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BYE-106641-70
Copy ___ of 14
3 April 1970

MEMORANDUM FOR: Director of Special Projects

SUBJECT : Photo Reconnaissance Systems Report No. 34

I. CORONA

A. Accomplishments

1. CR-13 Dr. "A" grid installation is in progress. Disic tracking completed and acceptable after new take-up was installed.

2. Move plans are being finalized with the security, training, and people plans are either ahead of or on schedule. Inventories should be completed during the middle of April. Progress continues on Buildings 152 and 156 refurbishments. In 152, the major area partitions are in place and shaker concrete has been poured.

3. Modified constant tension assemblies will have been delivered for all remaining systems by mid-April.

4. Documentation classification analysis continued. It is expected that preliminary determination of AP classified material storage will be known by 10 April.

B. Problems

1. Currently, a piece of tape is thought to have been responsible for the CR-13 Disic take-up failure reported last week. Analysis is still being accomplished.

2. Not a problem yet, but something to watch, is the impact of the teamsters strike on the delivery of items for Bldg. 152 and the planned move.

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C. Projected Status

1. CR-11. Post-storage functional tests.

2. CR-12. Storage preps.

3. CR-13. Environmental test preps.

4. OR-2. Functional test preps.

5. CR-14. System tracking preps

6. CR-15. Receiving inspection.

II. HEXAGON

A. General

1. The checkout of AP programs on the IBM 360 mod 65 computer is progressing satisfactorily. There are no known problems at this time that would prevent meeting the 1 May target date of releasing the mod 50. This week has been spent compiling and checking out individual programs. Initial job-stream flow and program compatibility testing (CPX) will begin next week.

2. The forward section was demated from the SDV III vehicle on 31 March. P.E. (E. Wolpin) in conjunction with SBAC engineering laid out the SSC-supplied cables and marked the forward section structure for cable clamps and brackets. SBAC will drill holes in addition to other work and return the forward section to P.E. for the start of forward section buildup on 9 April 1970.

3. SSTC #3 checkout was resumed when SBAC furnished a master mux. Archive tapes from Danbury's Chamber "A" are being used to acquaint the field group with the AVE/SSTC interface.

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4. The EMI filter mod installation on DM 1, 2, and 3 take-ups began 1 April. The structural integrity of the brake appears marginal after the mod. However, this is not the flight configuration of the brake, and both the location of EMI mod and the brake are being checked on DM 4 and the Flight Model take-ups.

5. A Project Office team has been established which will review the "D" Model preliminary FACI data and later will conduct the formal FACI on the P-1 Model. P.E. has delivered to the Resident Office about 25 cubic feet of "pre-FACI" material which will be reviewed next week by the Project Office team and SETS. The remainder of the material is expected to be abailable, at least in preliminary form, by the end of April. The Preliminary FACI will serve the general purpose of defining the configuration of the "D" Model, the tests conducted, and the adequacy of the information provided. This type information will be utilized in deriving more specific guidance to the contractor for the content of the formal FACI package.

6. The two 105K film rolls for the DM R&I backup will be sent to the West Coast on 6 April. Kodak is currently making a batch of 45% RH (± 5%) SO-236 (the SO-380 replacement) in order to meet a 5 May need date for P-2's Chamber "A" test. 40% RH (maximum) SO-236 will be available in July and will be flown on P-1.

7. Planning efforts are under way for a color processor at Perkin-Elmer. Facility modifications should not be a problem, since space was provided for such a contingency.

8. The Project Office received P.E.'s lists of required TFE/AGE spares in preparation for next week's provisioning conference at Norton AFB. The dollar amount of bench level (piece part) spares were $59,000.00 for TFE and $80,000.00 for AGE. A maximum of $70,000.00 for TFE bench level spares has been allocated. The Project Office will provide the initial stock of bench level spares and, thereafter, the Contractor shall maintain the stock level.

