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BYE-107909-71  
Copy 10 of 14  
5 March 1971

MEMORANDUM FOR: Director of Special Projects

SUBJECT : Photo Reconnaissance Systems Report No. 82

I. CORONA

A. Accomplishments

1. CR-14 (Mission 1114) is in its final readiness for launch on 24 March 1971, and normal mission preparations are currently taking place. Preliminary camera operations data are being sent to the SOC today for editing.

2. The six-pack study group met at the WCPO on 4 March. The purpose of the meeting was an information exchange and further definition of size, weight, stand time, and constraints. The study completion target date is 26 March 1971.

B. Problems

No major problems.

C. Projected Status

- 1. CR-14. Flight preps (readiness).
- 2. CR-15. Backup preps.
- 3. CR-16. Block preps.
- 4. CR-8. Final integration.

GROUP 1  
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downgrading and  
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SUBJECT: Photo Reconnaissance Systems Report No. 82

II. HEXAGON

A. General

1. The Project Office Acceptance Team and Perkin-Elmer are presenting to Mr. Patterson and Mr. Dirks today the results of the SN-002 Chamber "A" acceptance tests. The Acceptance Team has recommended a retest at Danbury after adjustment to the "F knob" to optimize on-orbit performance in the plus or minus 30 degree region, but some technical and operational questions must be answered before this decision can be made. Shipment is scheduled for 9 March, pending resolution of the above question. The WCPO is supporting the technical evaluation of SN-002 with "MACFACT" runs of tests 11 and 14. This effort has resulted from PE's inability and/or refusal to run "MACFACT" at Danbury in support of the government Acceptance Team.

2. Negotiations of the follow-on contracts still awaits receipt of the auditor's report.

3. The acceptance test spec for the 'TUNITY software modifications was reviewed by PE, SSPO, [redacted] and SCF on Tuesday afternoon with no significant problems. Work is apparently proceeding well and on schedule. Output from the modified 'TUNITY software will be checked by the group on approximately 16 March.

4. The WCPO has supported PE/WCFO in their analysis of Chamber A-2 resolution data on SN-003. The "resolute" program was run, and summary resolution data sent to Westover, Headquarters, and PE on 4 March.

5. The WCPO acted as backup for Westover in the running of some "FIDAP" data on 4 March. This backup was necessitated by computer problems at Westover. The required support was minimal and did not impact other WCPO computer users.

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6. The WCPO computer utilization (in percentage) for February was as follows:

CORONA	19.87
HEXAGON	49.00
MRI	6.79
OEL/ORD	6.00
ESL	1.59
SYSTEM MAINT.	5.48
OTHER	11.27
METERED HOURS	293

NUMBER OF

JOBS PROCESSED 3358

Messrs.  of the Office of Computer Services are developing and testing software for the "AUTUMN" project utilizing the WCPO Computer Facility.

B. Model Status

1. Development Model (SDV-III)

R-8 day tests have been successfully completed. Phase III of the compatibility tests have begun and should be completed this evening. The R-1 day meeting is scheduled for 13 March at VAFB.

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2. SV-1 (SN-003)

a. The A-2 Chamber tests were successfully completed, taking about five days longer than planned due to (1) excessive time required for temperature stabilization of SV-1 in the chamber (3 days); (2) time required between camera operations were longer than originally planned. Recent PE data indicated that, to obtain good data, especially in the platen area, there needed to be about 3-4 hours of "cool" time between operates. This added about one day; (3) it took about 22 hours to "dive" the A-2 Chamber (the stabilizing temperature was about 59 degrees versus the 70 degrees expected).

b. A-1 Chamber preps are in progress. PE/WCFO has completed the microswitch changes (ECP 8298) on the builder rollers. The builder roller shim change (ECP 8226) is in progress and should be completed on all takeups. PE's chamber preps, including testing of the builder roller changes, should be completed by 8 March. SV-1 is scheduled to be in Chamber A-1 on 9 March.

