

it. I list it here as an area for exploration, because one detects that the ruling or the desire for a universal set of additions to the internal combustion engine would not accomplish the total purpose which all of us have in mind, and that in fact the nitrogen-oxide problem may turn out to be more significant.

I do believe that it is important to call attention again, which is in the record, that I think all agreed, certainly in the southern California area, that the requirement was in the light of present knowledge a wise one. But on the decision that the universalizing of it throughout the whole United States, there is some indication that this requires a great deal more exploration and one which may later indicate that this may not be a wise universal decision.

Aside from automobile emissions, when we come to the general problem of air pollution abatement, the translation of the Los Angeles and southern California experience to the rest of the United States is considered by many workers to be a mistake. The conditions are not comparable and there is no tremendous evidence to indicate that the episodic situation in Los Angeles and obviously the ones in London and in Donora to warrant easy extrapolation to the whole of the United States. We may return to that in a moment.

My No. 4, Mr. Mosher, deals with Lake Erie. One thing is obvious, that Lake Erie is aging. Secondly, there are phenomena associated with that aging that are highly objectionable. A number of correctives, both above Lake Erie and in Erie itself, should be carried forward in the reasonable future and at a rapid pace.

It is also clear, however, that major expenditures—there has been some testimony that it may be something of the order of a billion dollars—need to be spelled out in order that those things that ought to be done should be selectively pulled out of it to be done. Still other proposals should be deferred while research is rapidly pursued in determining what the impact on Lake Erie such measures would have.

Lake Erie has been under a kind of desultory investigation from the standpoint of aging to my knowledge for a little over 100 years. Unfortunately, it has been very sporadic and from a scientific standpoint very limited, although the quality of investigation has been good. But it needs very, very much more elaborate inquiry. The time has arrived, I would say today, where the research aspect ought to be pursued in parallel with a number of the correctives which as I repeat could be carried forward now.

It should be remembered likewise that Lake Erie is the oldest and the shallowest of the series of lakes. It has been aging more rapidly than all the other lakes in that stream.

I might point out that the success, or at least apparent success, of recapturing some of the lakes from increased aging which has happened in Europe, which has had a longer experience with this, has resulted in Lake Zurich primarily and not in Lake Geneva, and in the Bavarian Lakes. But this was accomplished in fact by intercepting all of the industrial and municipal wastes in those areas and taking them completely out of the lake systems and discharging below them.

Now I mention this because such an inquiry in the Lake Erie area is one which obviously you may want to make. I would not dare suggest,