attempt to additionally satisfy other services' needs if possible, and its second purpose was to be clear of any proprietary considerations that might be involved in launcher manufacture.

The development at China Lake proceeded under initial funding, and the designs were made up by engineers and personnel at China Lake themselves. From these designs hardware was manufactured, and tests were run. These tests proved unsatisfactory.

The designs were revised, and subsequently in 1967 additional hardware was made up or ordered made up, some of which was delivered and tested in 1967, some of which was not delivered until early this

Again these tests proved unsatisfactory in certain aspects, all attributable to the design problems involved. Another design was made up correcting all of these initial problems, and currently hardware is under manufacture for this final design, and part of the tests that are necessary to qualify this have been run, and have proved quite

The final hardware being made up is due to complete manufacture by the end of July, and the final testing needed to certify this design to be completed in August. The design drawings, rights, data, everything that is necessary for competitive procurement is to be ready in September.

Now this modification attempt at a design resulted in late 1966, when the first failures occurred, in changing the aspects and making it a two-launcher versus four-launcher development.

This two-launcher was then named the LAU-70 and 71, LAU being

Mr. Roback. LAU-70 and 71?

Commander Katcher. LAU-70 and 71. A 7- and 19-round launcher made of aluminum to serve a dual purpose, namely to be reliable, and at the same time to be able to be manufactured inexpensively enough to qualify as a disposable launcher, as the current paper tubes are. This is the sequence of events at China Lake.

Mr. ROBACK. Is the fabrication done in-house?

Commander KATCHER. No, sir. The fabrication the first time was let after a competition. The second time it was let to two firms after a competition, and the third time, in an effort to expedite and not delay the development any longer, it was directed to a single producer to manufacture eight units from the design drawings of China Lake

Mr. Roback. Captain McMorries, you can submit for the record a

list of the firms that were solicited and awarded.

(The list follows:)

1. Contract N60530-12827 (5 each 7-round and 19-round launchers—The initial commercial research and development effort which led to the LAU-70/A

Vendor	
Chromogatt Corn	Amount Award
L.T. Industries	1 \$45, 565, 00 X 59, 714, 86
1 Price negotiated to \$24,779.63.	7