

ORA E-2e



TAGBOARD

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BYEMAN CONTROL SYSTEM

~~1ST~~ NATIONAL RECONNAISSANCE OFFICE
WASHINGTON, D.C.

OFFICE OF THE DIRECTOR

12 March 1971

MEMORANDUM FOR DEPUTY SECRETARY OF DEFENSE

SUBJECT: TAGBOARD Mission Over South China

I have reviewed the 5 March 1971 TAGBOARD mission with the NRO staff. As you know the mission was not successful due to failure to recover the payload, although I was pleased that the drone vehicle itself again performed the flight profile and payload ejection exactly as programmed. The loss of the payload was caused by a two part failure:

1. The parachute system was partially disabled by loss of the air pickup chute which prevented an air snatch by the JC-130 aircraft.
2. Although the main parachute canopy lowered the payload to the water surface, a subsequent pickup attempt by a Navy vessel was unsuccessful due to procedural errors, and the payload sank.

The precise cause of failure of the parachute system cannot be completely defined at this point. There is a strong probability that a malfunctioning valve prevented adequate cooling of the parachute compartment during flight of the drone. The resultant overheat condition, sustained for over an hour, could have degraded the tensile strength of parachute components. Four of 7 payload hatches inspected subsequent to this flight were discovered to have potentially unreliable cooling valve lock mechanisms.

Remedy for the malfunctioning valve is a simple safety wire installation. Likewise the procedural errors which prevented surface recovery can and will be prevented in the future.

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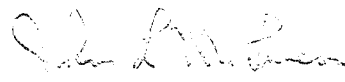
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I would normally recommend a review of the design engineering features of the suspect mechanisms, and perhaps an intervening flight test before the next operational launch. However, it is my understanding that there is an urgent need at this time for the intelligence to be gained from a completely successful TAGBOARD mission over the same targets. I believe the use of the TAGBOARD vehicle to satisfy this need is the solution which presents us with the lowest risk factor and does stand a reasonable chance of success.


John L. McLucas

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