RESERVED FOR COMMUNICATION CENTE JOINT MESSAGEFORM SECURITY CLASSIFICATION op eecret/byeman TYPE MSG Control System PRECEDENCE SPECIAL INSTRUCTION WHIG 0501 Comm SS-2 **SS-7** eyes only for general martin from Dr. McMillan RF-1 Dorian secur This message is in four parts. PART I: The purpose of this message is to provide further guidance for conduct of the present DORIAN effort, particularly that dealing with the manned/unmanned capabilities. This message revises instructions in parts of WHIG 3537 and Program Directive 65-2. PART II. A decision must be made early in the program as to how the alternative unmanned capability will be developed. To provide the basis for this decision, a two to three month analysis of the manned and unmanned versions is required to identify the critical aspects of the two approaches, including the impact on 1700spacecraft and system design. In addition, immediate effort is to YEAR he initiated on those critical automatic subsystems required for the SIGNATURE TYPED NAME AND TITLE Colonel D. L. Carter/ TYPED (or sigmpod) NAME AND TITLE Lt Col H. C. Howard Colonel David L. Carter SECURITY CLASSIFICATION

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managed system such as V/H sensors, image trackers, improved mavigation systems for open loop V/H determination, and optical and mechanical devices for partial or total compensation of variations of image motion across the format. A report to the DNRO is required about the middle of December on the results of this analysis together with a recommended course of action, and on the progress in developing critical automatic subsystems.

PART III. The analysis of the manned and unmauned capabilities should be conducted in accordance with the following guidelines:

- (1) The unmanned capability should be developed concurrently with the manned.
- (2) The unmanned capability should be achieved if possible by using a camera system for the manned version that can operate without a man.
- (3) The best possible automatic systems for navigation, camera motion pointing, focusing and image/control should be incorporated in the manned as well as the unmanned systems.
- (4) The camera optical system should have the objective of operating either manned or unmanned with up to resolution.
- (5) Planning at the present time should provide for a flight demonstration of the unmanned mode at the best feasible resolution

within nine months after the first manned flight,

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Although Eastman Kodak has been designated as the primary CONIAN contractor, this analysis should include concurrent review of alternate optical systems to establish whether there is any other system which would be preferable to that being pursued by EK, particularly with regard to reducing the possibility of resolution degradation in either the manned or unmanned modes. It is recognized that if this review produces a preferable alternative system, it will be necessary to determine whether a program reorientation is necessary or desirable.

PART IV. For planning purposes, later development of a large optical system of high resolution which can satisfy intelligence needs not met by the current DORIAN remains open. EK is to be allowed to propose on a larger system and ITEK and P-E are to be continued in their present paid competition for two to four months.

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