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SUBJECT: Photo Reconnaissance Systems Report No. 34

B. Development Model

1. Camera "B" completed 100°F and 70°F tests in vacuum and in air without any changes in the OB torque. OB "A" is still exhibiting high torque, and P.E. is starting to troubleshoot in front of the chamber today. There is some indication that the high torque in Camera "A" developed during the photographic runs at 100°F.

2. DM-4 take-up failed qual vibration twice this week, both times due to the builder roller arm uncaging. Operationally, this would be a catastrophic failure. However, the builder roller did remain caged during the first two qual shocks and vibration tests. Since DM-4 has gone through five partial qual tests, there is some cause to believe that there is a wear-out problem. The Project Office is planning to tie this builder roller down, complete the remaining axis vibration test on DM-4, and ship it. Additional testing to demonstrate a fix will be done on a breadboard.

C. Flight Article #1

Both platens have been removed from the TCA to repair damage to the film marking light pipe blocks. The damage is believed to have occurred during the light leak test when the sensitometric film was in the system. The TCA is now expected to be installed into the midsection on 6 April vice a 1 April schedule date.

D. Flight Article #2

1. Progress on P-2 during the week consisted primarily of routine assembly. Alignment has been completed. Platen B was removed after alignment and will be subjected to another vibration test to verify that the 2A4 wiring problem (reported last week) has been corrected.

2. Lockheed has advised that the P-2 midsection will be delivered on 6 April. Since this is three weeks late to P.E.'s scheduled need date of 16 March, there may be some impact, but this cannot be assessed until P.E. reviews the midsection assembly schedule to determine if SBAC has incorporated all the changes that resulted from the recent S&M IFWG meetings.

SUBJECT: Photo Reconnaissance Systems Report No. 34

III. Meetings Requiring Participation of Headquarters Personnel

Date	Subject	Attendees
P.E.		
7, 8, 9 Apr	Review Pre-FACI Package	[redacted] respectively)
8 Apr	Review "D" Model EMC Qual Test Results	[redacted]
LMSC		
8 Apr	OPS IFWG	[redacted] Johnson, Webb
8 Apr	A&T IFWG	Burks
9 Apr	Schedule IFWG	[redacted]
9 Apr	ATU Review	[redacted]
9-10 Apr	BOB Tour of LMSC	Crowley, [redacted]
[redacted]		
7-9 Apr	Spares Provisioning Conf.	[redacted] Fitzgerald [redacted] (7-8 only)
WESTOVER AFB		
9-10 Apr	Chamber "A" Data Review	Kohler [redacted] Burks, [redacted] (1 day only)
RCA		
6 Apr	DM-4 and P-1 Series Status	[redacted]
Hqs.		
7 Apr	Schedule Review	Staff [redacted] PMO/PRS/OSP

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SUBJECT: Photo Reconnaissance Systems Report No. 34

Distribution:
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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 -

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BYE-106558-70
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27 March 1970

MEMORANDUM FOR: Director of Special Projects

SUBJECT : Photo Reconnaissance Systems Report No. 33

I. CORONA

A. Accomplishments

1. Mission 1109 (CR-10) was successfully terminated on 23 March 1970 during Rev 309. The second bucket has been forwarded to EK for processing. No anomalies were noted during the entire mission.

2. Proposals for the fabrication of replacement units for Haydon Timers have been received and evaluated. Contract award to Autronics, Los Angeles, is presently pending.

B. Problems

During HIVOS preps, CR-13's disic testing indicated a defective T/U. The unit will be replaced, and the HIVOS test will be delayed approximately one week.

C. Projected Status

1. CR-11. Storage.
2. CR-12. Pre-storage tests.
3. CR-13. Environmental tests.
4. QR-2. Tracking.
5. CR-14. System assembly.
6. CR-15. Modifications.

