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~~CORONA~~ ~~HEXAGON~~

BYE-7390-70
Copy 10 of 14
23 January 1970

MEMORANDUM FOR: Director of Special Projects

SUBJECT: Photo Reconnaissance Systems Report No. 24

I. CORONA

A. Accomplishments

1. The UTB meeting, which convened on 16 January, resulted in a plan, with assigned action items, to prepare CR-11's flight for optimum possible UTB results. These actions included review of launch and orbit effects, hardware impacts, thermal paint pattern, S/C heaters, and review of UTB flight history.

2. Mission 1108 PEIR was released, and the PET was convened 13 and 14 January. There were no unusual aspects.

3. The Dr. "A" HIVOS material from CR-12 was delivered to Westover for data reduction.

B. Problems

1. Evaluation of the CR-10 HIVOS data indicates a slit width motor problem. This, plus instruments "ramp up" and "ramp down" time differentials, are being investigated.

2. Tracking problem on CR-13 apparently was caused by the "B" T/U flanges. The T/U was changed.

C. Projected Status

1. CR-10. Investigation of slit width and ramp times.

2. CR-11. Flight Preps.

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3. CR-12. Block Preps.

4. CR-13. Tracking.

5. QR-2. Acceptance.

II. HEXAGON

A. General

1. The MPR CDR pre-meeting was held on 16 and 19 January. The CDR was held on the 21st and 22nd. [redacted] and V. H. Webb attended these meetings. No major problems were uncovered. (see also para. 1

2. The Naka Committee met at LMSC on 20 January and in executive session on 21 January (having previously met at P.E. on 5 January) to prepare their assessment and conclusions with regard to the adequacy of the CORONA/HEXAGON overlap. In essence, the findings were that the June assessments (50% probability of launch within one month of 17 December 1970, 75% within three months, and 95% within six months) were still valid, despite slippages of most milestones of as much as a month, and the Committee further recommended that there be no additional CORONA procurement.

3. The RV buy-off for RV 1 was held by the Air Force at McDonnell on 20 January with a targeted shipping date of 27 January. At the meeting, the Project Office was to certify that the take-up was ready for shipment. However, P.E. had not informed their field office of additional alignment tests that were required after vibration testing at McDonnell. The Project Office required that these tests be run, since, if there was a roller misalignment discovered at Lockheed, the RV/TU would have to be returned to McDonnell.

4. The DM-2 take-up was bought off at RCA by P.E. on 20 January and was shipped to McDonnell on 22 January. This buy-off was much better organized than DM-1, with all of the supporting documentation

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available. Several problems remain on DM-2, however, including alignment shifts during vibration, builder roller latch binding, and a brake failure. The 40° temperature test was waived due to schedule pressure. However, this will not be waived on subsequent take-ups. The DM-3 buy-off is tentatively scheduled for 31 January. This should have no program impact, though it is a late delivery to the present integrated schedule.

5. It was decided at the chemistry meeting that a series of image evaluation tests should be run with the various materials and chemistries, particularly since the manufacturer is proposing a UTB version of SO-349 and a new chemistry, 819. The existence of this new material and new chemistry was not brought to P.E.'s attention at the meeting. It is also felt that Westover might be included in this test series. The current modified B chemistry will be used until such time as a decision is made on the material/chemistry combination after testing is complete.

6. Both rolls for the First Flight Unit test film will be delivered on 30 January. There will be no other large roll deliveries until early March. This is because of limitations in emulsion batch manufacture at Eastman-Kodak.

7. A meeting was held at Eastman-Kodak with P.E., SETS, and Headquarters, where agreement was reached on winding parameters for building film stacks. However, the tolerance on core pressure is a matter of controversy. E.K. calls for such a large tolerance that either the core integrity or stack integrity may be affected. E.K. will be requested to gather enough data to reduce the tolerance.

8. The supply core contamination problem reported last week has disappeared. No corrosion was involved. The vendor is going to reclean all the cores that were affected.

9. The relocation of the A/P is now underway. Hiller Corporation has been officially notified about the cancellation of the lease. It is hoped that during the first week of February, a meeting can be held with Lockheed and Hiller to determine the refurbishment of the A/P and the termination

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of the lease. [redacted] of OCS is now being processed for a transfer to the West Coast effective 1 March. The Office of Computer Services is also assigning [redacted] to the staff on the West Coast, to work for [redacted] as a senior systems programmer. He is also being processed for relocation to the West Coast on or about 1 March. The configuration of the 360/65 and its peripheral equipment has been transmitted to IBM, and IBM has agreed to the delivery date of 9 March and the operational date of 23 March, which makes it compatible to the installation and checkout and the termination of the 360/50 on or about 1 May. The construction and modifications to Building 152 are now in their final design phase. LMSC will be going to competitive bids during the week of 26 January, and a review of this will be made on the West Coast during the first week of February. [redacted] will be TDY to the West Coast during the week of 26 January for the interface meeting with Perkin-Elmer and SETS. He will also be reviewing the software requirements and the computer phaseover from the 360/50 to the 360/65.

