

DEPARTMENT OF THE AIR FORCE  
OFFICE OF THE ASSISTANT SECRETARY

HELIX

MEMORANDUM

6 April

On Flax

TWX from Gen  
Martin on HELIX  
package. Have added  
a few margin notes.

I will advise John  
he has another 2 days  
to examine.

I have all other  
copies this TWX

*J.S.*  
T.S. Brennan

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DISPATCHED *PH*

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IMMEDIATE WHIG CITE  0668

HELIX

FOR DR. FLAX FROM GEN MARTIN

1. REFERENCE YOUR 1 APR MEMORANDUM ON NEW GENERAL SEARCH AND SURVEILLANCE SYSTEM, FORWARDED TO ME BY WHIG 5037.
2. IN SEVERAL AREAS COVERED BY YOUR PROPOSED PACKAGE FOR THE EXCOM, I BELIEVE THAT A DIFFERENT OR MODIFIED APPROACH WOULD BE HIGHLY DESIRABLE AND GREATLY ENHANCE THE PROBABILITY OF THE MOST EFFICIENT AND EFFECTIVE DEVELOPMENT AND EMPLOYMENT OF THIS PROPOSED SYSTEM. I WILL NOT REPEAT MY PREVIOUSLY SUBMITTED COMMENTS ON THE NUMBER, AND SIZE, OF RECOVERY VEHICLES, NOR ON THE SPLIT MANAGEMENT RESPONSIBILITY CONTEMPLATED IN THE PRESENT PACKAGE, EXCEPT TO POINT OUT THAT MY PREVIOUS COMMENTS ON THESE MATTERS STILL APPLY TO THE PRESENT PACKAGE.
3. HOWEVER, REGARDLESS OF THE SPECIFIC ASSIGNMENT OF RESPONSIBILITIES IN THE SPLIT-MANAGEMENT STRUCTURE, FULL CO-LOCATION OF THE WORKING ELEMENTS OF THE HELIX PROJECT OFFICES OF BOTH ORGANIZATIONS WILL RESULT IN THE MAXIMUM COORDINATION AND BEST POSSIBLE WORKING ARRANGMENTS AND COOPERATION, IN ADDITION TO GREATLY REDUCING THE TRAVEL EXPENSES AND CONSTRAINTS OF COORDINATING COMPLEX AND SENSITIVE MATTERS BY TELEPHONE AND MESSAGES WHICH WILL OTHERWISE BE REQUIRED FOR THESE MATTERS. I URGE THAT THE ASSUMPTION IN THE PACKAGE THAT THE CIA OFFICE WILL BE LOCATED AT LANGLEY BE DELETED AND A STRONG RECOMMENDATION MADE FOR ITS CO-LOCATION WITH THE SAFSP OFFICE ON THE WEST COAST.
4. ALSO, REGARDLESS OF THE OTHER DETAILS OF THE SPLIT-MANAGEMENT STRUCTURE, LIAISON OFFICERS ARE HIGHLY UNDESIRABLE AT ANY LOCATION; THEY WILL IMPEDE RATHER THAN HELP ACHIEVE THE RAPPORT ESSENTIAL TO A SUCCESSFUL DEVELOPMENT. UNDER SPLIT-MANAGEMENT, ALL OF THE WORKING TROOPS IN THE HELIX PROJECT OFFICES OF BOTH ORGANIZATIONS SHOULD DEAL DIRECTLY WITH THEIR ASSOCIATES, TO INFORM AS WELL AS TO CARRY OUT SPECIFIC WORKING FUNCTIONS. I URGE THAT THIS LIAISON OFFICER FEATURE BE DELETED AND THE COMPLETE RESPONSIBILITY FOR ALL LIAISON BE PLACED UPON THE ENTIRE APPLICABLE ELEMENTS OF EACH ORGANIZATION.
5. THE SCHEDULE CONTEMPLATED IN THE PACKAGE LEAVES NO ALTERNATIVE BUT TO EMPLOY LETTER CONTRACTS. THE INITIATION OF THIS SYSTEM BY LETTER CONTRACTS WILL UNQUESTIONABLY ACCENTUATE THE PROBLEMS INHERENT IN THE SPLIT MANAGEMENT CONCEPT. IF AT ALL POSSIBLE, THE SOURCE SELECTIONS SHOULD BE CONDUCTED AND ALL CONTRACTS NEGOTIATED ON A DEFINITIVE, RATHER THAN LETTER, BASIS FROM THE START. THIS PROCEDURE WOULD ENTAIL A DELAY OF ABOUT SIX MONTHS AFTER EVALUATION OF PROPOSALS BEFORE ALL CONTRACTS COULD BE NEGOTIATED. HOWEVER, SINCE THE STATED REQUIREMENT IS APPARENTLY NO MORE URGENT NOW THAN IT WAS A YEAR AGO, AND IN VIEW OF THE NON-TECHNICAL DELAY ALREADY ACCEPTED DURING THIS PAST YEAR, IT IS NOT