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SUBJECT: Photo Reconnaissance Systems Report No. 33

II. HEXAGON

A. General

1. The Monthly Technical Meeting was held at SSC on 25 March 1970. Highlights of the meeting were:

a) The problems of film tracking at the 30° scan mode for both the "D" and P-1 models was reviewed. No consistent explanation was presented; however, system alignment/film tracking problems, coupled with the servo system "jitter" during the long pause at 30°, was referred to several times. A "tranquilizer" box, which deactivates the film drive and metering capstans during the pause, was built and tested on the "D" model. The test was inconclusive as a flaw in the box kept the capstans turned off all the time. As the problem has not been resolved, the plan is to conduct all testing on the West Coast in the 60° or greater scan mode. This increases the test film usage and requires that the supply be changed before any testing on the West Coast. This, in turn, will prevent any testing of the ATCS (Active Thermal Control System) in Chamber "A-1" since the ATCS was sized for the thermal gradient compatible with 40% film and not 50%.

b) Chamber "A" photographic data from the "D" model was presented for the 70° temperature conditions. Bar "B" was presented as having 161 l/mm for the 50% case and 130 l/mm for the 96% low case.

c) The results of the P-1 acceptance vibration testing was presented. The worst results (on the platen) were presented only when the Project Office specifically requested that they be shown. When asked what alternative plans they

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were considering to fill the gaps in testing on some of the small components (the platen and looper were undertested on the component level) P.E. top management took the position that none was required. This is a high risk approach with elements which have such stringent alignment and functional requirements as the platen and looper.

d) The presentation on the SSTC maintenance program consisted of generalities on fault isolation and circuit card replacement and repair. The SSTC's are supposed to isolate faults down to the circuit card level by means of its self test feature. After fault isolation, the problem will be fixed by either replacing or repairing the faulty item. Performance will then be reverified again by means of the self test circuit.

SSTC's No. 2 through 5 will have spare cards, but SSTC No. 1 will only have spare piece parts (resistors, etc.) because it is not common to the other four. Spare cards for No. 1 would be uneconomical.

P.E. failed to bring out that there will probably be no testing of the spare cards at the vendor's facility, but this is not alarming since the vendor's (AC Electronics) QC program seems satisfactory. P.E. said at the 9 March Spares Meeting that the cards could be tested if SSTC No. 5 was available at AC, but AC would have to be tasked to do this, and Headquarters does not feel that this is the way to go.

e) The report on the automatic microdensitometer was unsatisfactory. It seems that the device, which is supposed to measure the plane of best focus and OB-to-film sync, is plagued with mechanical and software problems. Their solutions to the problems are in three categories: 1) noise reduction activity for the electronics; 2) correction of the software programs; 3) fabrication of optical standard targets to be used for calibration. There was no schedule information presented and no plan as to how to solve the problems.

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SUBJECT: Photo Reconnaissance Systems Report No. 33

2. The West Coast IBM computer 360/65 was ready for program checkouts at 1700 on 23 March 1970.

3. The forward section build-up could have started on 25 March 1970, as far as SSPO items were concerned. The SPO had been requested to make the forward section available as soon as possible, and there are indications that it will be made available about 1 April 1970.

4. Regarding the SO-236 film and the 819 chemistry situation, the Project Office feels that the best approach is to devote one versamat to P.E. to this evaluation effort. Arrangements are being made to have the necessary supplies sent to P.E.

5. Responses were received from all CORONA and HEXAGON Contractors on the FY 1971 Program and FY 1972 Budget Call. The submissions were in line with budgeted funds requested in previous years with the exception of Perkin-Elmer, who came in with a considerable increase in both the FY 1971 Program and Estimated Program Budget Costs for years beyond 1971. The FY 1971 submission is approximately $18 million above the figure submitted in last year's NRO Program Call. The average cost of sensor subsystems for the follow-on procurement of six units showed an increase of about $4 million per unit. The Project Office is making a separate assessment of the validity of these costs and will modify the Contractor's funding request if appropriate.

6. P.E. received proposals on the production and refurbishment of take-ups from RCA and General Electric. The General Electric cost for the manufacture of eight take-ups and the refurbishment of 16 was $13.9 million, while RCA submitted a quote for $5.1 million. P.E.'s estimate, based on an incomplete costing, was $6.5 million. P.E. requested permission to commence fact-finding with RCA to determine what additions to their cost proposal might be incurred due to changes. RCA proposal was based on a December 1969 design.