3. SV-2 (SN-002)

a. Forward Section

McDonnell Douglas has been working on the FS this week. RV-1 has been installed, and all RV's are now in place. PE/WCFO has been waiting for retrofit instructions for the builder roller changes and the resolution of similar tracking problems (wedging) at Danbury. Retrofit instructions arrived on 1 March.

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b. Midsection

See paragraph II. A. 1.

4. SV-3 (SN-004)

SN-004 is being prepared for midsection shake which is scheduled to be completed by 8 March, and the post-vibration functional test is to be completed by 11 March.

III. Meetings Requiring Participation of Headquarters Personnel

<u>Date</u>	<u>Subject</u>	<u>Attendees</u>
<u>LMSC</u>		
10-11 Mar	Operations IFWG	[ ]
<u>Vandenberg AFB</u>		
12-13 Mar	R-Day Meeting	Burks, [ ] [ ]
<u>PE</u>		
10 Mar	Film Core Meeting	[ ]
<u>NRO</u>		
11 Mar	FY 71 Fiscal Status	[ ] Patterson, [ ]
<u>HQ</u>		
8-9 Mar	Project Officers Course	[ ]

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HQ

10 Mar

DD/S&T Course

Patterson,

? Mar

Follow-on Negotiations  
with PE

**AD/PRS/OSP**

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- Cy 10 - RB/OSP
- Cy 11 - PRS/file
- Cy 12 - PRS/chrono
- Cy 13 - NEPO
- Cy 14 - WCPO

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12 March 1971

MEMORANDUM FOR: Director of Special Projects

SUBJECT : Photo Reconnaissance Systems Report No. 83

I. CORONA

A. Accomplishments

1. Final flight loading of CR-14's main cameras and DISIC were completed on 11 March for Mission 1114 launch on 24 March 1971. Normal mission preparation continues with the H-timer requirements to be shipped to VAFB today. Minimal new software is being checked out to support the special DMU rocket firing requirements in the CORONA Evasive Maneuver Contingency Plan.

2. A review to date of the "six pack" study was conducted by WCPO and SP-7. Progress is good and the study should be completed within schedule (26 March). Effort is concentrated on using basically the 24" Petzval stereo camera, slightly modified Agens, six small (23-24") SRV's, and either a Thorad or Atlas "F" booster. Twenty- and thirty-day mission capabilities are being explored.

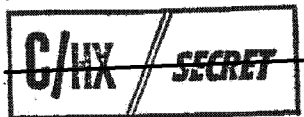
B. Problems

No major problems.

GROUP 1  
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C. Projected Status

- 1. CR-14. Launch preps.
- 2. CR-15. Backup preps.
- 3. CR-16. Block preps.
- 4. CR-8. Assembly and integration.

II. HEXAGON

A. General

1. The SDV-III Phase III rehearsal profile briefing and readiness meeting was held on 2 March. The rehearsal was delayed two hours due to test and tracking station problems and finally started at 1301 PST on 5 March. The phase testing and STC rehearsal, once launched, ran smoothly except for data flow. Since only the Vandenberg RTS was used for support, it had to simulate the other RTS units; therefore, the tape recorder read-backs ran hours late. In a real flight this should not be a problem, since all RTS's would be on-line. A critique was held on 9 March 1971. The "R-6 Day" test was run on Monday, 8 March, and the "R-1 and R-0 Day" tests are scheduled for the 13th and 14th.

2. At the Operations IFWG on 10 March, plans were made for a command message checking exercise during the period 5-8 April and the next first flight rehearsal for no earlier than 19 April due to the CORONA mission interference.

3. Several [redacted] visited the WCPO on 9-10 March to review the spares storage facilities, spares control procedures,

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spares listings, and spares requisitioning procedures. All items were satisfactory, and the Depot will add control numbers to the spares list to aid bookkeeping/storeroom functions.

B. Model Status

1. Development Model (SDV-III)

The "R-4 Day" test sequence scheduled for 11 March was postponed due to SSTC problems. SSTC spare cards have been shipped to the base, and sensor testing will resume when the AGE is repaired. In the meantime, LMSC is attempting work-around procedures.

2. SV-1 (SN-003)

SV-1 has been readied for Chamber A-1 testing which is scheduled to begin on 14 March.