*Dr. Flax Have discussed w/ Dr. JM and will complete*

*9/1*

~~TOP SECRET~~  
Handle via EYESAL  
Control System

OBVIOUS TO US HERE THAT THIS RELATIVELY SMALL ADDITIONAL DELAY WOULD BE UNACCEPTABLE. UNQUESTIONABLY IT WOULD MAKE THE PROGRAM EASIER TO HANDLE THAN THE SEVERAL LETTER CONTRACTS WHICH WILL BE REQUIRED UNDER THE PROPOSED SCHEDULE. ALSO IT WOULD EASE THE FY67 AND FY68 BUDGET REQUIREMENTS FOR THIS SYSTEM.

6. THE DISCUSSION OF SE/TD CONTRACTORS, AND OF THE ROLE OF THE SPD IN THE OVERALL SE/TD FUNCTIONS IMPOSES RESTRICTIONS WHICH SEEM MOST UNREALISTIC AND UNNECESSARY. I AGREE THAT THE SPD SHOULD NOT GIVE ANY TECHNICAL DIRECTION TO THE SSS PO CONTRACTORS, BUT I DO NOT AGREE THAT HE SHOULD NOT DO ANY SYSTEM ENGINEERING ANALYSIS CONCERNING THE SENSOR. WHILE THE RESPONSIBILITY FOR INTERNAL SENSOR SYSTEM ENGINEERING IS ASSIGNED TO THE SSS PO, THE SPD AND HIS SE/TD CONTRACTORS ALSO SHOULD DO SYSTEM ENGINEERING STUDIES IN ORDER TO INSURE THE HIGHEST LEVEL OF COMPETENCE IN THE IDENTIFICATION AND DELINEATION OF ALL INTERFACE AND SYSTEM INTERACTION PROBLEMS, AS WELL AS SUCH RELATED MATTERS AS SATELLITE OPERATIONAL COUNTERMEASURES, ANALYSIS OF COMPLEX INTERACTIONS AND TRADE-OFFS WHEN MALFUNCTIONS OCCUR IN FLIGHT, ETC. THE SPD SHOULD BE ALLOWED TO MAKE RECOMMENDATIONS TO THE SSS PO, ALTHOUGH THESE WOULD NOT BE DIRECTIVE EXCEPT IN REGARD TO INTERFACES, SUBSYSTEM INTERACTION OR OVERALL SYSTEM PERFORMANCE. IN ALL REFERENCES TO THE SPD, THE SSS PO, AND THE SE/TD CONTRACTOR, I URGE THAT THE PRESENT PROHIBITION ON EITHER SPD OR SE/TD CONTRACTOR BEING AUTHORIZED TO CONDUCT SYSTEM ENGINEERING ANALYSES OF ANY ASPECT OF THE SENSOR INCLUDING INTERNAL ASPECTS OF THE SENSOR SUBSYSTEM, BE DELETED AND THIS AUTHORIZATION EXPLICITLY INCLUDED, RETAINING ONLY THE RESTRICTION OF THE SPD OR THE SE/TD CONTRACTOR GIVING ANY TECHNICAL DIRECTION OF THE SENSOR SUBSYSTEM CONTRACTOR.

7. SIMILARLY, I RECOMMEND THAT THE RESTRICTIVE LANGUAGE CONCERNING THE AUTHORITY OF THE SPD DURING AN OPERATIONAL MISSION BE CHANGED TO MAKE HIM FULLY RESPONSIBLE, REGARDLESS OF THE TIME AVAILABLE, FOR THE OVERALL ANALYSIS AND SUBSEQUENT DECISION AND ACTION CONCERNING ANY ASPECT OF THE HEALTH OF THE SATELLITE, INCLUDING THE SENSOR SUBSYSTEM, USING THE ASSEMBLED TECHNICAL ADVISORS PRESENT IN THE HELIX COMMAND POST AT THE STC FOR ANALYSIS AND ADVICE ON THE BASIS OF WHICH HE WILL MAKE SUCH DECISIONS AND DIRECT SUCH ACTION AS NECESSARY. THIS WILL INSURE THE PRESENCE IN THE COMMAND POST OF A FULLY REPRESENTATIVE AND COMPETENT TECHNICAL ADVISORY GROUP; IF SUCH A GROUP IS PRESENT, THERE IS NO NEED TO RESTRICT THE SPD (AS IS DONE ON PAGE 9 OF ATTACH 4-5).

