city, hopefully perhaps reports from private physicians who see people that they think are affected by air pollution will be sent into a central location where this data can be collated with the air pollution analytical data.

Unfortunately, up until now we have had to go back and analyze what happened in retrospect during an episode. For instance, after the famous November 1966 episode that Mr. Ryan talked about yesterday, the report on the health effects of that only appeared in the December 1967 Archives of Environmental Health. It took them 1 year to analyze the health effects data.

Mr. DADDARIO. What you are doing is establishing a whole series of denominators which will begin to develop an understanding on both sides. Both the weather people and the medical people will be able to put these together in a meaningful way.

Dr. ECKARDT. We hope so.

Mr. DADDARIO. Mr. Bell.

Mr. BELL. Dr. Eckardt, you say on page 4, "Thus any criteria issued at this time with regard to such long-term, low-dose effects * * * must be regarded as speculative."

How long would it take you to develop such criteria? Do you have have any length of time figured on that?

Dr. ECKARDT. I am not sure that we will ever have complete data to be any more than speculative about this. I think we are going to have to feed one element in and attempt to develop air quality criteria and that is judgment. I do not know how you define it. Maybe judgment is not speculative, but it is not a hard-and-fast number analysis. You are going to have to feed into this very competent medical judgment which is going to have to take into account judgments which probably cannot be fed into a computer.

Mr. BELL. What is the time period on that?

Dr. ECKARDT. You mean how long will it be before criteria are developed?

Mr. BELL. Yes.

Dr. ECKARDT. I would think they can be developed in accordance with the timetable that Dr. Middleton talked about yesterday. He proposed that perhaps by the end of this fiscal year they would have three air quality criteria issued.

Mr. BELL. I see.

Dr. ECKARDT. I have talked with them and I know they plan two additional ones, probably by the end of 1968.

Mr. DADDARIO. Dr. Eckardt, these three reports you are talking about, the Public Health Service has 0.1 part per million, State of Pennsylvania, 0.25, Holland 0.3. What does this really mean? As you look at it, what does it mean in the difference in abatement cost to meet each of these proposed criteria? What does it show us if we are to look at one as against the other?

Dr. ECKARDT. I will attempt to answer that. I do not know whether I can do it adequately.

Mr. DADDARIO. Why don't you give us an explanation and then we can go over it and refine it for the record later if you wish.

Dr. ECKARDT. Yes. A few years ago the Public Health Service issued some suggestions as to how Federal installations in the cities of New York, Philadelphia, and Chicago should try to meet their respon-