

It of course is part of our national military and space program, the development of improved propellants, and we have some people with me who are quite conversant with the propellant program. As you will recollect, beryllium is a very dangerous material. There is no question about this. In recognition of the fact that we were proposing to test and develop propellants in which this material would be used as an additive, we earlier recognized well over 11 years ago the fact that we didn't know all we ought to know about this subject and have undertaken a rather extensive research program on both the dispersion of the material in the atmosphere following propellant testing, the toxicology of the material, and all of the problems associated with detection and evaluation of the presence of the material in the environment.

Our comments do reflect a sincere concern of a specialized problem which also might be typical of any industry which is undertaking to manufacture, produce or handle a material which is a potential toxicant or has potential environmental pollution characteristics.

Now, specifically to answer the question, "Are we working with the U.S. Public Health Service?" We are indeed very closely working with the U.S. Public Health Service on this matter to arrive at an agreed-upon approach to the definition of acceptable environmental quality standards for the presence of a material which is needed for the national defense but which possesses certain attributes which might make it harmful if present in too large a quantity.

This is typical of this risk versus benefit and application of technology as to what you know now and what you need for the future.

Mr. WAGGONER. That leads me to my last question. The chairman of this subcommittee, who is one of the most capable men I have ever known in my life, seized immediately upon your stress of the word "practicable" earlier during your prepared statement.

I share some of his concern about your use of the word practicable. I had the feeling that you were trying to relate cost to benefit when you used the word practicable. Specifically what does the Air Force do in pollution abatement as they relate cost to benefit?

Where do they draw that line of practicality?

Colonel MEYER. I think that I will have to answer this in two parts. In the first instance when we are talking about, and if I could address myself to the question of practicality, there are several attributes of this problem. It would be completely feasible to pass legislation or to establish regulations which said there shall be zero emissions of a certain material into the environment. I mean, this just takes the administrative authorities' willingness to say that this is what is desired. This may be without the availability of means of reducing the discharge to zero. Or, again, coming into the cost versus benefit, that the costs would be so great in return for the benefits of not having zero discharge, the little bit of appreciation—and I have a chart here which has been used in one previous hearing which, if the chairman would permit, I know time is running out, I would be happy to just show it, it shows the cost-versus-benefit problem, if it is permissible, sir.

While he's bringing this up, the other aspect of the practical side to this is, can you measure the environment? You know this business of requirements means that you have got to have some way to analyze the situation if you are going to enforce something, Mr. Chairman, and my eminent friend, Congressman Waggoner, you have got to be able to