C/HX SECRET

BYE-107839-70
Copy 10 of 14
10 July 1970

MEMORANDUM FOR: Director of Special Projects

SUBJECT : Photo Reconnaissance Systems Report No. 48

I. CORONA

A. Accomplishments

1. CR-12 flight preps continue for 22 July launch. Orbit is now 88 n.m. preigee vice 100 n.m.

2. A/P contractor O&A and engineering personnel are being moved to Bldg. 156 during the next reporting period. Training class is scheduled for 28 and 29 July.

3. CR-15, the first system to be transferred, will be moved during the week beginning 20 July. CR-12 "back up" system is planned to be moved after Mission 1111 orbit is satisfactorily achieved.

4. H-timer inputs for CORONA Mission 1111 will not be transmitted from Bldg. 156 to VAFB until Sunday, 12 July due to extensive program editing requirements of the SOC. The Sunday date represents the latest possible shipping date consistent with the scheduled H-timer installation of Friday, 17 July.

5. Version 18.6 of the 360 operating system has been generated and partially tested. This system will be available for limited use beginning 13 July. It will not be used for Mission 1111.

6. Filters were received from the vendor and tests will continue.

C/HX SECRET

HANDLE VIA BYEMAN CONTROL SYSTEM ONLY

C/HX SECRET

SUBJECT: Photo Reconnaissance Systems Report No. 48

B. Future Activities

1. Mission 1111 payload readiness review at A/P on 15 July.

2. R-6 and R-1 system readiness reviews at VAFB on 14 and 21 July, respectively.

3. Mission 1111 (CR-12) launch 22 July 1970.

C. Projected Status

1. CR-12. Flight preparations and shipment to VAFB on 16 July.

2. CR-13. Storage preps.

3. QR-2. Pre-storage preps.

4. CR-14. Pre-storage preps.

5. CR-15. Temporary storage.

II. HEXAGON

A. General

1. Messrs. Patterson and [redacted] met with Mr. Maguire and others at P.E. to analyse the impact of the P-1 problems on the program schedule. Alternatives are being explored to minimize the effect on a 17 December launch schedule. Mr. Patterson will discuss his findings and conclusions with General King and Coh Buzard next week.

2. A portion of FACI was held at P.E. on 7 August 1970 to define the baseline configuration. The significant open items are:

C/HX SECRET

HANDLE VIA BYEMAN CONTROL SYSTEM ONLY

~~C/HX~~ // ~~SECRET~~

SUBJECT: Photo Reconnaissance Systems Report No. 48

a. The configuration presented for FACI (P-1) is not satisfactory as it does not meet the requirements of the Performance Specification. Those ECO's necessary to upgrade the performance to the required level must be submitted as part of the baseline configuration.

b. The Quality Control Dep't. had not certified compliance with the ICD's.

c. The data presented in support of the claim that P-1 had successfully completed the assurance vibration test was inadequate. A more detailed analyses is required. Ability of the system to transport film after exposure to a vibration environment was not demonstrated. This capability must be demonstrated on SDV-II after the qual acoustic test.

3. Tests and analysis to identify the problem, and cure, for the large Metering Capstan error, are continuing at P.E. The source of the problem has not yet been identified but it has been found that changes to certain servo gains alleviate the problem. These "tweaks" to the system will not be accepted by the Project Office until the basic problem is identified and/or the "tweaks" can be shown to have no other effect on the system.

4. The cause of the low core pressure problem at EK which has been reported for the last two weeks is still undetermined. Kodak's investigation and testing led them to recommend to the Project Office that the builder roller pressure be increased from 13 to the neighborhood of 30 lbs., which will put the core pressure back in the 400 psi range. In addition, they proposed to wind a 50,000 ft. pilot roll onto instrumented cores prior to winding future large rolls. Extrapolation of this pilot winding should indicate any winding anomalies.

~~C/HX~~ // ~~SECRET~~

HANDLE VIA BYEMAN
CONTROL SYSTEM ONLY

SUBJECT: Photo Reconnaissance Systems Report No. 48

Both the Project Office and P.E. have concurred with EK's proposal. There is yet no explanation why the core pressures dropped from the 400 psi to the 100 psi regime.

5. A mechanical problem on the spooling maching has delayed winding the 66.6 inch film roll for the caging deletion studies by P.E. It now appears that the roll will be delivered on 14 July vs 13 July. This is not expected to impact P.E.'s study.

There were two pilot roll windings run at the previously mentioned winding parameters and these rolls showed 390 and 400 psi. EK will increase the builder roller pressure to 35 psi for the next pilot roll winding in order to get the pressure over the 400 psi mark.

