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GLARD 589
GLARD PASS WHIG

SECRET 211600Z AFR 75 CITE CHARGE 3813.

PRIORITY WHIG.
HANDLE VIA BYEMAN CHANNELS ONLY
HEXAGON
FOR COL WHEELER. FROM MAJ GEN BRADBURN/COL ANDERSON
SLBJ: FLANNING FOR HEXAGON BLOCK IV.
REF: (A) WHIG \$551. 28 FEB 75
(B) WHIG \$570, 7 MAR 75
(C) WHIG \$676, 26 MAR 75

1. WE HAVE INITIATED BLOCK IV STUDIES USING SUSTAINING ENGINEERING ON A NON-INTERFERENCE BASIS AT LMSC, & AND PE. AT LMSC WE ARE LOOKING AT WAYS TO EXTEND LIFE (PRIMARILY ADDITIONAL HYDRAZINE). AT &, UTICA, WE ARE LOOKING AT EXPANDING THE COMMAND AND SECURE WORD CAPABILITY. THIS IS PARTICULARLY IMPORTANT FOR

PAGE 2 CHARGE 38 15 SECRET

LONGER LIFE AND TO TAKE ADVANTAGE OF THE BENEFITS

OF THE MODIFIED FILM TRANSPORT (MFT) OR THE ITEK PAYLOAD.

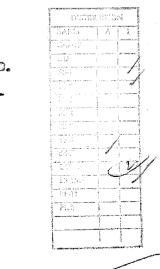
AT PE WE ARE LOOKING AT BOTH THE MFT AND SOLID STATE

ENSOR (S OUBED). THE UNLY AREA NOT PRESENTLY BEING ADEQUATELY COVERED IS COMPETITION.

2. AT ITEK WE DO NOT HAVE A POOL OF SUSTAINING ENGINERS AS WE DO AT LMSC, GE AND PE. TO PROCEED ANY
FURTHER WITH THE ITEK COMPETITIVE CAMERA CALL WORK
HAS BEEN STOPPED), IT WILL BE NECESSARY TO PROVIDE THE
ADDITIONAL FUNDS LISTED BELOW.

3. THE PROJECTED HEXAGON MISSION 1219 LAUNCH DATE OF
OCT 1981 REQUIRES THE FOLLOWING MILESTONE ACTIVITIES
TO BE STARTED ON THE DATES INDICATED TO MAKE THAT

INITIATE ENGINEERING MODEL AT ITEX
DESIGN REVIEW (ENGINEERING MODEL)
DEC 75
PRELIMINARY SYSTEM DESIGN
OPTICS INTEGRATION AND TEST
ENGINEERING MODEL BASELINE TESTS
MAY 76



PAGE 3 CHARGE 38 13 S E G R E T
FINAL SYSTEM DESIGN AND SYSTEM
DEVELOPMENT PLAN
ISSUE RFP
CONTRACTOR PROPOSALS RECEIVED

JATE ACHIEVABLE.

SEP 76 AUG 76 JAN 77

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ONTRACT GD-AHEAD JLL 77
IF BLOCK IV PAYLOAD IS NOT COMPETED THESE DATES
CAN BE DELAYED THREE MONTHS.
4. TO KEEP THE ITEK CAMERA DESIGN ALIVE AND TO DETAIN
REALISTIC COST INFORMATION, THE FOLLOWING FUNDS ARE
REQUIRED:

OOLLARS IN MILLIONS)
FY 76 FT FY 77 TOTAL
6.060 1.453 .528 8.033

COSTS FERTAINING TO THE DEVELOPMENT, PRODUCTION AND OFERATION OF BLOCK IV WILL BE INCLUDED IN THE MAY BUDGET SUBMISSION AND ARE NOT INCLUDED HERE IN.