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7. A discussion was held with Messrs. [redacted] Jones, [redacted] and Patterson regarding the method of contracting for follow-on procurement. The principal problem at the present time is the lack of authorized funds from the NRO to cover the entire obligations that P.E. would normally make under fixed price contracting in FY 1970. Because of the long lead time in the procurement of many items, most subcontracts must be initiated prior to the end of this fiscal year. P.E. is investigating issuing contracts on the basis of limitation of liability on the subcontracts to $6.1 million which has been requested from the NRO for long lead time purchases in FY 1970. Approximately $4 million of the $6 million has already been approved and the $2 million is being held pending further requests by the Project Office for these funds. If suitable contract arrangements can be worked out, it is expected that P.E. will place the subcontractors immediately under a fixed price contract. If they cannot be so arranged, it may be necessary to issue separate contracts for FY 1970 long lead procurement and for follow-on production or to issue letter contracts to cover long lead procurement only.

8. SSC has agreed to participate in the development and updating of the Headquarters Test Requirements/Test Compliance Matrix. The updating information will be provided regularly at each of the schedule reviews beginning 1 April. There are different views concerning the interpretation of "requirements"; however, these are not expected to interpose insurmountable problems.

9. SSC is in the process of compiling all of the contractually required data for the conduct of the "Preliminary FACI" and the "Acceptance" of the D Model. The documentation will include acceptance and technical certification data, AVE test logs, fabrication and inspection records, MRB's, ECO's, qual test reports, reconcillatory reports (D and P-1 Models), CEI and equipment specifications, and test data.

10. One side on both the Development Model and Flight Model has a cyclic error on the metering capstan summed error signal. On the D Model the error repeats about once every 18 frames, for a duration of about 4 or 5 frames. The envelope appears to be sinusoidal. The error signal increases (over spec) about a factor of

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four at the envelope maximum. The problem has existed for "a couple of months". P.E. has assigned a team to investigate the problem, but cannot yet explain the source of the error. The flight model modification repeats about every 50 frames with an over spec ratio or two to one.

B. Development Model

The Development Model has completed the 40° and 100°F photo vacuum tests with Camera A. The plan is to trouble-shoot Camera "B" in front of the chamber and, if it can be fixed within 24 hours, to go back in for a 100°F stereo qual test. This would lead to a ship date of 10 April for the D Model. If there is a major failure such as the OB motor or encoder, the schedule and test plan will have to be reassessed.

C. Flight Model #1

1. The supply is complete and is being installed in the mid-section. There are two or three items on the supply which will have to be field retrofitted according to the present plans.

2. The midsection is complete except for cables used to gain access to thermocouples in Chambers A and A-1. The thermocouples monitor the performance of the active thermal control system. SSC is unable at this time to manufacture these cables and will attempt to install AGE cables to perform this function during chamber tests.

3. The TCA is to be installed into the midsection on 30 March. The better part of the last week has been used up investigating 30° scan problems. The special 30° scan tests have been completed on P-1 without providing an explanation for the problem or resulting in a satisfactory correction for one side of this model. At the present time, one side of the model does not operate satisfactorily at 30°.

4. SSC is now quoting a 31 May 1970 ship date for P-1 with no slack or contingency in the test program.

SUBJECT: Photo Reconnaissance Systems Report No. 33

D. Flight Model #2

Both OB's have been put into the frame and are going into alignment. Platen "A" goes into the assembly on 27 March. Platen "B" has suffered more 2A4 (photo mode electronics) box problems. The first problem was a blown capacitor which was caused by the platen test station, where AC and DC power were simultaneously applied to the box. This problem has been fixed. The cause and nature of the second problem is due to the way the box is mounted -- the wires rub against the casing and short out, and the mounting is now being changed. Two PE Aerospace boxes and one RadInc box are being fixed as a result of this problem. Another 2A4 box is available and will be put in the assembly next week. Platen "B" encoder failed acceptance vibration test. The switching tracks did not respond properly after vibration. The P-3 encoder is now being used in P-2, and the P-2 problem is being investigated. P-2 is currently about four days late to a 7 April completion of the two-camera-assembly.

