Dr. ECKARDT. I don't think we could.

Mr. DADDARIO. There is a research problem. We are spending a half billion dollars to do something we are not certain about.

Mr. GAMMELGARD. We know the systems will reduce the unburned hydrocarbons. We know they will substantially reduce hydrocarbons and substantially reduce carbon monoxide. Carbon monoxide is becoming more and more of a problem in the city in heavy traffic. Not that it is a serious problem, but the carbon monoxide levels are going up at a rate where if they continue that way for another 10 years, they will become uncomfortable.

Mr. DADDARIO. I wouldn't want to impose on you or Dr. Eckardt to spend the half billion dollars. But could you spend a sum substantially less than that on research to accomplish more than we are now?

Dr. ECKARDT. I think so.

Mr. DADDARIO. In what way would you proceed, Doctor, if you were to take an alternative route?

Dr. ECKARDT. Well, there are some areas that I'm interested in in the medical field which I intend to discuss later in my statement and I think there are areas in the technical field where additional, perhaps novel methods of controlling exhaust might be worthwhile which would include also the control of the nitrogen-oxides.

Mr. DADDARIO. Why don't we wait until we come to your statement to explore further this question.

Chairman MILLER. Mr. Chairman, we talk about these devices we are going to put on automobiles. In California some years ago we had to use certain accepted devices on cars.

I realize that pollution is created by automobiles. I have no way of measuring it, but it seems to me that one truck or bus diesel engine creates as much or more pollution than 10 automobile engines do. I have driven across the continent perhaps as much as any man here; and many times I have pulled over to the side of the road rather than follow one of these trucks. What are we going to do about it? I live on the fifth floor of the Methodist Building, and during the height of the tourist season, there are 20 or more buses parked around the Supreme Court Building. During the summer, they run their motors to keep the air conditioning on while people go in and out of the building. Sometimes the pollution is so heavy in our apartment that we have to get out of it. What are we going to do about this kind of pollution?

Mr. GAMMELGARD. I think your order of 10 times is too high, Mr. Miller. The diesel engine is a very efficient engine and gets more power out of a gallon of fuel than an automobile and this is why it is used. I couldn't help but agree with you that the odors coming out of a diesel engine are obnoxious but I don't think the odors coming out of a diesel engine have any adverse health effect. In that respect, I think they have a cleaner bill of health than automobiles. But what you do get is this very disagreeable odor and in some cases smoke.

Now, things can be done to improve the smoking characteristics of diesels. The engines in general should be better maintained. This would help the problem. There are additives which will reduce the