5. THE OFERATIONAL PLEXIBILITY INDICATED IN PARAGRAPH B(1) THRU (4) OF WHIG 0370 IS OBTAINABLE WITH EITHER THE FERKIN ELMER MODIFIED FILM TRANSPORT OR THE ITEK

PAGE A CHARGE 38 13 5 E C R E T CESIGN. WE CLARENTLY FLAN TO INCLUDE WIFT AS THE BLOCK IN BASELINE THEREFORE THERE ARE NO ADDITIONAL COSTS INCURRED IN DETAINING THIS OPERATIONAL PLEXI-BILITY. STUDIES AND ANALYSES IN PROGRESS WILL DEFINE EFFORT REQUIRED TO SATISFY NITRS 4 UNDER A RANGE OF CONDITIONS. WILESTONES AND COSTS WILL BE DETERMINED SHORTLY AFTER THE SIERRA STUDY IS CONCLUDED. WE ARE STUDYING THE DATA PROVIDED BY WHIG 8476 TO ASSESS MPACT TO THE BASELINE, IF ANY. 6. IN RESPONSE TO PARAGRAPH E. WHIG 0378: WE ARE OUR-PENTLY ANALYZING AN INCREASE IN THE SUPPLY STACK DIAMETER WHICH WILL PROVIDE AN EXTRA 358% FT ON EACH SIDE. CHANCES IN SUPPLY SERVO LOOP AND STACK DIAMETER DETECTOR MAY BE REQUIRED. INCORPORATION OF THESE WODIFICATIONS AS EARLY AS MISSION 1215 MAY BE POSSIBLE. A FURTHER INCREASE IN THE SUPPLY STACK DIAMETER PRO-VIDING ANOTHER 3598 FT ON EACH SIDE IS ALSO BEING STUDIED. IN ADDITION TO THE SUPPLY SERVO LOOP AND STACK DIAMETER DETECTOR CHANGES, THIS INCREASE WILL REQUIRE

PAGE 5 CHARGE 3813 SECRET
MODIFICATIONS IN THE TAKE-UP ASSEMBLY AND IN EQUIPMENTS AT BRIDGEHEAD. THESE CHANGES ARE PLANNED FOR
INCORPORATION NO EARLIER THAN MISSION 1219 (BLOCK IV).
BOTH OF THE ABOVE CHANGES ARE APPLICABLE TO EK 1414.
7. THE SOFTWARE MODIFICATIONS REQUIRED FOR BLOCK IV
WILL BE DETAILED AS THE HARDWARE MODIFICATIONS ARE
IDENTIFIED. THE INITIAL ESTIMATE FOR THE CAPABILITIES
IDENTIFIED IN YOUR MESSAGE IS FROM 2.5 TO 3 MILLION

W. To precipe

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DULLARS. STUDIES ARE IN PROCESS TO DETERMINE THE DESIGN INTERDEPENDENCIES OF THSE CAPABILITIES.

8. IT IS DIFFICULT TO DECIDE TO COMPETE A SYSTEM DIST IS PERFORMING AS VELL AS THE PE CAMERA. THERE ARE; HOWEVER, TWO DISTINCT ADVANTAGES OF COMPETITION. FIRST, OF COURSE, IS THE SUBSTANTIAL COST SAVINGS WHICH MEGHT BE REALIZED EVEN IF PERKIN ELMER WINS THE COMPETITION. SECOND, THE STEEN DESIGN HAS SMALL, BUT IMPORTANT RECHPICAL ADVANTAGES. THE INCREASED OFFICAL BAR DISMETER WILL PERMIT US TO OPERATE AT A HIGHER ALTITUDE WHICH REDUCES THE ORBIT ADJUST REQUIREMENTS, FILM

PAGE 6 CHARGE 3813 B E C R E T
REVERSAL IS NOT REQUIRED EVEN IN THE FINE FILM PATH,
AND THE REDUCED COMPLEXITY IS BOUND TO HAVE A PAYOFF.
FOR THESE REASONS, I RECOMMEND THE ITEK COMPETITIVE
CAMERA STUDY BE REINSTATED AT THE FUNDING LEVEL OF
PARAGRAPH 4 ABOVE.
E-2 IMPOET

SECRET

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