3. SV-2 (SN-002)

a. Forward Section

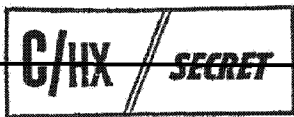
The assembly of the forward section is now complete. Manual mode testing will begin today, and film transport tests will commence on 15 March.

b. Midsection

The midsection is scheduled to arrive NAS Moffett today, the delay being caused by the decision not to use the C5A because of the newspaper publicity.

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4. SV-3 (SN-004)

The midsection shake was completed with no problems. The chamber preparations for this vehicle will begin 13 March 1971 with the in-air tests in the chamber to begin on 15 March 1971. Problems have continued with this vehicle with the F&E box. This new F&E box is of the same configuration as that box which was scavenged from SN-004 to be placed on SN-002 after completion of SN-002 acceptance tests. Schedule projects to a ship date of 13 April 1971.

III. Meetings Requiring Participation of Headquarters Personnel

<u>Date</u>	<u>Subject</u>	<u>Attendees</u>
<u>PE</u>		
17 Mar	CEI Specification Negotiation	<input type="checkbox"/>
<u>WCPO</u>		
19 Mar	HOPE Message and TM Performance Evaluation	Kohler
<u>LMSC</u>		
16-19 Mar	S&M IFWG	<input type="checkbox"/>
<u>SAMSO</u>		
16-18 Mar	CCB Meeting	Kohler
18 Mar	OOPS Meeting	Johnson

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VAFB

12-13 Mar SDV-III R-2 and R-1 Day Meeting

16 Mar Mission 1114 (CR-14) R-7 Meeting

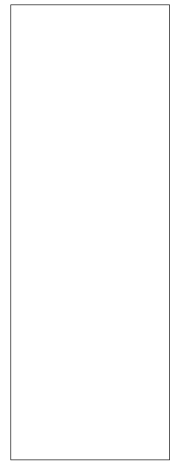
18-19 Mar CR-14 Checkout and Mate

RCA

16 Mar Takeup (P5-3) Buy-off

WAFB

15 Mar Review SN-002 Acceptance Team Report



DONALD W. PATTERSON  
D/PRS/OSP

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19 March 1971

MEMORANDUM FOR: Director of Special Projects

SUBJECT: : Photo Reconnaissance Systems Report No. 84

I. CORONA

A. Accomplishments

1. CR-14 was shipped to VAFB for Mission 1114 Launch on 24 March 1971. Receiving and launch preps are now in progress.
2. The six pack study inputs from the contractors are being amalgamated and coordinated with the SPO and the results will be reviewed by SSPO at the WCPO on 24 March.

B. Problems

Problems have caused the "Arroya" (P-11 payload) to be replaced with a mass simulator in order to keep the 24 March launch date.

C. Projected Status

1. CR-14. Launch preps.
2. CR-15. Backup preps.
3. CR-16. Block preps.
4. CR-8. Assembly and integration.

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SUBJECT: Photo Reconnaissance Systems Report No. 84

II. HEXAGON

A. General

1. A formal request was prepared for NRO funds to initiate the study phase for the Block II HEXAGON System competition. Subject to NRO fund authorization, it is planned that the data packages for the study will be released to four contractors (including Perkin-Elmer) by 15 April.

2. The discussion with the SPO on on-orbit operations interfaces and responsibilities still has neither been accomplished nor scheduled.

3. On 16 March, the 'TUNITY output generated from the acceptance test runs on the modified 'TUNITY software was examined by SSPO, PE, [ ] CSC and Aerospace. Only a few minor problems were uncovered, and thus the modified 'TUNITY should be available on schedule.

4. A general discussion of "HOPE"/"MACFACT" was held at the WCPO on 15 March. Several modifications and improvements to "HOPE" were discussed, and a final SV-1 format established. "HOPE" operational support procedures during SV-1 were discussed, and preliminary plans outlined for the WCFO to provide primary support with TRW acting as backup.

