

would not get us for violating a noise abatement procedure, but I think rather a careless and reckless operation which, indeed, it would be.

Mr. DEVINE. I mean within the bounds of safety because you are interested in your own safety as well as that of the passengers in your ship.

Mr. BRUNELLE. We try. I think this noise problem has been one of continuing education for our pilot groups. I think at first, when the airport first came out with maximum PNdB, the fellows tended to revolt. I think any change is this way. I think from constant education and reading the paper, they have found that people on the ground do have a problem, and it is a genuine and real one.

We are greatly interested in it now. We spend a great deal of time going to meetings and trying to develop new techniques. We are giving people everything they can possibly get in Washington. People are coming in just as high as they think is feasible and safe. We would like to have higher if we could, but it just isn't within the state of the art.

Mr. DEVINE. Well, I think that you, in your statement, demonstrated that the ALPA has an abiding interest because you say here, "The chairman of the Standing Committee on Noise Abatement." They wouldn't have a committee like that in the ALPA unless they were concerned about it.

Mr. BRUNELLE. Yes, sir. Yesterday I was in New York with Congressman Wolff, and on December 11 through 13. I will be in Montreal on an international noise problem; so that indeed we are working.

Mr. DEVINE. Thank you, Mr. Chairman.

Mr. KUYKENDALL. I have a couple of questions having to do with the sonic boom. The chairman in his close proximity to Boeing may want to get an opinion here on these things. The sonic boom problem, of course, is a different geographical problem from noise abatement because it happens out on the airways and the noise abatement is an airport vicinity problem. I think it is entirely different in this respect.

I have found a little personal laboratory, Mr. Chairman, on this matter of the sonic boom. Our family owns a ranch out in west central Texas, and the military use this area for air maneuvers constantly. When you are sitting out on a deer stand you get a very good study on sonic booms. You first see the contrail and wait for the boom. It is very interesting, and I notice that the lower the aircraft, the boom was much much heavier.

Is this true, that very high altitudes don't give a very severe boom? Do either of you know?

Mr. ADAMS. Well, the factor, Mr. Kuykendall, is a very simple one. The sonic boom as opposed to airport noise is produced by a contraction in the air. As you know, the air piles up and then it snaps back. This produces a vibration. As you are lower, the vibration is heavier, but the area covered is narrower. It is like a cone that comes out from the point. As you go higher, as long as you are still within the air cover, the vibration will continue down the whole cone, but will be of less intensity.

Mr. KUYKENDALL. Is it considerably less?

Mr. ADAMS. No. This was the question I asked General McKee when he was here. Once the vibration occurs, if you are in the atmosphere