights 1 and 2 is in preparation by the SFO for redetermination of contractor impact.
14. DAC is being directed to change the Laboratory Module launch atmosphere to 80% helium, 19% oxygen and 1% water vapor.
15. Towers IEM and IEM became available during the month for unevacuated testing of flat and curved surfaces.
16. The first 82" test sphere was moved into Chamber IEM on 14 Jul for testing. Work is progressing satisfactorily.
17. The tracking mirror (flat) blank for the Qualification Model (QM) was delivered on schedule, 3 Jul 67.
18. The COA barrel for Structural Development Model (SDM), received earlier, is being inspected and prepared for assembly. Assembly of other EDM components is scheduled to begin 4 Aug 67.
19. The initial GE technical work statement for the new baseline schedule and part of the deferred line items was received on 7 Jul 67. An Air Force/Aerospace review of the technical changes resulting from the 12-month schedule revision and from deferred items has been completed. The compliant document changes proposed by GE, identified as Block I changes, contained 49 changes. The SFO/Aerospace review deleted several of these changes because in our opinion they were in-scope or because it was more cost effective to include as part of another change. On 19 Jul a review was held with GE and an agreement was reached on the wording of those

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changes which were acceptable. GE will submit a rewritten version of the Block I changes for final review and coordination. The second GE technical work statement for the balance of the deferred effort, including the field test proposal is scheduled for submittal to the SPO on 1 Aug 67. The SPO/Aerospace comments on the second package are due back to GE by 20 Aug 67. The above technical packages will be the basis for the GE Cost Proposal to be submitted on 29 Sep 67. The next GE TD meeting is scheduled for 9-10 Aug at GE, Radnor. The Mission Payload System Segment (MPSS) Program Review will be held at Radnor on 17 Aug 67.

20. PERT/Tize - SPO/Aerospace visited EKC on 18 Jul 67 to review the PERT networks derived from EKC's schedule data. The negative slack conditions were resolved and the subsequent result of the data produced no negative slack. The problem of negative slack previously reported as a result of the MWC/MAC electrical interface simulated delivery problem was resolved with MAC agreeing to accept delivery per MWC's delivery schedule.
21. A Gemini B Technical Direction and Segment Management Review was held with MAC on 13-14 Jul 67. These meetings were successful in establishing segment status and identifying segment level technical and management problems to be resolved by the contractor and the project office.
22. A meeting was held at Wright-Patterson AFB, Ohio, on 11 Jul 67 with SPO/Aerospace and APFL/AMRL personnel concerning fire detection/suppression. Technical data pertaining to Wright-Patterson AFB laboratory test efforts in this area were made available (via the SPO) to Dr. Gerstein, Aerospace consultant. Upon completion of additional data gathering efforts at NASA, Houston, Texas, and AMD, Brooks AFB, Texas, Dr. Gerstein will (via MOL Aerospace Program Office) provide recommendations relative to selection of best detectors/suppressants for potential use by MOL.
23. MOL Telemetry Control Board - The MOL Telemetry Control Board and Working Group was established to control the assignment and utilization of MOL telemetry resources. The need for such a board was dictated by ever increasing telemetry requirements that could potentially exceed the telemetry capacity of the MOL System. The Board members are the MOL SPO Director for Engineering, the Director for Test Operations, and the Aerospace Group Director of the Engineering Directorate or their representatives. The Working Group members are representatives from appropriate divisions in the Engineering and Test Operations Directorates, the T-IIIM project office and their Aerospace counterparts. The SAFSL-6D, Integration Division, representative is the Working Group Chairman. A TM Control Board Charter was prepared and was in coordination as this reporting period closed. Initial tasks, such as reviewing Flights 1 and 2 telemetry requirements, preparing standard measurement criteria and developing a measurement list format were accomplished.

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24. Meetings were held at all MOL OV associate contractors to discuss the draft Exhibit 10010, Orbiting Vehicle Non-Metallic Materials Combustion and Atmospheric Contaminant Control Standard. All contractors accepted the proposed document with minor technical changes. They cautioned that potential high cost and schedule impact may result if the SAFSL Exhibit is implemented. Major subcontractors of all associates are starting to procure materials; therefore, direction must be given very soon to preclude purchase of undesirable materials.

25. The Fulton Skyhook Air Rescue System containers were transported to MAC, St. Louis, to determine if this equipment can accommodate the DRC's for retrieval operations. The DRC's will fit the containers. Water and airlift test programs will be necessary before a final decision can be made to use this equipment for retrieval purposes.

26. A Memorandum of Understanding between AFIC and the MOL SFO was drafted and signed. In the agreement, Sacramento AMA (SMAMA) agreed to receive, store and refurbish the recovery AGE under the Item Management concept. This includes SMAMA funding for same. The MOL SFO will furnish disposition instructions as well as TO's and drawings obtained from NASA. SMAMA has transmitted instructions to all supply agencies holding Gemini B recovery equipment having them ship the equipment to McClellan AFB for storage and refurbishment.

27. The AVE Computer Program Executive problem was resolved at a meeting with GE and DAC/IBM. GE was directed that they had a contractual responsibility to provide a working executive compatible with the DAC programs. (GE is to report on the details of that executive no later than 18 Aug 67.)

28. The Configuration Control Board (CCB) reviewed 26 Engineering Change Proposals (ECP's); 20 ECP's were approved and six were disapproved. The following significant ECP's were included in the approved CCB actions:

- a. Laboratory Module Accommodations for the Nose Fairing.
- b. Provisions for Incorporation of the Acquisition and Tracking Telescopes.
- c. Provisions for Incorporation of the Internal Sliding Mask Assembly.

Firm quote estimates for the above ECP's amounted to \$15,055,000.

29. Following the DAC "Long Duration Operations" Study Midterm Briefing, discussions were held with DAC on midterm guidance. A midterm guidance letter was forwarded on 7 Jul outlining guidance on the costing portion

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of the study and the inclusion of a growth payload. SPO/Aerospace/contractor meetings are being held on the average of once a week. Final report due date is 25 Aug.

30. A dialogue on the growth payload technology has continued through this month with Col Allen's group in SP-6. An EK growth study briefing summarized their FY 67 effort. Discussions are continuing with the objective of having a "man peculiar" sub-task added to the EK study in FY 68, and also working toward a mutual position on what needs to be done in the Control Moment Gyro Technology area to support the configuration work being done by EK. A preliminary assessment of all the critical technology areas involved in the growth payload is expected by 1 Sep.

31. A proposed radiation specification for the baseline program has been drafted and coordinated within the SPO. The specification level is established so that it can be met within existing state-of-the-art technology. A briefing is being prepared for a 1 Aug target date to brief the SPO Director and Staff on the rationale for the specification with a recommended course of action.

32. \$28.4 million of FY 67 funds have been received and the total amount has been initiated. Of the \$100.4 million of FY 68 funds received, \$92.5 million have been initiated.

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