

Mr. McGRATH. No, sir. Let me say this is my opinion. SO_2 is the most easily measurable gas. A man can sit at his desk and he can know the amount of sulphur by weight in a ton of coal. He can then make a mathematical computation and determine how much, after combustion, SO_2 is going to be in it from that stack. He can also assume certain meteorological conditions and topographical conditions that he can mathematically compute, how far that dispersion of the emission will go, and what it is likely to be at ground level. So what they have done, although there are many other gases which go to make up the atmosphere which we breathe indited SO_2 as it happened to be the easiest one to measure. And not only from a mathematical standpoint but also the devices, which we presently have with respect to measuring at ground level, are not very sophisticated devices as yet. They are still not very accurate. However, most of them have been developed to measure SO_2 , not some of the others. There are some carbon monoxide measurement facilities, but not many of them. So SO_2 has been picked on, in my opinion, and I think it has been enforced by a critique by a Dr. Negelbaum. Negelbaum wrote a critique of the criteria which is almost equally as long as the criteria itself, in which he said there couldn't be possibly evidence to support the conclusions published by PHS.

So in my opinion they took sulphur because it was the easiest gas or the easiest element to handle to come to some conclusions. They were criticized yesterday for being so slow, but the Senate says you better re-evaluate because we don't like the looks of your criteria at the moment.

Mr. MULTER. Thank you.

Mr. WINN. Do you agree with Mr. Via who said that if the ignition equipment was operated properly there would be "a negligible amount of air pollution."

Mr. McGRATH. From that phase of air pollution, I would say I agree with him to an extent. One, it is of economic benefit to the consumer to burn his fuel in a proper manner. Therefore he gets the most BTUs and the most heat with proper combustion. There is the problem of start up and of cleaning the flu in the boilers where occasionally there will be puffs of smoke for limited periods of time, say three or four minutes duration where nothing would clear it out insofar as burning, burning coal. You are talking about electrostatic percipitators which have efficiencies of ninety nine and a half percent. You are getting out practically everything. But these are terribly expensive pieces of equipment. The only ones who can really afford these are the electric utilities.

Now proper combustion, however, in small installations for the most part can give you fairly clean burning but you have a problem of whether the janitor has proper ventilation in the room. He may have the finest piece of equipment in the world in there and yet he isn't operating the equipment properly by improper ventilation.

Mr. WINN. Would you agree that approximately fifty percent are not properly operated?

Mr. McGRATH. Let me put it this way sir, insofar as coal is concerned our major market here is the utilities and Government. Now both the Federal government and the utilities have of necessity, insisted that there be adequate and proper combustion in the fuel they