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HEX-10632-69  
Copy 10 of 14  
24 October 1969

MEMORANDUM FOR: Director of Special Projects

SUBJECT: Photo Reconnaissance Systems Report No. 11

I. CORONA

A. Accomplishments

1. Mr. DeSilva, Chief, Foreign Intelligence Division, and Chairman, IPC, was given a CORONA briefing at AP and a HEXAGON briefing at Building 156, as well as tours through the AP, the STC, and LMSC facilities on 21 and 22 October.

2. ICRS members were given a CORONA briefing and AP tour on 23 October.

3. A transit BEACON briefing was provided West Coast Project Office personnel on 23 October. This system is tentatively scheduled to be used on Agena's 1656 through 1659 (CR-11 through CR-13) and will provide more accurate tracking data. Present system provides approximately plus or minus 750 miles accuracy versus an estimated plus or minus 150 mile accuracy from the transit BEACON. APL/JHU will receive transit data for mapping and charting use.

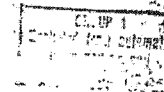
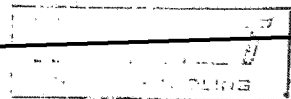
4. CR-9. Underwent a pre-flight shake. The post-shake confidence run indicated normal system performance.

5. CR-10. Satisfactorily completed pre-environmental light leak checks, vibration and confidence run.

B. Projected Status

1. CR-8. Refurbishment at Itek.

2. CR-9. Flight Preps.



~~TOP SECRET~~  
SPECIAL HANDLING

SUBJECT: Photo Reconnaissance Systems Report No. 11

3. CR-10. HIVOS
4. CR-11. System Tests.
5. CR-12. Acceptance Tests.
6. CR-13. Acceptance Tests.

## II. HEXAGON

### A. General

1. SDV-1 testing at LMSC has not begun because SBAC has encountered problems with the transponder. Testing could start as early as 24 October, but the current estimate is 27 October. SBAC's inability to begin testing has been welcomed by SSC/WCFO, since the SS Electrical Simulator continues to demonstrate minor workmanship and functional anomalies in the SSC/WCFO acceptance tests. WCFO expects these tests to be completed by 24 October.

2. The Headquarters comments relative to the HEXAGON Development Model Test Plan were sent to SSC this week. Approval of the plan was deferred pending correction or clarification of several major issues.

3. Headquarters' response to the Qualification Test Plan is in review and Headquarters comments are expected to be completed by 30 October 1969. A gross deficiency noted thus far is that there is no "requalification" plan for failed equipment.

4. A meeting on the Spares Program was held at Perkin-Elmer on 23 October. The spares responsibility is now under Mr. Malin, and it is expected that Mr. DeVeaux will be his man specifically working on spares. Perkin-Elmer has reduced the quantity of each spare AVE black box from 2 to 1 almost across the board, as a result of examining the spares delivery schedule and the availability of next item hardware in house. This reduction will bring the dollar value of spares down to

HEX-10632-69  
Page Two

~~TOP SECRET~~  
SPECIAL HANDLING

**SUBJECT: Photo Reconnaissance Systems Report No. 11**

approximately \$2.5M for the black boxes. AGE spares are expected to total another \$1M to \$1.2M, which will make the grand total for spares something less than the \$4.1M originally allocated. This reduction is precisely what the Project Office had hoped would occur following the examination of spares delivery versus the availability of next in line hardware. However, it is thought that the real motive behind Perkin-Elmer's cut-back is the reallocation of the additional money which was made available in the spares pot from the recent negotiations. That is, if Perkin-Elmer can keep the spares total down to about \$4M, this will allow them to reallocate approximately \$2.5M for other uses.

5. Discussions on AGE were held with various responsible individuals in P.E., and it was clear that P.E. intends to greatly expand their version of the AGE list. They have promised us a new complete AGE list by 4 November.

6. A meeting is scheduled at Eastman-Kodak next week to finalize the Film Specification. The Project Office is optimistic about this since almost all items outstanding have been agreed upon informally.

7. The Processing Lab in Building 156 is ready for initial chemical checkout, and to this end Perkin-Elmer (Danbury) is checking its chemical stores to see about sending the West Coast enough to get started. If not, the Project Office will arrange to have Eastman-Kodak send it out.

8. The October Technical Review was held at P.E. on 22 October with the following highlights:

a. The LSFS has not proven to be temperature insensitive as predicted. The cause has not been determined, and the end result may be that a temperature calibration of each Optical Bar LSFS will be required.

b. The silicone-based lubricant (F-50) used in the O. B. 14" bearings has been found to degrade at the high temperature condition. The alternative lubricant (SRG-60) has a higher torque level associated with it that overloads the O. B. motor. PE is considering alternate fixes at this time.

