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16 June 1961

CORONA/ARGON

MEMORANDUM FOR THE RECORD

SUBJECT: Trip Report - [redacted]

1. PURPOSE: Travel performed on 3 - 13 June 1961 to monitor loading of vehicle 1107 and 1108. Additional: Item was a Technical Directive meeting with the SETD group and the CCB.

2. GENERAL:

a. LOADING: Operation at VAFB was normal for both the Argon vehicle 1108 and the Corona vehicle 1107. Buy-off was accomplished for the instruments at base and the D.D. Form 250 returned to contracts. Since, a delay in loading on 1107 necessitated a day by day slip, I remained on the West Coast an extra 4 days. This brings up a good point: I feel that the loading operation on "C" and "A" is now routine and recommend that Hq. permit Capt. Johnson from AFSSD to represent the Government during this operation. [redacted] also plans to be present on the "A" loadings. (On the first one or two "C" items, I feel I should personally attend the loading operation.) In the event of unusual difficulties or a situation requiring a decision, both myself and Lt./Col. Murphy are available by telephone. Furthermore, I could be there in about 12 hours in the event of some emergency. Loading on B - 2 gives a one day pad before the instrument moves to the launch stand anyway. In this manner a considerable savings of travel cost could be effected and more time available for work at Hq. For buy-off, Lt./Col. Murphy could accomplish this at LMSD or he could delegate this authority to Capt. Johnson at VAFB.

b. TECHNICAL DIRECTIVE MEETING:

Minutes of the first TD meeting on the Mural program are attached. Procedures for operation of the SETD, T.D. #4 on the Auxiliary Press Camera, and the Design Control Specification for the "Dual Parallel Output Clock Generation" are on file in DFD.

c. MURAL CLOCK: A proposal has been received by SETD from FCIC for [redacted] for eight "A" clocks. This includes [redacted] for line of balance control plus one black telephone. The FCIC schedule shows the following deliveries:

(1) ENGINEERING FLIGHT UNIT, 16 Oct. 1961. This may be tight for delivery.

(2) QUALIFICATION UNIT, 30 Oct. 1961. Since the "A" clock is being repackaged to eliminate the shutter timer and includes the design of a dual parallel output clock generator in place of the "A" generator, it is highly desirable to qualify the entire unit. We are actually repackaging the entire unit in shape and the installation point is

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of course different. The SETD does not believe significant savings could be made by qualifying only the new sub-assemblies. The safest procedure is, obviously, to qualify the entire "M" clock as a sub-system.

(3) FLIGHT UNITS:

- (a) 13 Nov. 61
- (b) 27 Nov. 61
- (c) 11 Dec. 61
- (d) 26 Dec. 61
- (e) 8 Jan. 62
- (f) 22 Jan. 62

(4) SPARE FLIGHT UNIT: One of the flight units in the above list will be allocated as a spare. This will insure availability of a unit for every flight. One unit is the least amount of spares that could be procured and does not imply that the confidence level on reliability is not right, but rather is insurance against damage in handling, shipping and test.

d. SETD REPRESENTATIVE: [redacted] will coordinate SETD matters as a representative in the ITAK plant in Boston.

e. SETD MEETINGS: It was decided to hold the SETD meetings (monthly) alternately in Boston and Palo Alto.

f. CLEAN ROOM INSPECTION AT VAFB: The clean rooms in the "L" Building are to be placed under dual supervision of LMSD top management and USAF local personnel under [redacted]. The LMSD representative will be [redacted]. I feel that with this type of people making daily, unannounced, inspections the quality of cleanliness will greatly improve. Attached is a draft of a proposed inspection list to be furnished these people and also posted in the "L" Building as a check list. A copy has been given to Ed Green for comment.

g. SPARE TRACK CENTER: [redacted] arranged to take me through the SIC one evening after hours when the area was empty. I had been unable to take this tour previously due to the association problem with many SSD personnel who know me. This did remind me of a point, however, I feel that it would be very advantageous to obtain a slot, for this agency (perhaps under D.O.D cover) to permit a scheduled attendance of selected agency personnel to the Ballistic Missile and Space Systems Orientation Course, at SSD in Inglewood. I don't believe the course, which was run by the Air University, has changed significantly since I left SSD. It previously ran for one week of intensive lectures and tours of several contractor facilities. Out of ten students participated in a TTY status. I feel that this basic indoctrination course would be especially beneficial to SPIC and operations personnel.

