

terials or structures and in the environment in general, including air, fresh water and marine, and soils. This is less than one-fourth of the total money programed.

The second item is on transport and distribution and fate of pollutants, which is \$20 million. The basic reason for undertaking research on effects of pollution is to achieve an understanding of how much of any particular pollutant we can tolerate without detriment to those things we want. At the same time, in order to understand where to take an action and how to control the levels, it is necessary to understand about the transport or movement of these pollutants. That is what the second item is.

The third one is easily understood, measurement and instrumentation, with \$11 million expended in this field.

The next item queried here was on exposure to and sources of pollution. What we meant by this was the fact that some pollutants occur in a variety of different environments and reach man or the other targets in a variety of different ways. As, for example, lead from gasoline.

Also, it is the fact that a number of different sources may contribute to the pollution at a particular point, such as a variety of sources contributing sulfur oxides to the atmosphere, which may affect an individual at a given place. The amount of money expended here is \$3 million.

For social, economic, and legal aspects of pollution, the total expenditure is somewhat less than \$5 million. And more than half of the total expenditure, \$99 million in this year, is intended to be spent on the prevention and control of pollution, that is research, development and demonstration, in this area.

Mr. Chairman, I think that summarizes what I now know about the expenditures of the Federal Government.

Mr. DADDARIO. Your total figure then comes to \$184,926,000?

Dr. BUCKLEY. That is correct, plus the estimated figure on pesticides.

For fiscal year 1967, an additional total of \$65,870,000 was spent on pesticide research related to pollution.

Mr. DADDARIO. How do you see this figure going in the future? What do we need to do dollarwise, Doctor?

Dr. BUCKLEY. I would rather talk about it with hindsight, Mr. Chairman.

Mr. DADDARIO. Look at it from hindsight then.

Dr. BUCKLEY. It is quite clear it has increased and it is quite clear some parts of it will increase. Even in these 2 years, 1967 and 1968, it is clear a larger proportion of the total is devoted to applying what we know, finding how to apply this, how to control pollution and how to prevent pollution immediately in 1968 than it was in 1967. The amount we are spending that basically relates to standards, criteria, and understanding how much pollution we can tolerate has not increased as rapidly as this. I think this is a reasonable trend. There is a great deal that we know almost well enough to apply and where fairly small amounts in development and demonstration are likely to pay off. And that is one of the trends which is clear in the data at this time.