8. ON THE BASIS OF A VERY QUICK REVIEW, THE SENSOR RFP SEEMS OK IN PRINCIPLE AND ADEQUATE FOR THE PURPOSE OF EXCOM REVIEW, BUT IT SHOULD RECEIVE A MORE CAREFUL REVIEW IN DETAIL BEFORE BEING SENT TO PROSPECTIVE CONTRACTORS. FOR EXAMPLE, THERE ARE SEVERAL INSTANCES WHERE THE NUMBERS USED ARE QUESTIONABLE, AND IF USED AS WRITTEN, COULD FORCE SENSOR RE-DESIGN FOR WHAT APPEARS TO BE ONLY MARGINAL GAIN, IF AT ALL. FOR

*Not major change for Package*

*Cur. Doc. will be cancelled*

INSTANCE, THE MINIMUM HALF PAN ANGLE OF FORTH-FIVE DEGREES (BOTH ITEK DESIGNS OPERATE BELOW THIS FIGURE - - FOURTY AND FOURTY-TWO DEGREES); THE SPECIFICATION OF A MAXIMUM FILM WIDTH OF NINE INCHES RATHER THAN THE STANDARD 9.5 INCH SIZE USED IN ONE OF THE DESIGNS; THE SPECIFICATION ON THE MINIMUM HALF STEREO ANGLE IS NOT CLEAR, AND COULD BE INTERPRETED AS QUITE DIFFERENT FROM PRESENT DESIGNS; AND OTHER INSTANCES WHICH SHOULD BE REVIEWED MORE CAREFULLY.

9. IN REGARD TO THE PROPOSED COMPETITION FOR THE THREE SEGMENT SOLIDS FOR THE BOOSTER, I NOTE THAT SUCH RE-COMPETITION IS A COMPLETE DEPARTURE FROM THE PENTAGON RATIONALE USED IN THE ESTABLISHMENT OF THE TITAN III PROGRAM, WHICH WAS WIDELY DISCUSSED AS INCLUDING THE CAPABILITY OF USING A VARIED NUMBER OF THE SOLID SEGMENTS WITHOUT GOING THROUGH REDEVELOPMENT. MY INFORMAL INFORMATION HERE ALSO INDICATES A SUBSTANTIAL DIFFERENCE IN REALIZABLE SCHEDULE FOR THE DIFFERENT POTENTIAL BIDDERS (SIX MONTHS UNLESS THE PRESENT CONTRACTOR IS THE WINNER), ALTHOUGH THIS MAY NOT BE A FACTOR IF THE SCHEDULE IS PACED DIFFERENTLY AS I HAVE SEPARATELY SUGGESTED ABOVE.

*etc will be*

10. THERE ARE SEVERAL PLACES IN THE PACKAGE WHERE THE LITERAL INTERPRETATION OF THE WORDING COULD VARY WIDELY, AS, FOR INSTANCE, THE STATEMENT ON PAGE FOUR, SECTION THREE OF ATCH ONE REQUIRING THAT QUOTE: ALL ELECTRONICS.....COMPONENTS REQUIRED FOR THE OPERATION OF THE SENSOR SUBSYSTEM WILL BE MOUNTED WITH THE SENSOR SUBSYSTEM END QUOTE. I WILL NOT ITEMIZE THERE, BUT SIMPLY POINT OUT THAT THE ACTUAL IMPLEMENTATION OF THE PROPOSED PACKAGE WILL REQUIRE EXTENSIVE AND DETAILED TECHNICAL ANALYSIS AND COORDINATION CONCERNING MANY MATTERS WHICH WILL BE COMPLEX IN ANY CASE BUT WILL BE FAR MORE EASILY RESOLVED BY COLLOCATED PROJECT OFFICERS RATHER THAN TWO OFFICES SEPARATED BY THE WIDTH OF THE CONTINENTAL U.S.

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CFN: 0668 HELIX WILL RERUN ON REQUEST

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