

in terms of vibration and temperature, and the functional performance requirements are therefore quite stringent. The qualification test program is 96 percent complete with only two items remaining to be qualified for the S-IC-1. Testing should be complete on these items by February 27, 1967.

The reliability test program is intended to determine how much margin there is between the qualification standards and the failure points. Figure 14 shows the statistics on that test program.

These test programs must be completed before we can move along to first unmanned flight and finally manned flight. Referring back to figure 10, all of the test programs are charted there, and the arrowheads there show when those programs must be completed to support the next activity in the total sequence. We refer to those arrowheads as constraints, but more simply stated, these events must occur in this sequence before we can proceed to the next major program event.

Thus far we have discussed our Boeing activities at Michoud and at the Marshall Space Flight Center. But, remember those 4,400 suppliers Dick Nelson told you about? How do we manage these suppliers to obtain a quality product? First, you start with rigorous, clear specifications and then set forth design requirements for the items. We specify quality-control system requirements, specify configuration-control systems requirements, etc. If we didn't hold to these stringent requirements, the suppliers would continue to make changes, and we might be in danger of having our qualifications testing invalidated. This is much the same type of control exercised by the Government. We survey the suppliers before we place an order. We place

RELIABILITY TEST PROGRAM

OBJECTIVE:

VERIFY THAT CRITICAL COMPONENTS CONTAIN AN
ADEQUATE PERFORMANCE MARGIN OF SAFETY TO
SATISFY THE ALLOCATED STAGE RELIABILITY GOALS.

SCOPE:

64 SUBSYSTEMS AND COMPONENTS ARE SUBJECTED
TO 27 TEST SERIES

STATUS:

20 TESTS COMPLETE (74 PERCENT)
SCHEDULED COMPLETION DATE: APRIL 30, 1967

FIGURE 14