Preliminary Report on Scout Vehicle 128 Failure.

Scout vehicle No. 128 was launched from the Pacific Missile Range in support of an Air Force Mission at 0140Z on 25 June 1964. The checkout and countdown of the vehicle were normal. The flight was fully normal throughout first stage burn and coast. At 0.1 second after second stage ignition the automatic destruct system was activated causing breakup of the second stage. The third and fourth stage combination continued on a ballistic trajectory with all of the third stage systems operating correctly for the flight conditions being experienced i.e. guidance, control and telemetry were considered nominal.

A preliminary review of the quick look data was conducted for Langley Center management by the Scout Project Office on 29 June 1964. This information indicates that the probable cause of the failure was actuation of the second stage auto-destruct system. There are two primary suspect areas being investigated, which are:

a. Activation of the destruct system by escaping hot gases from the igniter or pressure tap plumbing at the head end of the second stage.

b. Activation of the destruct system by an electrical signal short.

The command destruct system has been absolved of blame for the time being because it is highly improbable this system could have been activated and the third stage destruct system not operate.

There is a slight possibility that static electricity generated during the initial separation sequence could have inadvertently actuated the safe-arm unit for the second stage destruct. Experts from the Cornell Aeronautical Laboratories have been requested to review
the destruct circuitry, equipment and operation. In
the event these people consider that additional
investigation is required, the necessary arrangements
will be made.

Project personnel from both the Langley Project Office
and the Prime Contractor will review in detail the
flight data on 1 and 2 July at Ling-Temco-Vought. Air
Force representation during this detailed review has
been requested. Langley plans to conduct a center
review of the flight data and the results of the first
investigations at the end of next week i.e. 9 or 10 July.
My office will provide you with interim written reports,
then the information warrants until the failure investiga-
tion has been completed.

For the time being we are proceeding with the preparation
of the next scheduled vehicles from both Wallops Island
and the Pacific Missile Range (SERT and S-48 respectively).
The auto-destruct system has never been flown at Wallops
Island although it had been planned for the SERT launch.
We believe that Mr. Krieger will allow Scout to be
flown again without auto-destruct and this will solve
the immediate problem. Since auto-destruct has been a
historical requirement at both ARM and PMR, it is
questionable whether the PMR will allow a similar waiver.
We are investigating the possibility of flying first
stage auto-destruct only on the PMR launch. This
would eliminate the area of primary suspicion and allow
the launches to proceed as scheduled. A decision with
regard to the PMR launch will be made by the end of next
week. We do not intend to compromise the S-66 schedule
for August if possible.

Based on the scheduled activity indicated above, OSSA
will decide at the end of next week whether it is
advisable to establish a formal review committee to
investigate the Scout failure.

Original Signed By
Edgar M. Gortright

E. M. Gortright

cc: LRG/Thompson
LRG/Schult
GSFC/Goett
R/Bisplinghoff
RNR/J. Lazar
SG/Naugle