

History
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SAO MESSAGE FORMAT

(CLASSIFICATION)		(MESSAGE IDENTIFICATION)	
TOP SECRET EARPOP		(will be filled in by SAO Office)	
RELEASED BY <i>H.O. Lorenzen</i> H.O. LORENZEN	DRAFTED BY R.D. MAYO <i>R.D. Mayo</i>	PHONE EXT.	NUMBER 3060

DATE 22 March 1971

PRECEDENCE	FLASH	EMERGENCY	OPERATIONAL	PRIORITY	ROUTINE
ACTION			IMMEDIATE	X	
INFO					

FROM: [REDACTED]
TO: [REDACTED]
INFO: ~~COGNAC~~

SUBJ: POPPY MISSION 7107 SPECIFICATIONS

- A. CITE [REDACTED] 168-71 (131700Z JAN 71)
B. CITE WHIG 112-71 (282028Z JAN 71)
C. CITE COGNAC 19-71 (011336Z FEB 71)
D. CITE COGNAC 33-71 (101300Z MAR 71)
- C. NRL LTR BYE 51904-70
D. CITE WHIG 358-70 (221444 MAY 70)

1. REF A PROVIDES THE MOST RECENT STATEMENT OF SPECIFICATIONS FOR MISSION 7107 ELINT SYSTEMS. REF B. ESTABLISHES PRIORITY FOR CERTAIN COLLECTION SYSTEMS WHICH WILL COMPLETE THE FREQUENCY COVERAGE FROM 154 MHz to 18 GHz, AND ASSURE THEIR DELIVERY IN TIME FOR MISSION 7107; (10½ to 12½ GHz in 7107C, and 15 to 16 GHz and 16 to 17 GHz in 7107D). REFERENCE C NOTED THE CONTINGENCY ASPECTS OF THESE BAND EQUATING TO THE MAJOR DIFFERENCE BETWEEN OPTION # I AND OPTION # II RESULTING IN A COST DIFFERENTIAL OF \$226.2K IN THE SPACECRAFT DEVELOPMENT AND AN ADDITIONAL SIX MONTHS IN SCHEDULE TIME.

REFERENCE D GAVE APPROVAL TO OPTION 1.

[] RECOGNIZES THE IMPORTANCE OF THE CAPABILITY OF THESE BANDS. BUT THIS DOES NOT ALTER THE FACT THAT THESE BANDS were the last designs, start OF ALL THE ELINT SYSTEMS BEING PREPARED FOR MISSION 7107. THE BEST ENGINEERING ESTIMATE AT THIS TIME INDICATES THAT THESE COMPONENTS WILL NOT ARRIVE AT NRL UNTIL AFTER 1 NOVEMBER...THUS MAKING THEM TOO LATE FOR MISSION 7107. THERE IS A VERY SLENDER POSSIBILITY IF THE AMMOUNT OF RE-WORK ON OTHER COMPONENTS IS LESS THAN HAVE HISTORICALLY BEEN REQUIRED, THEN THE VENDER MAY IMPROVE DELIVERY BY A SLIGHT AMMOUNT. To meet Ref B requirement for these three bands necessitates a delay in the launch schedule of Mission 7107 by at LEAST 1½ MONTHS...THE ALTERNATIVE IS TO DROP THESE BANDS FROM FURTHER CONSIDERATION FOR MISSION 7107 []

EARLY DECISION ON THIS MATTER IS IMPERATIVE.

(CLASSIFICATION)

NOTE: SEE REVERSE SIDE FOR INFORMATION ON OUTGOING MESSAGES

HANDLE VIA
BYEMAN-TALENT-KEYHOLE-COMINT
SAGES CONTROL SYSTEMS JOINTLY

ENCLOSURE (2)

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2. [REDACTED]

3. TWO OTHER CHANGES HAVE BEEN MADE IN THE ELINT SPECIFICATIONS FOR MISSION 7107. AS REPORTED IN THE TOG: (1) IN 7107 A & B the two bands COVERING 2680 to 2840 and from 2840 to 2930 as SPECIFIED IN REF A HAVE BEEN COMBINED AS A SINGLE BAND DUE TO TECHNICAL DIFFICULTY IN ATTAINING A SATISFACTORY PERFORMANCE IN THE PROTOTYPE SUBSYSTEM AND ALSO BECAUSE OF THE REDUCED SIGNIFICANCE OF THE REQUIREMENT FOR NARROWING THE BAND WHICH LED TO THE ORIGINAL DESIGN GOAL. (2) [REDACTED] IS NOT BEING INSTRUMENTED IN THE ELINT SYSTEMS OF MISSION 7107 AS ESTABLISHED IN THE FEBRUARY TOG MEETING.

