general discussions of what degree of pollution abatement can be achieved in specific cases and at what cost.

Sometimes the effect is important, sometimes it isn't. But at any rate, we believe that we will be performing a service by exposing this kind of technical detail in the context of the more general discussion.

Mr. DADDARIO. Dr. Cooke, is there any relevance to the lead health problem? You do not mention it here.

How does it fit in?

Dr. COOKE. I refer, as an example, to the phrase:

What kind of research would be required to find out if lead actually does interfere with the operation of certain enzymes systems in the body, thus producing subclinical effects of an unknown nature.

We would emphasize those areas in which there is known data with regard to effects of lead, and those in which there are not. In the latter case we would indicate which data might be collected and provide suggestions as to how.

Mr. DADDARIO. I see. Then you have not——

Dr. COOKE. We have not ignored that possibility. We have not crossed it off. This sentence was meant to fit within the narrow confines of this morning's testimony. It was meant to point out the need for additional information. In the second example, concerning sulfur in coal and precipitator efficiencies, we point out the purposefulness of bringing technological data alongside economic data to help provide more realistic forecasts of the technological and economic merits of course A versus course B.

As I said earlier, it is with these examples that we hope to point out how we will use technical knowledge to point out the areas where economic and health problems pertain. Also, to the extent we can, we will relate the technological facts to the economic and the health problems.

Studies of environmental quality generally conclude that analytical chemistry is vital to developing new knowledge of the processes involved.

Our study would illustrate the problems and achievements in specific terms. We would point out, for example, that until the past year or so, there has been no means of making standard samples of many air pollutants, at the concentrations at which they actually occur, that could be used to calibrate the methods and instruments that we use to measure such pollutants.

There are things that can be done to make progress in the face of such problems, but they are problems nevertheless that must be solved sooner or later and the existence of such problems means that we must always be certain what kind of information we are dealing with.

For example, the national air surveillance network in the past couple of years has improved its analytical techniques for nitrogen dioxide. One result is that the nationwide readings for 1966 are recorded at values of 50 percent higher than they were in previous years for the same actual concentration of nitrogen dioxide in the air.

This, then, is the kind of perspective that we hope that we, as a scientific society, will be able to provide.

In retrospect, let me now describe briefly some of the problems that a society such as ours encounters in organizing for such a venture. In fact, we still have to validate the efficacy of our present approach. The