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Copy 12 of 14  
13 March 1970

MEMORANDUM FOR: Director of Special Projects

SUBJECT : Photo Reconnaissance Systems Report No. 31

I. CORONA

A. Accomplishments

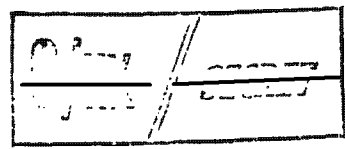
Mission 1109 (CR-10) is proceeding in a satisfactory manner. SRV "A" was recovered on 11 March 1970 following ref. 111. The second portion of Mission 1109 is proceeding satisfactorily. The rate of operation has been reduced due to weather, consequently only 13% of the second portion of film has been expended. Very preliminary reports indicate that the photography from the forward camera is of average J-3 quality. The aft camera film is being processed today. In view of the higher altitude and more northern location of perigee, "average" quality from the mission will be indicative of "good" technical performance of the J-3 camera.

B. Problems

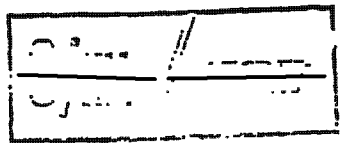
No significant problems were encountered during this reporting period.

C. Projected Status

- 1. CR-10. Orbital operation.
- 2. CR-11. Pre-storage.
- 3. CR-12. Block test.



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- 4. CR-13. Environmental preps.
- 5. QR-2. Tracking.
- 6. CR-14. System assembly.
- 7. CR-15. Modification.

**II. HEXAGON**

**A. General**

1. The IBM 360 mod 65 computer equipment was delivered to Bldg. 156 on 9 March, and installation has begun.

2. J. Murphy, DD/SS/OSP, toured the A/P, the Itek facility in Palo Alto, and Bldg. 156 and discussed security aspects with the WCPO.

3. P.E. management presented to the Project Office on 12 March their winning subcontractor recommendations in most of the follow-on procurement subcontract areas where competition was requested and Project Office concurrence is required. The general conclusion was that most of the current vendors were selected, primarily because their costs were lowest. The following recommendations will be concurred on by the Project Office when formal transmission for approval is transmitted:

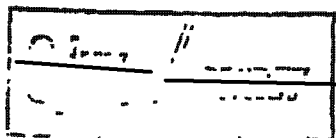
a) RadInc - the present nine boxes (including the sequencer) for \$6,850,500.

b) PE Aerospace - the present twenty boxes for \$4,002,200.

c) DRC - encoders one and three for \$1,313,688.

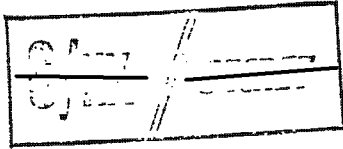
d) Bolter & Chivens - encoders 2, 4, 5.

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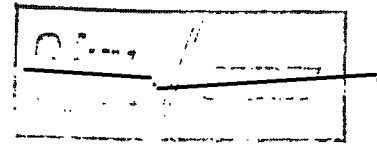
- e) Kidde - pneumatics for \$5,340,500.
- f) Kidde - relief valves for \$71,900.
- g) MTI - supply motors for \$126,984.

The major problem remaining prior to Project Office approval lies in the area of awarding the fixed price contracts as stated above, or entering an initial period under a letter contract, until the negotiations are complete between P.E. and the Project Office. Several other subcontract competitions have not completed their evaluation by P.E., but will be shortly. Mr. Maguire was advised that the Project Office did not favor the issuance of letter contracts to the subcontractors and felt that they should complete their negotiations of a fixed price contract as quickly as possible after Government authorization. Maguire's main concern was in negotiating a contract with a subcontractor without knowing fully the requirements which would be laid upon Perkin-Elmer in their basic contract with the Government. It was pointed out that if these requirements, in fact, impacted their contract with the subcontractor, they could include the effects of this impact in their negotiations on their contract. Mr. Maguire stated that he would reconsider this course of action and would advise as to what he proposed to do shortly.

4. Mr. Maguire stated that there had been no decision made with SDS regarding the disposition of the 9300 computer. P.E. is still pursuing a course towards breaking their contract with SDS and either bringing up to Danbury the IBM 360/65 or ordering a new system. At the present time they are negotiating with IBM on the order of a new system to be delivered in approximately six to seven months. They are planning to modify the building at Danbury to locate the computer in such a way that it will be accessible through the lobby for other uses outside of OTD. The computer area will be divided into a black and white section to permit the combined use by black and unclassified programs.

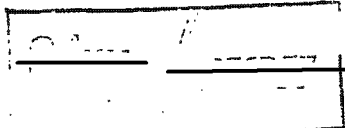
5. Perkin-Elmer has submitted a request to permit other optical work to be performed in the presently classified optical polishing shop at 77 Danbury. It was pointed out to Mr. Maguire that nothing had changed

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in the program with regard to program security in the considerations which had required that that be a secure area. However, the Government would be willing to review the initial decision to see whether it was still valid or whether the area could be opened up to other work. It was suggested that in view of the long range aspects of the sensor production program that consideration should be given to consolidating all of the OOD HEXAGON-related activities in Danbury to help with the Danbury overhead problem and to eliminate the need to add additional unclassified work to that facility in order to keep the facility. Mr. Maguire said that he would take this suggestion under consideration and would advise as to whether they would proceed in this manner.

