Mr. GREER. There are three layers there; there are two nylon and one Tedlar.

Mr. WINN. I see.

Mr. GREER. The Tedlar is on top and the two underneath are nylon. This is the way foam looks after it's cut.

Mr. CABELL. Do you have to mill this to fit it to the contour of your bird? It's not flexible enough to be able to wrap it, is it?

Mr. GREER. Yes. You see, you have got a radius of about 200 inches, a very gentle curve.

Mr. CABELL. It will conform?

Mr. GREER. You get a big sheet 9 by 27 feet and it's got some play in it, actually just lays on it. It looks very stiff, but a large piece is quite pliable.

Mr. GURNEY. In an effort to understand how the program works a little better, let's go back to this insulation problem. How and when did you discover the defect in the original insulation you got from the subcontractors?

Mr. GREER. We really didn't discover it until we had put some on the quarter panels of the stage and had them in proof-pressure tests.

Mr. GURNEY. Is this the very first stage you are talking about?

Mr. GREER. Yes.

Mr. GURNEY. Incidentally, again, had you bought a lot for all of your stages or only for this one?

Mr. GREER. We procured a considerable amount and it was in the pipeline coming in and there was no good alternate source where we could just terminate that and get some new insulation right away. At that time we found we were in trouble, we were committed through about three stages. Now, we could have stopped right there. Then you would have seen a bigger schedule impact than I showed you a minute ago. So we chose to fight the repair cycle. When you pressure-test this and it rips, you repair it. You test again, and maybe you blow another place and repair it. Eventually, you get to where it's repaired and it works.

Mr. GURNEY. You are making your own now, you are not getting it through subcontractors?

Mr. GREER. That's right.

Mr. GURNEY. What was the matter with this? Was it poor workmanship, poor quality, poor design, or what?

Mr. GREER. The design is all right, it's OK, it works. There was lots of lab work done on this insulation by the engineer who designed it and built test items, and if you build it right and you glue it on right, it's great. In fact, it lulled us a little bit into complacency—we should have been more alert. For example, the actual pressure that this sees, when it's on the pad and we pump it up with helium, is like 4 pounds per square inch above atmospheric. As the stage goes aloft, then this vents off and you actually peak out somewhere around 5 or 6 pounds per square inch relative to the vacuum outside. We started out at 15 pounds per square inch proof test, because our laboratory samples would go to 40—they would all go to 40. We started blowing this up to 15 and it was ripping right and left, so then we went back and rechecked our real requirements for design and found that we could live with 7 pounds per square inch for proof-