requirement of control mechanisms is a significant beginning. I am in full accord with the more extensive recommendations of Mr. Norman Cousins, chairman of the mayor's task force on air pollution, New York City, and I'd like to reiterate these points as he presented them to the Committee on Public Works earlier this year.

First, that studies should be made to determine whether the blowby and afterburner devices required under the Clean Air Act might not have the adverse side effect of emitting oxides of nitrogen, thus creating a substantial new problem.

Second, effective air pollution control devices should be required for all cars, regardless of age.

Third, extensive research should be aimed at the idea of developing chemical additives for use in all fuels which now produce pollutants, including fuels used in automobiles, buses, trucks, heating furnaces, and steam and power generating stations.

With respect to sulfur oxide, a great deal of progress can be made by using low-sulfur fuels while continuing to work on improving furnaces and developing inexpensive devices to catch dust and sulfur fumes. In this whole field, I think it is extremely important to remember this point recently expressed by Senator Edmund S. Muskie, of Maine: "Additional study is needed, of course, but this fact is too often used as an excuse for delay."

The rivers and streams of our Nation have for so long a time served as a dumping ground for our waste products that it will require a major commitment of money and talent to overcome the harm done by enterprising but unthinking Americans. In this day and age, even, approximately one-fourth of our towns and cities are without any kind of treatment facility for raw sewage. Over $40 billion is required merely to catch up to the needs of the moment. In comparison, the $600 million to be spent by local communities and the $150 million by the Federal Government are totally inadequate. The sources of water pollution are many and include domestic sewage and other oxygen demanding wastes, infectious disease-producing agents, plant nutrients, organic chemicals including pesticides and detergents, industrial wastes, sediment and silt from land erosion, and heat from power and industrial plants.

Intensified research and development is urgent to keep ahead of the problem of waste treatment. We need advanced means of treating municipal and industrial wastes. Particularly, we might look into the development of joint treatment systems such as is that shared by the Potomac communities of Lake, Md.; Westernport, Md.; and Piedmont, W. Va.; and the West Virginia Pulp & Paper Co.

New methods of solving the problems of cities which have combined storm and sanitary sewers are sorely needed. Over one-third of our Nation faces having their sewage flow untreated into their streams because of the overflow of the system during storms.

Another area of investigation for our scientists and engineers would be to develop alternative methods of waste disposal, instead of the age-old one of unloading it into our rivers. Basic research will always be in demand to determine the effect and fate of new chemicals discovered and used in industry and on such complex problems as recently cropped up in Riverside, Calif. when *Salmonella typhimurium* was polluting that city's well water supply.