5. The construction of a third analysis room at the WCPO is now underway. The construction is due to be completed within three weeks. The documentation of the 360 operating system release 20 has been delivered and is currently being reviewed. This release of the operating system is planned for implementation in June. A program

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technique to allow multi-programming during the transmission of data from the SSTC is currently being tested. Concurrently, a study is being conducted to determine the feasibility of using a Hewlett Package 2116C with an attached tape drive to service the SSTC.

B. Model Status1. Development Model (SDV-III)

SDV-III is at VAFB undergoing mechanical fit tests including removal of an RV. PE work is virtually complete.

2. SV-1 (SN-003)

SV-1 is undergoing thermal vacuum testing in Chamber A-1. The PE portion of "normal Day 1" (as modified) is complete, and the "normal Day 2" operation began on 18 March. Per present schedule, A-1 testing should be complete on 24 March.

3. SV-2 (SN-002)a. Forward Section

The SV-2 F/S is completely assembled and aligned. Manual mode tests have been accomplished on all four TUA's. Film transport testing is scheduled to begin on 19 March.

b. Midsection

The supply has been reloaded and installed into the midsection. M/S leveling has been checked by SVIC, and the TCA twist measurement is currently being taken. The

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sensor is scheduled for operation the morning of 19 March. Based upon a success schedule, the M/S could be turned over to SVIC during the period 24-26 March. Under this condition (with nine days of SVIC work remaining), the M/S would be ready for mate on 6 April, assuming no Sunday work. It has not yet been determined why there was loose film in the bottom of the supply when the covers were removed. PE's position is: "It could have occurred on the east coast or the west coast, but probably not during shipment." West coast attempts to determine the cause of the problem have isolated the Supply Test Station (SUTS) as the one possible culprit. The SUTS has, however, been used twice following the initial hookup with all operations normal. PE (Danbury) has been verbally requested to submit a TWX report on the results of their investigation.

4. SV-3 (SN-004)

PE experienced a takeup film tracking problem on SN-004 which they are blaming on the film taper (non-uniformity of edge-to-edge thickness). The maximum taper that was measured is 85 millionths inches. The tracking problem appears to have occurred during the last 700 feet of test film on the takeup. The tests were run with the TU builder roller "up" signal overridden, so there is a question as to the roller force being exerted on the film stack. PE has installed wedge sensors on this TU (P2-2) which will measure the amount of builder roller tilt. PE states that the camera is tracking very well and vacuum acceptance tests will begin on Monday, 22 March.

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5. SV-4 (SN-005)

The "B" side OB is going through a series of checkout tests. The "A" side OB was installed on 18 March. Vibration tests on the completed TCA are scheduled for 31 March, and the TCA is expected to be installed in the midsection between 10-12 April. To date, no problems have been encountered with the model and it is about three days ahead of its projected schedule.

III. Meetings Requiring Participation of Headquarters Personnel

<u>Date</u>	<u>Subject</u>	<u>Attendees</u>
<u>TRW</u>		
23 Mar (morning)	Program Discussions	Patterson <input type="text"/>
<u>VAFB</u>		
23 Mar	Mission 1114 R-1 Meeting	Patterson, <input type="text"/> <input type="text"/>
24 Mar	Mission 1114 Launch Activities	<input type="text"/>
<u>STC</u>		
24 Mar	Mission 1114 Observation	Patterson
<u>WCPO</u>		
25 Mar	Administrative Discussions	<input type="text"/>

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PE

23 Mar SN-004 Readiness Review

SAMSO

25 Mar Managers Meeting

Patterson,

26 Mar Program Discussions

Patterson,

Itek

24 Mar Visual Edge Matching  
Equipment Acceptance

Westover AFB

25 Mar Review Westover Require-  
ments for Advanced Micro-  
densitometer

RCA

25 Mar P5-1 Takeup Buy-off

HQ

24 Mar "H" Program Briefing to  
(afternoon) Resident Field Security  
Officers

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Cy 9 - C/SS/OSP  
Cy 10 - RB/OSP  
Cy 11 - PRS/file  
Cy 12 - PRS/chrono  
Cy 13 - NEPO  
Cy 14 - WCPO

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