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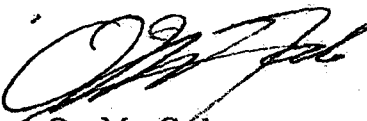
OFFICE OF THE SECRETARY OF DEFENSE
WHEN WITH ATTACHMENTS

May 5, 1959

MEMO FOR Mr. Albert P. Toner
The White House

The attached items are submitted by the Department of Defense for possible inclusion in the daily summary for the President.

³
Items 1 and 2 have also been sent to Dr. Killian.


O. M. Gale
Special Assistant

THE WHITE HOUSE
WASHINGTON

May 6, 1959

Attachments
3 items

General Goodpaster:

Ref: SN # 540, Item # 2

Earlier details were forwarded by April 27 memos from Russell and me, in response to the President's interest.

A. P. Toner *apt*

Attachment
Orig. DOD item #1 of 5/5/59 (S)

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WHEN WITH ATTACHMENTS

SecDef Cont. No. *41557*
S-679

(L. ... 8/3/59)

R-2
06-M-0882

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1. DISCOVERER II Recovery and Changes in DISCOVERER III
(Secret) (Reference Item 4, April 27, 1959 Report)

The results of the search in the Spitzbergen area for the capsule ejected from DISCOVERER II are negative insofar as capsule recovery is concerned. The findings of Air Force personnel who actively participated in the search convincingly confirm telemetry information that capsule ejection did take place and further that programmed events took place in proper sequence. Components such as retro rocket, parachute and light worked successfully and calculations for distance travelled during separation and descent were within tolerance for recovery in the planned area had the unfortunate timer reset difficulty not been encountered.

There is no positive evidence that the capsule was recovered by Soviet personnel who are, by treaty with the Norwegian government, engaged in coal mining operations on Spitzbergen. However, it has been reasonably well established, by search pattern tracks in the snow, that the Soviet personnel did engage in a search for the capsule. If the capsule was recovered by the Soviets, no serious compromise of technical information was effected.

Modifications are underway for future DISCOVERER launchings to avoid a repetition of ejection and impact in other than the planned recovery area. These modifications include a new programmer or timing mechanism which has more flexibility than the one used in DISCOVERER II. Preprogrammed orbital period can be reset by command to coincide with actual orbital period in two ways. In addition, longer expanses of time during which command contact with the satellite can be exercised, are being programmed to avoid inadvertent loss of command control by out of phase initial orbital period. Also by means of telemetry, a display of the orbital period setting is provided at the ground station.

These modifications will be incorporated in the next DISCOVERER launch scheduled for 21 May 1959 and will improve to a great extent, the probability of impact in the planned recovery area. The modifications should eliminate loss of communication and control capability and the reset error which resulted in loss of command control of DISCOVERER II during critical orbits.

*SN# 510
of body
w/ SN
on site*

(Carbon destroyed 5/11/59)

(A. ret'd 8/3/59)

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4:55 p
DoD 5-5-59

SecDef Cont. No. 5-679

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Item 1. DISCOVERER II Recovery and Changes in DISCOVERER III
Continued

To further improve reliability and success probability, additional engineering analyses and parallel preparation for equipment changes are being conducted. One of the changes to be incorporated, if the analysis determines it to be desirable, is an arming device which would be triggered by command to allow ejection only if all equipments are functioning properly. An engineering report is to be submitted by the contractor on 15 May 1959. This report in conjunction with operational experience concerning modifications incorporated in the next DISCOVERER will provide further guidance as to which, if any, of the alternate or additional modifications should be incorporated in subsequent launches.

It is believed that the engineering steps being taken will provide maximum assurance against accidental capsule ejection and impact in or adjacent to Soviet territory.

SN # SHD (over)

NSM 8/11/59

(Carbon destroyed 8/11/59)

(Printed 8/3)

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4:55 P
DoD 5-5-59

~~CONFIDENTIAL~~

SSN# 16539

2. POLARIS Firing Date (Confidential)

Seventh firing of a POLARIS Missile configuration (POLARIS AX-8) is scheduled for 8 May at Atlantic Missile Range. Primary objectives are to test performance, control and separation in first stage flight.

(Carbon destroyed 5/6/59)

~~CONFIDENTIAL~~

