

Mr. GAMMELGARD. Not only industry, but other sources, too.

I would say, for example, Tulsa is one of the cleanest cities in the country and I think if they had one well-located station they couldn't justify putting in a dozen stations or even a half dozen.

Mr. MOSHER. So this is an individual decision depending on the character of the city?

Mr. GAMMELGARD. Yes. As I recall the Chicago system, just the monitoring stations, the equipment itself costs something like \$135,000, so you are not talking about peanuts for a good system.

Mr. DADDARIO. What responsibility do you have, taking into consideration that we are in the process of establishing criteria to improve things, to anticipate what some Government agency may require you to do by taking the situation as it presently exists, and doing what is necessary to improve it, without any compulsion?

Dr. ECKARDT. We are attempting to anticipate this and proceed accordingly.

Mr. DADDARIO. We could expect, then, that industry will be making such efforts?

Dr. ECKARDT. I think they will, yes.

Mr. GAMMELGARD. I'd like to point out, Mr. Chairman, that since the end of World War II, all of our lighter products, gasoline, kerosene, No. 1 and No. 2 heating oils and diesel fuels, have all been desulfurized to a much greater degree than they were at the end of World War II so that the sulfur content has dropped by more than 50 percent in that 20-year period in the light products. There is practically no sulfur in gasoline today, but desulfurizing heavy residual fuel, which is our remaining problem, is very expensive and as the point was made, you can price yourself out of the market if your competing fuels still stay at the present level.

Mr. DADDARIO. You finally answered Mr. Bell's question.

You would expect, then, that the same research which has allowed you to do a better job with certain fuels will continue to go on, I would expect, at an accelerated pace, to the point where you can do the same thing with these other fuels that presently cause you this problem?

Mr. GAMMELGARD. Yes.

Mr. DADDARIO. It is not that you are ignoring the situation. You recognize that it exists and you are trying to do something about it.

Mr. GAMMELGARD. In the year 1966 the oil companies in this country spent over \$4 million on research to develop or to improve the desulfurization processes for residual fuel.

Mr. DADDARIO. Do you have any judgment, Mr. Gammelgard, as to what research effort is going to be required in order to do a much better job in this area? As you look at it, do you have an estimate as to what time period will allow you to improve this sulfur content?

Mr. GAMMELGARD. We have the technical feasibility now to desulfurize residual fuel oils. One of the major companies operating in this country and in South America made an investment several years ago on the strength of the New York City 1964 code which at that time scheduled a stepwise reduction to a 2.2 percent maximum sulfur by October 1969. Before the facilities were even completed, the ground rules and the target had changed so that this facility was practically useless to them. More recently the target and the date for achieving it