III. Meetings Requiring Participation of Headquarters Personnel

Date	Subject	Attendees
WESTOVER AFB		
31 March - 1 April	HEXAGON Data Review	Burke, [redacted] Kohler
HEADQUARTERS		
1 Apr	Schedule Review	Staff

Personnel

Mr [redacted] reported for duty at the West Coast Project Office on 20 March 1970, and is assigned to the Computer Software Support position.

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SUBJECT: Photo Reconnaissance Systems Report No. 33

Training

[redacted] will attend the Budget Process Course at Headquarters from 30 March through 3 April.

[redacted]
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 - [redacted]
Cy 14 - [redacted]

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6 March 1970

MEMORANDUM FOR: Director of Special Projects

SUBJECT : Photo Reconnaissance Systems Report No. 30

I. CORONA

A. Accomplishments

Mission 1109 with CR-10 STB payload was successfully launched on 4 March 1970. A slightly "cold" burn from the booster that was not compensated for by the Agena resulted in a "short" orbital period. DMU's have been used to adjust the orbit to planned parameters, with the exception of perigee location which remains about 20 degrees further north than desired. The present 97.4 nm perigee altitude will be raised to approximately 100 nm sometime later in the mission, depending on the utilization rate of the five remaining DMU's. The mission is progressing well with no apparent problems.

B. Projected Status

1. CR-11 completed the first block test with STB. Data is being analyzed. A second block test will probably be run today.

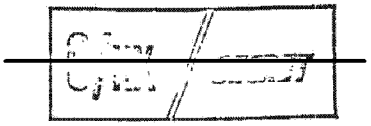
2. CR-12 is completing block preparations.

3. CR-13 is in tracking with STB.

4. CR-14 is in acceptance.

II. HEXAGON

A. General



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SUBJECT: Photo Reconnaissance Systems Report No. 30

1. P.E. has been given a go-ahead to study four of their proposed design improvements. These are Brush Motors, Large Capacity Buffer, two areas under the Improved Sequencer, and In-flight Changeable Filters and Material Change Detector. The study to delete the Supply Caging Mechanism is being delayed until the problem of EK limits on core pressure is resolved (this problem was reported in the last weekly). The Large Capacity Buffer study was expanded to include a supply radius sensor. The latter had originally been part of the Modified Film Transport study which is not being pursued at this time as the Large Capacity Buffer study overlaps this area.

2. P.E. has modified the vibration acceptance test procedure on Flight Model #1 to include three axes vice a single axis. A CCR is being submitted for this change. The Project Office's position is that the complexity of the sensor subsystem, the criticality of alignment, and the large number of vibration sensitive elements leaves no question but that a three-axis shake is required and is in scope.

3. An informal review of P.E.'s AVE spares conditioning plan was held on Wednesday. P.E. is proposing to condition (outgas and burn-in) ten electronic boxes in-house for $120,000 and have not yet provided satisfactory backup data to the Project Office to justify these costs. P.E. claimed that RadInc had quoted $275,000 to do the conditioning, but it was discovered that RadInc had quoted on a vastly different work statement than what is now planned. P.E. is to request another bid from RadInc based on the current plans for spares conditioning.

4. Eastman Kodak delivered the second 105K foot roll of P-1 film and about 90% of the photo lab equipment spare parts this week. Eighty thousand feet of light struck film was also delivered to RCA in 10,000 foot rolls. Seven new 26,000 ft-roll shipping containers were received by E.K.

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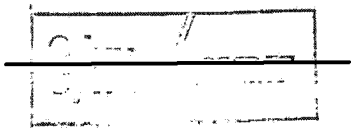

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5. SSPO was represented at the AC Monthly Managers' review on 3 March 1970. The delivery schedule of SSTC #4 has slipped one month due to changes directed by SSPO and SSC, and the WCPO has agreed to the presently scheduled 15 April 1970 delivery date. SSTC #5 is on schedule. Work on the modifications necessary to interface the SSTC data with the 360/65 computer is beginning to show signs of progress. A more detailed report on this Management Review has been prepared for the Director, PRS.