HEX-10632-69

Page Three

~~TOP SECRET~~  
~~TOP SECRET~~  
SPECIAL HANDLING

**Hx SECRET**  
SPECIAL HANDLING**SUBJECT: Photo Reconnaissance Systems Report No. 11**

- c. The film path leak rates and pressure decay between operations was presented. A modification of the HSSOP may be necessary in order to allow an automatic determination if repressurization of the film path is necessary prior to an operation.
- d. The status of the Launch Transient Analysis was presented. No results have been obtained, nor will there be until after the Engineering Model thermal data has been analyzed.

9. The results of a preliminary investigation of the applicability of a GPC (General Purpose Computer) with the HEXAGON sensor system were presented by SETS to SSC and Headquarters at Headquarters on 23 October. The inability of off-the-shelf computers to accommodate the high-band-width servos (metering capstan, platen, and drive capstan), in their present configuration, leads to the tentative conclusion that a GPC is impractical for the HEXAGON improvement program.

**B. Engineering Model**

- 1. The Engineering Model was removed from Ready Room A on 20 October. A recycle into the Ready Room (estimated to require 8 hours) may occur in order to verify that a change to the supply gain corrected a looper drift problem.
- 2. The Chamber "A" procedures have been partially completed and were reviewed on 23 October. The procedures for the film sticking tests have not yet been written.

**C. Development Model**

- 1. The Development Model is still slipping, mainly due to additional work required by manufacturing and to correlate the SSTC instrumentation. At this point there is no positive slack in the delivery date for the Development Model.
- 2. The Development Model #1 take-up is estimated to be six days late against a 15 November delivery date by RCA. There are several

HEX-10632-69  
Page Four**Hx SECRET**  
SPECIAL HANDLING

**SECRET**  
SPECIAL HANDLING

**SUBJECT: Photo Reconnaissance Systems Report No. 11**

possibilities to regain this time, the main one being eliminating a low level vibration test and a 70° thermal humidity test (a 40° and 93° test would still be run).

**D. Flight Article #1**

Optical Bar B goes into Chamber "D" for pre-vibration testing on 24 October 1969.

**III. Administrative**

**Meetings Requiring Participation by Headquarters Personnel**

<u>Date</u>	<u>Subject</u>	<u>Attendees</u>
<u>PERKIN-ELMER</u>		
30 Oct (AM)	4 RV Test Station and TU Sim. Final Design Review	Burks, [ ]
30 Oct (PM)	Performance Specification Disc.	Burks, Kohler
<u>DIA</u>		
27 Oct	Color Task Force	Kohler
<u>EASTMAN-KODAK</u>		
28 Oct	Supply Core Pressure Meeting	[ ]
29 Oct	Film Specification Meeting	[ ]
<u>NPIC</u>		
28-29 Oct	Mission 1052 PET	[ ] Webb, Kohler, Burks, [ ]

HEX-10632-69  
Page Five

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**Hx SECRET**  
SPECIAL HANDLING

**SUBJECT: Photo Reconnaissance Systems Report No. 11**

<u>Date</u>	<u>Subject</u>	<u>Attendees</u>
<u>AP, 156 &amp; STC</u>		
29 Oct	General Cushman Briefing	<input type="text"/>
<u>HEADQUARTERS</u>		
29 Oct	Schedule Review	Staff
30 Oct (PM)	Tech Briefing on Supply Caging Proposal	<input type="text"/>
31 Oct	Performance Spec and Performance Evaluation Meeting	Johnson, Burks, Kohler
31 Oct	SETS Software Discussions	Kohler, Burks, <input type="text"/>
31 Oct	CORONA Relocation Briefing to General King	Patterson, Fitzgerald
<u>WRIGHT-PATTERSON AIR FORCE BASE</u>		
30 Oct	Film Test Program Review	<input type="text"/>
<u>SAMSO</u>		
30-31 Oct	EMC Control Board	<input type="text"/>
<u>HORIZONS (Cleveland)</u>		
29 Oct	Horizons Contract Review	Kohler
<u>MWC</u>		
29 Oct	EM #3 Testing Review	<input type="text"/>

HEX-10632-69  
Page Six

~~SECRET~~

~~SECRET~~  
SPECIAL HANDLING

**SUBJECT: Photo Reconnaissance Systems Report No. 11**

**B. Personnel**

- 1. [redacted] will report on board at Headquarters on 27 October 1969. It is planned that he will EOD at West Coast Project Office approximately mid-December 1969 after program familiarization and the selling of his house.
- 2. [redacted] has declined the offer for employment. He was being considered as a replacement for [redacted]
- 3. [redacted] has agreed to take the computer programming and management staff position in the West Coast Project Office. His processing is underway.
- 4. Messrs. [redacted] are in process for December EOD.

[redacted]  
PMO/PRS/OSP

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- cy 12 - OSP/PRS/Chrono
- cy 13 - [redacted]
- cy 14 - [redacted]

DD/S&T/OSP/PRS/JWL:ncc/X5725 (24 October 1969)

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HEX-10632-69  
Page Seven