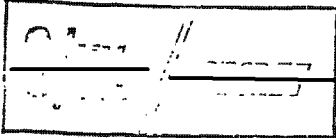
6. EK advised that the respooled AFP roll will have 103,000 ft. of film and that it is satisfactory from a sensitometric standpoint. This film is planned for Development Model R&I backup at SVIC. Since this film is over a year old, it should be used for R&I or for the DM pad load in August. Two more 26,000 ft. light struck rolls of film were shipped to P.E. on 7 March for use in P-1. These two rolls were requested by P.E. on 8 March.

7. An AGE Spares Provisioning Conference was held at P.E. on Tuesday and was, in general, satisfactory. Technically, the proposed spares seemed to be all right but the Project Office asked that the Government auditors review the costs and that some of the items be reassessed to determine if sparing certain component parts would not be more acceptable and economical than sparing the complete item.

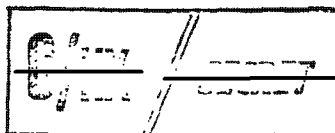


8. P.E. has recently completed an updated version at the TDMS Software Executive Program. This program and a set of data obtained from the "D" Model are being forwarded to Headquarters along with a set of SSC

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computer results acquired with the use of that data. The program is to be IBM-compatible, and the results obtained on the Headquarters computers should match those of SSC. This will be the first use of actual hardware system test data for evaluation by Headquarters computers.

9. This week P.E. demonstrated system data acquisition (including hardware) through the SSTC and the TDMS. The data acquired, processed, and printed out quick-look results in near real time, limited primarily because of the use of a teletype printer instead of a line printer. This is a significant first in the test data acquisition and processing efforts.

**B. Development Model**

The development model is proceeding with Chamber A testing in vacuum. The 70°F uniform temperature tests including sync flash and through-focus tests were complete. The chamber is being repressurized to obtain the film for analysis. During the testing, the "D" Model experienced, because of a technician's error in inserting the wrong card in the SSTC, a classic catastrophic failure when both cameras lost tension and there was an uncontrolled shutdown. By starting at the minimum possible speed, the slack film was pulled out of the supply, the tension restored, and the cameras operated. The cameras appear to have a greater flexibility than originally believed.

**C. First Flight Model**

The TCA has successfully passed acceptance level z-axis vibration and acoustics. It is now being set up for x- and y-axis vibration. The quick-look data shows no failure either during vibration or acoustic testing.

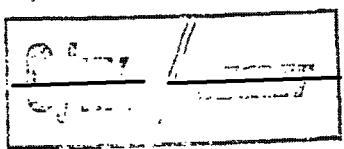
**D. Flight Unit No. 2**

1. Platen "A", Film Drive "A", and Loopers "A" and "B" underwent vibration tests early this week and are ready for two camera assembly. Film Drive "B" will be vibrated after P-1 TCA and Supply finish vibration tests. Optical bar "A" is ready for TCA buildup and OB "B" comes out of Chamber "D" on 14 March.



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2. TCA buildup commences on 18 March. The buildup sequence has been modified such that the film drive assemblies will be installed in Ready Room "B" after platen/OB made and test. This will allow quicker access and trouble-shooting in the event of a malfunction at that level.

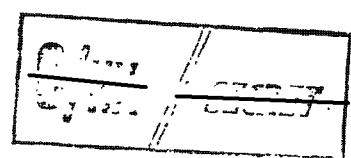
3. The P-2 test team is being formed with Mr. Saperstein as test director.

**III. Meetings Requiring Participation of Headquarters Personnel**

<u>Date</u>	<u>Subject</u>	<u>Attendees</u>
<u>PERKIN-ELMER</u>		
18 Mar	Payload Information Meeting	Patterson, Kohler, [redacted] [redacted] Webb, Burks.
19 Mar	Film Chemistry Briefing by EK	[redacted]
<u>MWC</u>		
17 Mar	Film Despooling Review	[redacted]
19 Mar	Managers' Meeting	Patterson
<u>Annual Leave</u>		
16-20 Mar		[redacted]

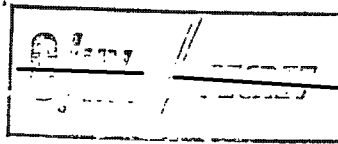
Donald W. Patterson  
D/PRS/OSP

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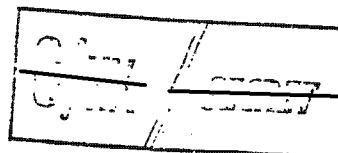


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**Distribution:**

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/EB/OSP  
Cy 9 - C/SS/OSP  
Cy 10 - RB/OSP  
Cy 11 - PRS/File  
Cy 12 - PRS/Chrono  
Cy 13 -   
Cy 14 -

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