b. IIRK PLANS: I was able to spend half of a day with [redacted] and [redacted] at their new West Coast facility. The most interesting portion of our conversations concerned a proposal "in work" between IIRK and [redacted] for a "black" high acuity (1 foot object) follow on to the G program. The [redacted] contribution was primarily in the small control rocket or jet area to enable orbit changes in flight to permit parallel flight line coverage with a long focal length camera of technical objective targets. The system would probably be a solid propellant type primary vehicle with the associate reduction in G.S.E. costs. This could also permit launches from other than VAFB and specific land area recovery. I see a definite attempt to break away from LMSO in future proposals. They have presently been able to hold off [redacted] from running to the Pentagon with a proposal, but feel that to secure some time for consideration of this system as a "black" operation, a small study contract for a hundred thousand or so would pacify [redacted] and permit a detailed investigation. I certainly feel that some organization should be working in this direction for the future. Eventually we should achieve a "quick reaction capability" for detailed intelligence requirements.

[redacted]
MAJCE USAF

Distribution:

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SETD, 1st TECHNICAL DIRECTIVE MEETING
June 5, 1961

1. SETD personnel introduced. Role of [REDACTED] as Eastern Representative explained.
2. Functions and Operating Procedures were discussed. SETD Operating Procedures were distributed. These are open to comment and recommendation.
3. LMSD status report showed all items to be on 90% or schedule. One special problem requiring attention is checkout and integration of vehicle clock into the first flight system. Span between delivery and completion of integration is shorter than normal and extra effort will be required. Also, camera sub-system must be delivered by September 18 to maintain 17 December ship-to-base date. An item requiring immediate action is resolution of whether frame camera is included in system. This is affecting LMSD effort on barrel section, fairing, and recovery system modifications.
4. ITEK reported that: -
 - a) Design for dual cassette 100% released. Parts for first four 95% complete. First article assembled by July 1, 1961.
 - b) Main panoramic cameras are in good position dependent upon completion of Triple Prime Qualification Program. Layout of position in barrel sections has been received and details of mods released. Changes beyond June 8 in main plate layout could cause schedule problems. # 51 and #52 considered best bet for H Program schedule.
 - c) Frame Camera - no difficulties on schedule at this time.
 - d) Simulator design is being gated by availability of optical glass. Design now underway. If rare earth glasses are required procurement time may determine delivery of simulators.
 - e) Requirements for seismic block for simulator discussed. Decision made not to build seismic block at L/H simulator. Base line resolution measured at ITEK and West Coast measurement is for check only.
5. Following TDS issued: - TD No. 1, Vehicle Clock, issued and implemented.
TD No. 2, REC Wiring Change, issued informally and incorporated in GE work statement.
TD No. 3, Change in Plug Type for Cassette, awaiting ITEK coordination.
TD No. 4, Auxiliary Frame Camera, submitted for discussion and approved by AFCCB. ITEK and LMSD will stop any further work to incorporate frame camera.

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6. Mechanical Interface Review showed no major problems. Most significant problem is interference of timing belt pulley with finger mounting ring and interference of cycle counter. Cycle counter will be moved. Timing belt pulley, however, should stay at present location and interference will have to be relieved in finger design or by other means. Mock-up of dual cassette and back cover showed no major problems.
7. Electrical Interface Review. Major problem exists at interface of vehicle clock and camera. ITRK considers clock interface drawing furnished by LMSD to be inadequate. Initial action to resolve this problem will be investigation by LMSD field representative to determine specific problems of interface. This will be followed up by visit by LMSD Engineering personnel if required. Due date for resolution is 16 June.
8. Weight Reduction. Means of reducing system weight were discussed. SETD is to prepare Technical Directive requiring Associate Contractors to study and recommend possible weight savings.
9. Next Technical Directive meeting is scheduled for June 29, 1961 in Boston.


