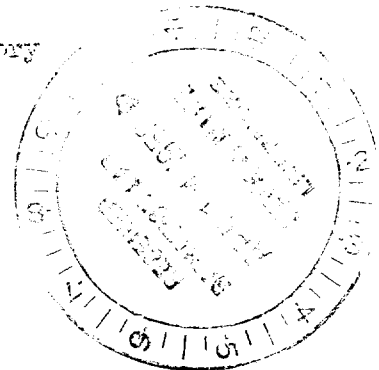


Two-Stage Vehicle for
University of California Radiation Laboratory



PROGRESS REPORT NO. 5

For the period between

1 March 1958 - 31 March 1958

Subcontract No. 108, Appendixes B, C, and D

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Submitted by

Cooper Development Corporation

Monrovia, California

PROGRESS REPORT NO. 5

1 March 1958 - 31 March 1958

Subcontract No. 108, Appendixes B, C, and D

This informal monthly progress report is the fifth of a series submitted in partial fulfillment of Subcontract No. 108. The information is regarded as preliminary and subject to further verification and analysis.

I. Delivery

The two remote control firing panels, 3 master control boxes, 5 launcher control boxes, and 27 sets of ASP fins were shipped to PPG during March. Second-stage hardware, the remaining couplings and breakaways, and 20 sets of ASP fins will be completed and shipped before 21 May 1958. Twenty-four No. 427 motors will be shipped by 23 April, and the remaining 16 by 21 May. Deliveries to PPG will be complete by 21 May.

II. Electronics

All electronic components which remain to be shipped are in production and are on schedule.

III. Wind Tunnel Tests

The operational characteristics of a filter-diffuser assembly using UCRL's new, reinforced filter were tested in the wind tunnel at Ames Aeronautical Laboratory, Moffett Field, California, on 13 March 1958. Visual observations indicate that the results will be quite similar to the results obtained in the test conducted on 30 January. The data are expected to arrive from Ames by 8 April, and analysis will be begun at that time.

IV. Field Tests

A two-stage vehicle, using a No. 427 Rocket Motor as a second stage, was fired at White Sands Proving Grounds on 19 March. The rocket was fired at

a Q.E. of 85°, and was expected to attain a peak altitude of 165,000 feet MSL. The programmer was set to open the nose during the descending portion of the trajectory, at approximately 100,000 feet. The peak altitude attained by the rocket was approximately 202,000 feet MSL, and the time to peak altitude was 140 seconds. The second stage ignition occurred on schedule. It is not known whether the remaining functions occurred properly, as the radar lost the vehicle at the summit of the trajectory and did not reacquire it. The ASP head was not recovered.

Further tests of the RTV-ASP vehicle, at WSPG and at Point Mugu, are scheduled for early April. The White Sands tests will be primarily to determine the aerodynamic characteristics of the vehicle, and to test the programming. The firing at Point Mugu is primarily a test of the flotation and water recovery system.

V. Field Service

Field service will be supplied as required for operations at PPG. The CDC field service group has left for PPG.