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CORONA



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**MEMORANDUM FOR:** Director, National Reconnaissance Office

**SUBJECT :** The Utilization of UTB in the CORONA Program

1. Subsequent to the unexpected Ultra-Thin Base (UTB) problems experienced in Mission 1105, I established a task team composed of members of my staff and [redacted] of the NRO to reevaluate the performance of UTB in the CORONA camera. Further, the task force was directed to consider the compatibility of flight schedules with the capabilities and limitations of the camera system to operate with the UTB.
2. You may recall that the use of UTB in CORONA was a design goal rather than a design specification in the J-3 development. No major UTB-related design changes were permitted in the original J-3 concept and only relatively minor modifications were considered by the current UTB task force.
3. After experiencing the quality variability with UTB material on Mission 1105, we questioned as to whether the CORONA system could obtain the desired performance with UTB without a further loss in quality or even, perhaps, a catastrophic failure.
4. Adequate camera system tests in a vacuum chamber at Itek have not been performed to date. Additional system testing with UTB under simulated operational conditions is needed to determine and verify problems relative to smear, tension, image motion, temperature effects on film lift, humidity, et cetera.
5. An in-depth review has been made of the system test procedures and potential modification to these procedures and the camera subsystem. A copy of the "CORONA UTB Task Team Final Report," dated 21 February 1969, is attached for your information.

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Declassified and Released by the NRO

In Accordance with E. O. 12958

on NOV 26 1997

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6. Based on the conclusions and recommendations of the task force, I am proceeding with the following immediate actions.

a. Refurbish the system qualification test instrument (QR-1) for use in a UTB test program at Itak. This is one half of a CORONA J-3, which has all of the recommended UTB modifications already installed and can be made ready for vacuum chamber test in a few days at no additional cost to the Government.

b. Institute a UTB/J-3 test program (outlined in Section 5 of the attached report) in the Dynamic Resolution Tester (DRT) at Itak, Lexington.

7. If we obtain successful results from the test program, it is expected that the next system which will be available for UTB film is CR-8 now scheduled for launch in September.

[Redacted]  
Director of Special Projects

Attachment:  
CORONA UTB Task Team Final Report, [Redacted]  
dated 21 February 1969, [Redacted]

Distribution:  
[Redacted]

OSP/JNMcMahon/[Redacted] (19/[Redacted] 1969)

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