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Copy 10 of 14
4 December 1970

MEMORANDUM FOR: Director of Special Projects

SUBJECT : Photo Reconnaissance Systems Report No. 69

I. CORONAA. Accomplishments

QR-2 (Mission 1112) continues in mono coverage after recovery of first bucket on 25 November 1970.

B. Problems

1. QR-2 (Mission 1112) No. 1 instrument is functioning. The material recovered from the first bucket is under analysis for the cause of No. 2 instrument and DISIC failure. (See REAGIN-31 for detailed material report.) The failure report for this part of the mission will be reported separately.

2. The CR-15 slope programmer failure analysis is continuing.

C. Projected Schedule

1. QR-2. "B" Mission.
2. CR-13. Pre-Storage - holding for storage audit.
3. CR-14. R-25 Status and holding.
4. CR-15. Pre-storage - holding for storage audit.
5. CR-16. Functional testing.
6. CR-8. Receiving tests continuing.

GROUP 1
Excluded from automatic
downgrading and
declassification

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II. HEXAGON

A. General

1. A meeting was held at Perkin-Elmer with PE, Headquarters, and PSO to determine the optimum storage locations for the spares. The issue was resolved in accordance with the spares policy, which states that field replaceable spares will be stored at Bldg. 156 and factory replaceable spares (approximately 12 items) will be stored at SSC. This recommendation was presented to Mr. Patterson and Mr. Maguire and accepted.

The following spares were technically certified this week: 1A2, 1A4, 5A1, 5A2, 6A1, 6A2, and 11 items of takeup test station spares. PE will prepare the DD-250 and send it to Headquarters for sign-off along with the technical certifications. The Project Support Office will issue a master spares list on February 15 indicating storage location.

Because of PE's delinquency in providing a recommended AGE spares list for the follow-on contract, Headquarters has requested the PSO to take the available data and attempt to arrive at a reasonable spares list. It is expected that this list will consist of replenishment spares from the current contract.

PE is now preparing data packages for AGE spares sell-off. They will provide a schedule by 11 December 1970. The following is the buy-off sequence:

- a. Electrical Simulator
- b. Auxiliary Takeup
- c. Power Bus Module
- d. TDMS
- e. Pneumatics

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2. Film testing by EK has shown that a rewind effect exists by which the interface core pressure is increased about 20% for each successive rewind. This is attributed to the "matte" which is a coating on the pelloid backing. The matte looks like a random distribution of microscopic hemispheres of varying heights (up to 3 microns). With successive windings, the higher hemispheres are flattened and contribute to the stiffness of the film.

EK now feels they can reduce the tolerance spread of core pressure from 430 ± 200 psi to 450 ± 150 psi by using 60 pounds builder roller force and 10 pounds film tension. This was accepted and will be incorporated in the film spec.

Additional testing will be done on six 18-inch (10,000 foot) rolls to determine any effect of rewind (or no rewind) on telescoping. These rolls will be tested on the first and the sixth windings. This testing is to be completed in early January before the decision is made on caging deletion.

B. Model Status

1. Development Model (SDV-III)

SDV-III was removed from the A-1 Chamber on 29 November and completed preps for the A-2 Chamber test on 3 December. The vehicle is currently installed in the A-2 Chamber and testing is due to be resumed on 6 December.

2. SV-1 (SN-003)

(A) Midsection

R&I of the midsection is now complete. In addition, the series of special tests requested by the SSPO have been run. The midsection

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light leak test has been completed. The material has been processed and is being analyzed. Preliminary analysis shows that the words are missing on the film from both sides. It is believed to have been caused by AGE problems. Another run was made on 3 December, and the midsection is planned to be released to SVIC on 4 December.

(B) Forward Section

The forward section buildup is essentially complete with the light leak test and pneumatics leak rate check having been accomplished this week. Final clean-up operations are in process and the system will be ready to mate by 4 December.

3. SV-2 (SN-002)

The format illuminator tests have been completed. Chamber "A" in-air tests are scheduled to start on 6 December. Vacuum tests are scheduled to start on 14 December and be complete on 29 December. The metering capstan servos (2A3) and supply film exit vestibules will then be updated and the 70°F in-vacuum chamber tests will be repeated. The system is scheduled to be ready for shipment in mid-January.

4. SV-3 (SN-004)

Supply vibration was completed on 4 December. TCA vibration will commence 8 December. The looper shaft modifications caused a slippage in the TCA vibration because the retests on the modified looper shaft indicated an anomaly which will not be

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corrected until 7 December. This slippage will not impact the planned major milestones because SN-004 generally picks up about a half shift per day in overlap activity from SN-002.

III. CONFIGURATION CHANGE BOARD

The following is a summary of Configuration Change Board activities this week:

A. Arranged for the EK FEAT Lab to perform special film tests and analysis for [redacted] TSD/DDP.

B. Arranging special U-2 flight with Wratten 3 and 12 filters in support of analysis being undertaken with HEXAGON to evaluate alternate filter possibilities.

IV. Meetings Requiring Participation of Headquarters Personnel

<u>Date</u>	<u>Subject</u>	<u>Attendees</u>
<u>PE</u>		
8 Dec.	Review revised Costs for Film Path Diagnostic Sensors	[redacted]
8 Dec.	Briefing to Dr. McLucas	Patterson
8-10 Dec.	Computer Programs Software Review	[redacted] (3-9 only)
9 Dec.	Forward Assembly Kit FACI	[redacted]
11 Dec.	Horizons Duplicating Film Program	Kohler

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Date Subject Attendees

LMSC

9 Dec. R-Day Countdown Meeting

10 Dec. Structural/Mechanical IFWG

10 Dec. Operations IFWG

Westover AFB

9-10 Dec. Review Westover Contracts Kohler

3M (St. Paul)

8 Dec. Review 3M Contract Kohler

STC

9 Dec. Orbit Operations Policy Subgroup

RCA

9 Dec. P3-3 Buy-off

PMO/PRS/OSP

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Cy 8 - C/SB/OSP
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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