SETD Manager

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5 June 1961

TO: [REDACTED]

FROM: [REDACTED]

SUBJECT: MURAL SYSTEM SPECIFICATION

1. A requirement exists for a general system specification for Mural Sub-system. This specification should contain the following major sub-headings: -

I. SCOPE

- a) General Description of System
- b) Purpose of System

II. OPERATIONAL PARAMETERS

- a) Orbit Parameters
- b) Coverage Capabilities
- c) Launch Limits
 - 1) Time of Year
 - 2) Time of Day
- d) Expected Performance and Compatibility with SO 132, SO 130, and SO 102 type Films.
- e) Recovery Envelopes for 1, 2, 3, 4, or 5 Day Operations.
- f) Capabilities for Covering Specific Areas of Interest
- g) Vehicle Performance
- h) Power Requirements for 1, 2, 3, 4, or 5 Day Operations.

III. DESIGN

- a) Specification of Environmental Condition
 - 1) Checkout
 - 2) Shipment
 - 3) Storage
 - 4) On-Orbit
- b) Requirements for Noise Suppression
- c) System Weight Considerations
- d) Listing of all Applicable Design Control Specifications.

IV. QUALITY CONTROL PHILOSOPHY

5 June 1961

V. RELIABILITY

- a) General philosophy
 - b) Reliability testing of parts, components, sub-assemblies, major assemblies, and the system.
 - c) Level of testing needed to establish reliability.
2. It is requested that your department provide SSTD support in the preparation of the specifications.
 3. In order to determine specific assignments and responsibilities and agreement on specification outline and content, a conference will be held at 1130 PM on June 7. Target date for first draft of the specification is 16 June 1961.
 4. A portion of the specification material was previously prepared in the Program Plan and Proposal documents which established the H Program.


SSTD Manager


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D R A F T

INSPECTION LIST VAFB "L" BLDG.

PURPOSE:

To establish an inspection list covering housekeeping and maintenance and calibration of GSE at VAFB "L" Bldg.

GENERAL:

Improvements required to assist in better housekeeping at the "L" Bldg.

(a) Add filters or screens to outside of "L" Bldg. over intake on clean room airconditioner.

CHECK LIST:

(a) Loose equipment shall be stored in the room provided when not in use. Shelves and hangers are provided for storage.

(b) Clean room floors shall be scrubbed once a week. DO NOT WAX. Additional scrubbing one day before a loading-mission will be accomplished when required.

(c) Smocks and/or coveralls, "will be worn in the clean rooms when instruments are being worked. Special shoes will be worn in the "A" clean room. These smocks and shoes should NOT be worn in other "L" Bldg. areas. Remove them in room provided at entrance to clean rooms. In addition, face masks, hats and gloves will be used for all instrument loading operations.

(d) Keep large doors to clean rooms closed except for the movement of equipment. Personnel must use access doors provided. Keep these access doors closed except when personnel are in process of entering or leaving.

(d) Vacuum clean top of test equipment bay in clean rooms every week.

(f) Cover instrument and/or instrument/fairing combination with a clear plastic cover at all times when no work is being accomplished.

(g) Establish and maintain "No Smoking" in both clean rooms. Inspect trouser cuffs before entering clean rooms.

(h) Establish and maintain a "No Smoking" area for the recover vehicle when it is open. Cover the vehicle with a clear plastic cover when it is open and not being worked.

(i) Cover the vehicle "programmer" with a clear plastic cover when it is open and access is not required.

(j) Clean processor immediately after use. Do not use the processor room for a storage area.

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- (k) Establish a maintenance system on dynamic and static balancers. Attach a tag of checkoff list to each balancer to log date that maintenance was performed.
- (l) Vacuum clean top and internal portions of test consoles used in clean rooms every week.
- (m) Clean work benches and floor around benches at the end of each shift.
- (n) Calibrate test equipment regularly, including consoles.
- (o) Conduct regular inspection of all handling equipment and dollies for proper maintenance and cleanliness.
- (p) Conduct safety inspection of pyro room before each loading operation.

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