B. Program

[redacted] reported to Headquarters on 6 July and has been receiving normal EOD processing. He has been briefed technically by the "H" staff members and will report on 13 July to [redacted] at SSC.

C. Flight Article #1

1. At the start of the 47°F Chamber "A" test on 7 July 1970, the "A" Camera failed catastrophically. The vehicle has been removed from the chamber and is being inspected. The cause of the failure has not been identified. The following has been identified:

a. A film tear occurred. The leader has been dethreaded.

b. The platen went through the stops and locked in a fixed position. This apparently occurred at the start of the 47°F run. A peice of film is in the platen.

c. The condition of the rollers in the film path has not yet been established. It is not known whether an overtension condition occurred.

HANDLE VIA BYEMAN
CONTROL SYSTEM ONLY

SUBJECT: Photo Reconnaissance Systems Report No. 48

d. At best, some rework of the fine film path will be required. At worst, the two camera assembly may be removed and replaced with the P-2 two camera assembly.

e. The supply will be reloaded with a new film stack.

2. The schedule cannot be assessed until the following are identified:

a. The extent of the damage and the length of time required for repairs.

b. The cause of the failure and the length of time required to implement corrective action.

D. Flight Article #2

Smear tests which were scheduled for 7 and 8 July were not conducted due to extending the metering capstan tests and a problem with the air bar on the "A" side twister. P.E. will attempt to run the smear tests on 10 July unless a decision is made to use P-2's TCA or platens in P-1. This decision is expected late 10 July.

E. Flight Article #3

1. Two camera assembly buildup and testing is continuing. The test program is being modified to allow completion of about half of the Ready Room B tests in the clean room. This will allow detection of problems early in the program and should reduce the Ready Room B test time.

2. The platens will be dynamically tested in the clean room. They are still the pacers in TCA buildup and will be available for system incorporation the end of July. The metering capstans are the pacing items with the platens.

3. P.E. is currently predicting a ship date of 24 November vs 16 November because the midsection was not released to P.E. until 25 June vs a scheduled 18 June date.

HANDLE VIA BYEMAN
CONTROL SYSTEM ONLY

C/HX // SECRET

...onnaissance Systems Report No. 48

...opment Model

1. SDV-III - The electrical isolation problem previously reported has been resolved as follows:

a. A replacement PDS has been received and installed.

b. The EMI filter (which was the source of the low impedance in TU No. 3) has been by-passed.

c. The cannister electronics for TU No. 2 which was the source of the low impedance in TU No. 3 was shipped to RCA. This TU has been disconnected from the vehicle.

2. The payload creep test was run on 9 July and preliminary data analysis indicates success.

3. The vertical baseline test is scheduled to being during the afternoon of 9 July.

4. A working meeting with WCPO, [redacted] SSC/WCFO and TRW revealed that SSC must revalidate the SS operational constraints input to the HESOP software.

III. Meetings Requiring Participation of Headquarters Personnel

Date	Subject	Attendees
P.E.		
14 July	Qual Program Status Review	[redacted]
14-16 July	Rest Procedures Review	[redacted]
16 July	RadInc Review	[redacted]

C/HX // SECRET

HANDLE VIA BYEMAN
CONTROL SYSTEM ONLY

~~C/TRX~~ // ~~SECRET~~

SUBJECT: Photo Reconnaissance Systems Report No. 48

Date	Subject	Attendees
14 July	AGE Spares Provisioning Conf.	
15-16 July	Integrated Logistics Plan	
WCPO		
13-14 July	MACFACT Discussions	
14 July	DM Status Review	Patterson
VAFB		
15 July	R-7 Meeting	Patterson
Headquarters		
16 July	Review TCA Qual Vibration Data	

/s/ (EHB)
Donald W. Patterson
D/PRS/OSP

BYE-107839-70
Page Seven

~~C/TRX~~ // ~~SECRET~~

HANDLE VIA BYEMAN
CONTROL SYSTEM ONLY

~~C/HX~~ / ~~SECRET~~

SUBJECT: Photo Reconnaissance Systems Report No. 48

Distribution:
Cy 1 - D/OSP
Cy 2 - DD/OSP
Cy 3 - D/PRS/OSP
Cy 4 - EO/OSP
Cy 5 - C/D&AD/OSP
Cy 6 - CB/OSP
Cy 7 - C/PAD/OSP
Cy 8 - C/SB/OSP
Cy 9 - C/SS/OSP
Cy 10 - RB/OSP
Cy 11 - PRS/File
Cy 12 - PRS/Chrono
Cy 13 -
Cy 14 -

~~C/HX~~ / ~~SECRET~~

HANDLE VIA BYEMAN
CONTROL SYSTEM ONLY