

8-hour exposure, and 120 parts per million for 1 hour exposure, and I would appreciate your contrasting these figures with the industrial hygiene standards of 100 parts per million—

Dr. LANDAU. No, they are now 50, aren't they?

Mr. CARPENTER. The latest information I have is contained in "Industrial Hygiene and Toxicology," volume 2, 1962.

Dr. LANDAU. I think the tentative threshold limit value is now 50 parts per million, but we can check that.

Mr. CARPENTER. Yes, if you would.

And in this table, in this particular volume, the indication is that a concentration inhaled for 1 hour without appreciable effect is 400 to 500 parts per million.

Dr. LANDAU. Yes. On this 50 parts per million, we can read from the testimony that was submitted to the Muskie hearing. It says:

Fifty parts per million is now recommended as the upper limit of safety for health in industrial workers exposed for an 8-hour period.

So that 100 parts per million has now been reduced to 50 parts per million.

Mr. CARPENTER. Whereas, these measurements taken in traffic rarely exceed that, although of course, they do in some cases. But the general question is the—what should be the layman's reaction to this emission-source restriction at this point before criteria have been published?

Dr. MIDDLETON. First of all, let me say that the carbon monoxide levels in the Los Angeles area, for example, are going up about 5 percent per year, which is just about the increase in motor vehicle population.

Mr. CARPENTER. Excuse me. Would that be at, say, 6th and Spring?

Mr. GRISWOLD. It is the downtown area.

Mr. CARPENTER. But it would not be at any one point?

Dr. MIDDLETON. Concentration downtown would go up some, but the total tons of carbon monoxide in the whole area is increased because the total motor vehicle population is increasing.

Mr. CARPENTER. Well, excuse me again, but if I could call attention to figure 12, on page 21, of this document, which is a moving 12-month average, could you comment on that chart, the dotted line being carbon monoxide, indicating a decrease in the last year?

Dr. STEIGERWALD. If you are looking at, say, average monthly temperature variations from year to year or average rainfall or average wind speed, these have great variations.

Mr. CARPENTER. And there are cycles longer than a year.

Dr. STEIGERWALD. Yes. There is no possible way to take a 2- or 3- or even a 4-year period. And if you ignore meteorology and depend only upon concentration, you cannot draw any conclusion.

Dr. MIDDLETON. May I also point out in reference to figure 12, that the period 1961 was lower than 1960.

It is difficult to read on the graph—it would appear to be a significant drop, but since it is an annual drop I think it emphasizes what Dr. Steigerwald has just said.

Mr. CARPENTER. They are moving 12-month averages.

There are points on that curve for each month, but they have shifted the 12-month average, you see, in plotting it.