6. The DM-4 take-up was subjected to the three axis qual shock and vibration following the first axis shock failure. A pin holding the motor came loose on each side, causing a slip in the rotor/stator phasing. DM-4 and PI-1 have to be torn down to incorporate a change to hold the pin in place. PI-2 will be delivered (with the fix) before PI-1 or DM-4.

B. Development Model

The supply radius sensing pot was inadvertently set at zero and sent a false signal to the supply servo. This caused an over tension condition in the film path, and a film jam in the "B" camera during the in-air testing in Chamber "A". The camera system was removed from the chamber, the film jam cleared, and it is back in the chamber running. The cause and extent of the damage is not know, but P.E. is proceeding with the testing.

C. Flight Article #1

1. Both platens have completed acceptance vibration testing. The platen "A" slit width stepper motor moved during vibration. The anomaly is being investigated. A fiber optics bundle on platen "B" failed (16w transmission) after vibration, and the fiber optics were replaced. Both platens have been reassembled into the TCA.

2. TCA in-air baseline tests are being run in Ready Room "B". Camera "A" is running well. A visible dust buildup on a Camera "B" twister has occurred, resulting in film scratching. A possible cause is a low gas flow through one airbar, and this airbar has been replaced.

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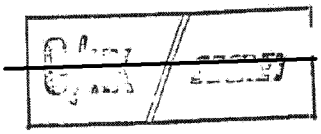

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3. TCA three-axis vibration should start early next week. Since this is the first TCA to be vibrated, acceptance vibration levels will be approached gradually. The first run will be at a low level, the second will be one-half acceptance levels, the third will be at acceptance levels. Seventeen tri-axial and nine single-axis vibration transducers will be mounted on the TCA.

4. A film tear which occurred recently is believed to be the result of misalignment between crossover and film drive rollers. This same misalignment problem occurred on the "D" Model between Ready Room "B" and "A". The misalignment causes the film to wander laterally off the roller during recycle. It is postulated that the film was nicked as a result of the wander. Film tension then caused a 30-inch diagonal tear through the film. It is planned to check this alignment both before and after TCA vibration tests.

IV. Meetings Requiring Participation of Headquarters Personnel

Date	Subject	Attendees
HQS		
9 Mar	PRS Software Briefing by DAD	Staff
10 Mar	HEX Nuclear Vulnerability Discussions with the Air Force	Patterson, [redacted]
11 Mar	Project AXUMITE Discussions	[redacted] Kohler, Webb
LMSC		
10-11 Mar	RV IFWG	[redacted]
10-11 Mar	A&T IFWG	Burks
11 Mar	Ops IFWG	[redacted]

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Date	Subject	Attendees
LMSC (cont'd)		
11-12 Mar	S&M IFWG	
12-13 Mar	TT&C IFWG	
12 Mar	RV System Design and Operation Briefing by McDonnell	Burks,
P.E.		
10 Mar	Spares Provisioning Conference	
10 Mar	Pre-PIM Review	Kohler
ITEK		
10 Mar	Review CORONA Tech Data Book	
HORIZONS		
12 Mar	Review Technical Progress	Kohler

Donald W. Patterson
D/PRS/OSP

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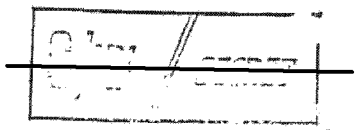

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Cy 8 - C/SB/OSP
Cy 9 - C/SS/OSP
Cy 10 - RB/OSP
Cy 11 - PRS/File
Cy 12 - PRS/Chrono
Cy 13
Cy 14

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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 rev. 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. q 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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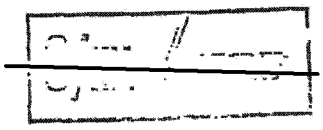

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4. CR-13. Environmental preps.