4. PARAGRAPH F. OF REF A NOTES THAT THE SATELLITE TO SATELLITE RANGING SYSTEM CAN NOT BE CARRIED BEYOND THE WORKING BREADBOARD STAGE FOR MISSION 7107 DUE TO SCHEDULE AND PERSONNEL IMPACT. DUE TO THE RECENT SUCCESS IN EVALUATION OF THE ON-BOARD RANGING SYSTEM (COLLECTION SITE TO SATELLITE AND BACK TO COLLECTION SITE) CALLED RETEP IN 7106 CHARLIE SPACECRAFT, IT IS RECOMMENDED THAT THIS BE INCLUDED IN MISSION 7107 C & D SPACECRAFT TO PROVIDE A SIGNIFICANT IMPROVEMENT TO THE SPACECRAFT EPHEMERIS AND THIS BE A TECHNICAL ALTERNATIVE TO THE [REDACTED] THE COST IMPLICATIONS OF THIS DECISION FOLLOW:

A- \$80K WAS PROVIDED FOR A RANGING SYSTEM WHICH CAN NOT BE ENGINEERED IN TIME FOR MISSION 7107 [REDACTED]

B- THE RETEP SYSTEM OF THE LAST MISSION, 7106 IS NOW OPERATING AND IS UNDER ACTIVE CONSIDERATION FOR BEING INCLUDED IN TWO OF THE SPACECRAFT OF MISSION 7107 TO ENHANCE THE EPHEMERIS AND TO PROVIDE A DIRECTLY CALIBRATIBLE "TURNAROUND-TIME" MEASUREMENT FOR THE VARIOUS ELINT CHANNELS OF *many of these spacecraft.*

C- DUE TO THE OUTSTANDING TECHNICAL NECESSITY OF BOTH OF THESE ENDEAVORS IT IS STRONGLY RECOMMENDED THAT THEY CONTINUE UNDER ACTIVE DEVELOPMENT (TO THE LIMIT OF THE \$80K ALREADY APPROVED.) BY USING THE REMAINING RETEP HARDWARE FROM THE LAST MISSION FLIGHT CERTIFIED SUBSYSTEMS CAN BE READY IN TIME FOR 7107C&D WITHOUT ADDITIONAL FUNDING.

This includes modifications to remove the initial technical difficulties experienced in 7106.

CONTRACTOR PERSONNEL ASSIGNED TO THE GROUND STATION SYSTEM DEVELOPMENT WILL FLIGHT CERTIFY THIS SUBSYSTEM AS WAS DONE BEFORE IN MISSION 7106.

D- THUS THE \$80K CAN BE PROGRAMMED FOR MISSION 7107 A ON-BOARD RANGING SYSTEM FOR SIGNIFICANT IMPROVEMENT OF MISSION 7107 EPHEMERIS TURNAROUND TIME AND (2) A WORKING [REDACTED]

5. REF B & C (PARAGRAPH 4) REQUESTS A PRELIMINARY TECHNICAL DESCRIPTION FOR MISSION 7107 TO BE PUBLISHED BY 2 APRIL. WHILE THIS DATE WAS INFORMALLY AGREED TO, THE NATURE AND EXTENT OF THE BUDGET REQUEST HAS PARALYZED THIS EFFORT. THEREFORE IT IS REQUESTED THAT THE DATE BE DELAYED TO A TIME APPROXIMATELY 30 DAYS AFTER THE LAST PORTION OF THE BUDGET SUBMISSION OR AFTER 14 JUNE.

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HANDLE VIA
BYEMAN-TALENT KEYHOLE COMINT
CONTROL SYSTEMS JOINTLY