

vehicle is inadequate to cope with the air pollution buildup, to which the motor vehicle is a significant contributor, we are expecting any organization that comes to us for control program grants to have a plan of action which will deal not only with the industrial source but a plan to take care of mobile sources in an emergency situation.

Mr. FELTON. What percentage of your effort are you putting into, say, title II of the bill relating to automobiles as opposed to title I?

Dr. MIDDLETON. I can supply you some budget figures if you like.

Mr. FELTON. Offhand, do you know what the ratio is?

Dr. MIDDLETON. The effort on stationary sources versus that on motor vehicles?

Mr. FELTON. Yes.

Mr. WILLIAMS. I don't think we break it out that way.

Dr. MIDDLETON. Ordinarily, we do not. But if the \$64 million appropriated for fiscal 1968 for all our activities—including research, enforcement, training, criteria development, and so on—were to be allocated either to motor vehicles or stationary sources, the total for motor vehicles would be approximately \$20 million. This is a rough estimate, of course.

Mr. CARPENTER. I would like to ask concerning your statement that episode avoidance is not a suitable alternative—if studies have been made on the relative cost of a national program that would eliminate episodes and the short-term effects as opposed to a national program that would eliminate the long-term effects, conceding that both effects are damaging to health and that they are different?

Mr. WILLIAMS. We said, I think, that elimination of episodes is a practical impossibility—impossible as a practical alternative to controlling sources of pollution on a year-round basis. There is no way known to control air pollution in anticipation of episodes.

The data on meteorology, the pipeline we have to God's intent, is not good enough nor going to be good enough for us to ever control air pollution as we see it on that basis.

Dr. LANDAU. I think there may be some confusion with regard to what we are talking about in terms of episodes. If by episodes we clearly mean those unusual situations, such as the Thanksgiving Day episode in New York City, this is one thing. But if you are thinking about pollutant levels which affect asthmatics, for example, these are not the kind of things that take place only during episodes. These are the kinds of effects that take place whenever you get even a fairly moderate increase in the pollutant level.

It doesn't require an episode to cause asthmatic effects, and we are certain it doesn't require episodes to cause effects on bronchitics and persons suffering from emphysema.

What we ordinarily refer to as episodes are real disasters, in which you have excess mortality, usually accompanied by excess morbidity. That is, you have an excess number of persons going to clinics, and so on.

In talking about episodes, you are talking about very high levels as opposed to the fact that during the course of a year you have low values and somewhat elevated levels, but certainly for most areas nothing close to what we call an air pollution episode disaster. You have to have unusual meteorologic conditions to hit this kind of air pollution disaster.