Dr. HIBBARD. I meant technically it is possible to put a device into existing designs of automobiles which will lower the exhaust approximately to the proposed 1970 standards.

The major unresolved aspect of this is the cost and how we get it to the public.

What I am saying is that the technology exists. The engineering is yet to come. This is a substantial advance from a year ago.

Mr. DADDARIO. When you say there is a substantial advance in the application of our technology, comparing your view of this with your testimony a year ago, do you see any increase which has taken place in this capability, one which allows you to believe that the increase in this application of technology capability will, in fact, be greater as we go along, or do you find obstacles which prevent our making such advances?

Dr. HIBBARD. I think within the last year, due to the stimulus and recognition of the problem, there has been a very splendid increase in efforts of industry and of the Government. There is a lot less lipservice to the problem and a lot more action.

I believe these problems are technologically solvable, and I believe with the kinds of ingenuity and capability we have in the manufacturing, scaling up, and cost reduction of these devices, particularly in the automotive industry, there is no reason to believe that pollution abatement cannot be done on an economically acceptable basis.

We cannot do it tomorrow because there is a timelag associated with all engineering effort.

I think the other areas we are concerned with, for example, the problem of SO_2 from smelter stacks, with the price of sulfur advancing as it is and with the development of technology, many of the smelters in the West now have SO_2 control devices. The operators of these smelters do this because it is good business, and they are stimulated in this effort for the purpose of recovering sulfur as well as to abate pollution.

The other areas with which we are concerned have to do with control of the dust and particulate matter from the large tailings piles and waste heaps which are the products of mining. These problems have not been solved. I think we know technically what can be done to solve them. For example, one of the ways of keeping dust off a tailings dump is to wet it down and eventually grow vegetation on it.

I think in the case of some of the burning dumps in Pennsylvania, old spoil banks of coal mines, we know technically what to do to put out the fire. Nevertheless, the cost of doing this is going to be very large, at least if we do it using the technology we know today.

The problem with respect to dumps, therefore, is how either to improve our technology to reduce the costs or how to take the technology we have and apply it at today's costs.

Mr. DADDARIO. Which ought we to do, use our present knowledge and apply it, or develop new knowledge—or both?

Dr. HIBBARD. What we would like to do is to add to the technology so it would be economic to rework these dumps, and to find values in them which would pay for the costs of restoring the land by moving them away or otherwise disposing of them.