

criteria you had not been able to find any data on a precise 24-hour exposure, or repeated exposures of 24 hours, would you then think that it would be possible and practical to go in and check at 24 hours?

Dr. MIDDLETON. I think what you are asking is a question that we normally take care of in our research needs prior to publishing the criteria, namely, we find out whether these things in fact take place.

Isn't this a part of our—

Dr. LANDAU. Yes.

I think what you may have reference to is the kind of thing planned in London, where, having adopted certain control measures, you now go ahead and measure morbidity in London, illness in London, and see whether or not the control measures have actually had an effect.

Certainly in the United States we would plan an ongoing program to assess the control activity. If the measures we are using are reasonable, there should be some reduction in the morbidity and mortality from these diseases after appropriate control measures have been taken.

Mr. CARPENTER. Well, to be specific if you choose, as New York has done, I believe, 0.1 parts per million sulfur oxide, 24-hour period not to be exceeded 1 percent of the time, would you think it practical and worth while to conduct experiments at precisely that concentration for that period of time to confirm that this was a threshold point of dose response in a properly selected sample of the population?

Dr. MIDDLETON. Your question really is validation of a theoretical assumption?

Mr. CARPENTER. Yes.

Mr. WILLIAMS. Which is not theoretical.

Mr. CARPENTER. Empirical.

Dr. MIDDLETON. OK, empirical.

We are at the point, whether we want to validate that or other things, we are at the point of using mathematical modeling of sulfur oxide emissions from tall stacks to see whether the meteorology, the formulas that have been produced for prediction, are in fact true, and the fact that we do this for some physical measurement is no different than being equally willing to do this for some biological reason.

Mr. AUERBACH. I think what we are basically talking about here is how criteria are set.

The Congress has directed us to develop and publish criteria based on whatever valid scientific evidence exists. We look at that scientific evidence, every bit of it, eliminating what seems to be invalid or inapplicable, and develop criteria based on what the data show about the relationship between levels of pollution, both short term and long term, and the effects that they produce on health, property, plants, and so on; so that the criteria are based on the best available evidence at the time that those criteria are published.

At the same time, we continue our own research, and we continue supporting research by other groups, and when and if that research shows that the criteria we have published should be revised in any way, they can be revised. It may, of course, confirm the criteria down to the last decimal place.

Mr. CARPENTER. But you wouldn't want this revision to occur after some economic or industrial change had been made if you could have