10. Operations

The CDR for the Mission Performance Reporting (MPR) routines of the operations software program was held at TRW, Redondo Beach, on 21-22 January. At previous meetings on 16, 19, and 20 January at [redacted] several hundred Design Problem Reports (DPR), submitted by the various participating government organizations, were reviewed, screened and assembled for presentation to the software contractor. Over 290 DPR's survived the screening. All were resolved at the CDR. The contractor was cooperative and patient when clarification of a disputed area was required. TRW had available, or on immediate call, personnel to thoroughly discuss questions on any and all MPR routines and to develop a clear understanding of troublesome subjects.

With all the smoothness of the CDR, one still cannot help but wonder at the staggering complexity of the software package. To have it all ready by October will require maximum effort even if no further problems are encountered, especially considering the number of DPR's

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on the MPR routines and the fact that the total package has ten such routines, each with its own family of subroutines. Manual overriding and data manipulation for the first three or four flights appears to be a significant portion of the operational phase.

B. Development Model

The QC test will be completed in Ready Room A today, and the supply will be removed to begin the process of installing non-light-struck film. Because of a rework in the film exit vestibule, which, it is predicted, will require five days, the horizontal baseline in Ready Room A will not occur before 1 February 1970. P.E. states that this will not effect their new delivery date of 15 March, as presented at Headquarters on 20 January.

C. Flight Model #1

1. Subsequent to replacement of the roller which had been damaged last week when the take-up was given the wrong commands, the system has been run in the stereo mode at all scan angles and at all V/h ranges. The system did not perform within spec; however, it did operate in all conditions. A retrofit will begin on 26 January on all elements which are now out of spec (i.e., metering capstan, loopers, platen B, brinelled rollers). The redundant side of the sequencer is inoperative because of a suspected short which resulted in the burnout of a voltage regulator. This does not effect the present testing, and this sequencer will continue to be used until either the qual or P_2 sequencer is available, at which time the P_1 sequencer will be sent back to RadInc for repair. The TCA is predicted to be available 10 February for installation into the SBA. That is the date which the SBA cabling will be completed by P.E. and the SBA will be given to Lockheed for their reinforcement of the TCA mounting bulkhead and hangers.

2. The SPO has been requested to set up a meeting asap at which SBAC is to define the structural fixes which they plan to incorporate. This will avoid P.E.'s installation of cables or pneumatic lines which would subsequently have to be rerouted because of SBAC's refit.

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D. Flight Model #2

Optical Bars A and B have been reworked, to correct the mirror coating problems, and Optical Bar A has met its requirements in Chamber C. Both bars are predicted to be available five days earlier than previously predicted, but are still on the critical path.

III. Administrative

Meetings Requiring Participation of Headquarters Personnel

Date	Subject	Attendees
PERKIN-ELMER		
27 Jan (PM)	SSPO Managers Meeting	Patterson, [redacted]
28 Jan	Monthly Technical Review	Staff
29 Jan (AM)	Follow-on Diagnostics Requirements	[redacted]
29 Jan (PM)	Film Transport Simulation Status	[redacted]
29 Jan	Disturbance Rebudgeting	[redacted]
WEST COAST PROJECT OFFICE		
27 Jan	Computer (360/65) Hardware Configuration Meeting	[redacted] Burks, Johnson
SBAC		
27 Jan	R-Day Countdown Working Meeting	[redacted]

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Date	Subject	Attendees
HEADQUARTERS		
27 Jan	SETS Status Review	Staff
28-29 Jan	Management Discussions	[redacted]
RCA		
31 Jan	DM-3 Buy-off	[redacted]

[redacted]
PMO/PRS/OSP

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cy 1 - D/OSP
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cy 8 - C/SB/OSP
cy 9 - C/SS/OSP
cy 10 - OSP/RB
cy 11 - OSP/PRS:File
cy 12 - OSP/PRS Chrono
cy 13 - [redacted]
cy 14 -

DDS&T/OSP/PRS/[redacted]/X5725 (23 January 1970)

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