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Log # 79-1238

29 MAR 1979

MEMORANDUM FOR LT. GENERAL A. B. ANDERSON, AF/XO

SUBJECT: DoD Shuttle Control (U)

(U) The "DoD Shuttle Control Capability Requirements Document" dated December 1978 was distributed to the Satellite Control Capabilities Steering Group for comment on 22 February 1979.

(U) On 26 March 1979 a copy of the "Mission Element Need Statement, DoD Shuttle Control" was provided. It is understood that this MENS supercedes the previous document. I am providing below a few comments on the MENS which I hope you will find constructive and useful.

(S) Sect. II Threat. This section properly emphasizes that denial of our command and control capabilities would be a primary Soviet objective in a conflict. Physical and electronic threats are discussed. I suggest you elaborate on how electronic attack might be implemented, if the Soviets chose to do so. Consider all of the DoD Shuttle control links. We will have to answer the question whether the dedicated DoD Shuttle control approach, with associated SCF and possibly TDRSS support, enhances the survivability of our command and control capabilities against such attack. Similarly, we should be more precise on EMP. Also, treat natural disasters.

(S) You might add under this threat section the fact that the Soviets vigorously seek to acquire data on our space systems and operations which can make our systems more vulnerable to various forms of attack. Are all of the threats listed in this section increasing with time?

(S) Sect. III B Planned Control Capabilities. We will also modify and use JSC for all simulation/training and depend on JSC for on-orbit control for sortie missions. Explain how sortie operations will be controlled as opposed to simple deployment operations.

(S) Sect. IV A Vulnerability. Add the fact that when the Shuttle is used for DoD military or intelligence purposes it becomes an integral part of our space systems. Thus we need to discuss all the threats which could apply to JSC. As written, JSC sounds almost invulnerable; therefore, why do we need a backup? Vague references to Presidential direction need to be replaced by specifics.

M&RS-2 CHRON AUTHOR

~~Classified by DUSD (SSS).~~
~~Review on 29 March 1985.~~

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(S) The need for handling at JSC data more sensitive than can be accommodated by "controlled mode" should be proved. This is important since we must devise work-arounds until we get a DoD facility; and, the question will follow - if we can work around through 1985, why can we not work around forever? Also, sortie modes are considered in the DoD Rev. 8 model.

(S) What are the statutory and doctrinal directives referred to? Be specific. Can we be more explicit on why using JSC does not give us the necessary direct and exclusive military control we need and why this fact lessens the effectiveness of DoD Shuttle operations?

(S) The Operability paragraph is confusing. Are we talking about the risk of losing an orbiter or a security risk? Will our operations be any more unpredictable than NASA will contend with in abort situations? How would a dedicated DoD Shuttle facility help the surge and launch on demand requirement? We will use encryption at JSC, so why does this require a separate facility?

(U) Sect. V Constraints. Why are "blue suit" personnel a constraint, and can we not use contractors at our facility?

(U) Interoperability is fundamental to our concept of a backup of a single mode at JSC and must be treated fully.

(U) Affordability is a major issue. $300 million to acquire only the DoD Shuttle control facility is unreasonable. Many cost trade-offs must be completed before we select an approach and know the cost. Surely a major portion will be within the Air Force budget if the need is great.

(U) The MOU on STS referred to is being updated and modified.

(S) General Comment. It is recognized that the MENS is not the document to advocate a specific solution. However, the MENS should show that there are technological opportunities to improve survivability against the threat in Sect. II and that redundancy and possibly better security are leading candidates. I believe the two main arguments for a DoD Shuttle control capability are 1) the critical national dependence on STS which requires redundancy; and 2) the need for security above Secret, if it can be proved. Obviously other arguments also should be developed as fully as possible.

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/s/
Marvin C. Atkins
Director
Offensive & Space Systems

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