5. OR-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. [redacted] DD/SS/OSP, toured the A/P, the Itek facility in Palo Alto, and Bldg. 156 and discussed security aspects with the WCPO.

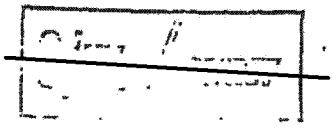
3. P.E. management presented to the Project Office on 12 March their winning subcontractor recommendations in most of the follow-on procurement subcontract areas where competition was requested and Project Office concurrence is required. The general conclusion was that most of the current vendors were 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) Boller & Chivens - encoders 2, 4, 5.



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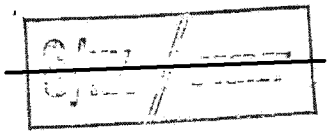

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e) Kidde - pneumatics for $5,340,500.

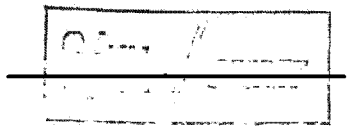
f) Kidde - relief valves for $71,900.

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



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 6 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. [redacted] 3.3(b)(1)
[redacted] met with the Project Office on Wednesday to discuss the 3.3(b)(1)
TFE/AGE spares situation. It was decided to have a provisioning conference at the Depot in early April to define those items that the Depot can provide, inventory control, accountability, etc.

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" underwnet 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 15 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 [redacted] as test director. 3.3(b)(1)

III. Meetings Requiring Participation of Headquarters Personnel

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

Donald W. Patterson
D/PRS/OSP

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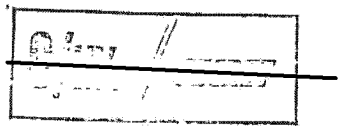

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Cy 2 - DD/OSP
Cy 3 - D/PRS/OSP
Cy 4 - EO/OSP
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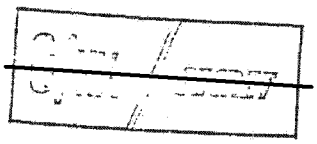
Cy 7 - C/PAD/OSP
Cy 8 - C/SEB/OSP
Cy 9 - C/SS/OSP
Cy 10 - RB/OSP
Cy 11 - PRS/File
Cy 12 - PRS/Chrono
Cy 13 -
Cy 14 -



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ACTION								
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CHAIRMAN, ICRS/COMIREX INFO PILOT

[redacted]

CHAIRMAN, ICRS/COMIREX, MR. SCHADEGG

SUBJECT: MISSION 1109-1 QUALITY REPORT

1. ALL CAMERAS OPERATED SATISFACTORILY THROUGHOUT MISSION. IMAGE QUALITY OF FORWARD AND AFT RECORDS VARIABLE. AT MAGIFICATIONS ABOVE 25X MOST IMAGERY APPEARS OUT-OF-FOCUS. IN ADDITION, THREE-QUARTER INCH WIDE BAND OF OUT-OF-FOCUS IMAGERY PRESENT ON FRAMES 3 AND 4 OF MOST FORWARD-LOOKING PASSES. THIS AREA IS APPROXIMATELY 12 INCHES FROM TAKE-UP END OF FRAME AND OCCASIONALLY EXTENDS ACROSS WIDTH OF FORMAT. AREA SIMILAR TO THAT ENCOUNTERED ON MISSION 1108 FORWARD RECORD.

2. MISSION INTERPRETABILITY RANGES FROM FAIR TO GOOD.

3. MISSION 1109-1 APPROXIMATELY 80 PERCENT CLOUD-FREE.

4. A SPECIAL HIGH CONTRAST DP ON FILM TYPES SO-369 AND 6451 OF PASS 58D WAS INITIATED BY BREAKDOWN TEAM. THIS PASS WAS ACQUIRED OVER MIDDLE EAST DESERT AREA AND ORIGINAL NEGATIVE WAS LOW IN CONTRAST. SPECIAL COPY RESULTED IN INTELLIGENCE NOT DERIVABLE FROM NORMAL DP.

~~T O P S E C R E T~~

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