

Dr. Hornig has been awarded honorary degrees by: Temple University (LLD 1964); Yeshiva University of New York (Doctor of Humane Letters 1965); University of Notre Dame (LLD 1965); Rensselaer Polytechnic Institute (Doctor of Science 1965); University of Maryland (Doctor of Science 1965); Ripon College (Doctor of Science 1966); Boston College (Doctor of Laws 1966); PMC Colleges (Doctor of Science 1967); University of Wisconsin (Doctor of Science 1967); and Worcester Polytechnic Institute (Doctor of Engineering 1967).

STATEMENT OF DR. DONALD F. HORNIG, DIRECTOR, OFFICE OF SCIENCE AND TECHNOLOGY, EXECUTIVE OFFICE OF THE PRESIDENT

Dr. HORNIG. Mr. Chairman, it is always a pleasure to appear before this subcommittee.

These hearings are addressed to the question of how to make the best use of existing Federal laboratories. It is a very important question, about which I have been much concerned, as has the Federal Council for Science and Technology and the President's Science Advisory Committee. There are well over 100 laboratories of substantial size in the Federal Establishment, and perhaps several times that number of installations where some research and development is performed. Around \$3.5 billion is being spent annually in laboratories operated by the Federal Government and our cumulative investment in these facilities in the last decade exceeds \$7 billion.

Nevertheless, it would be a mistake to consider the utilization of existing laboratories in isolation from larger problems. The function of laboratories is to solve present problems and to lay the foundation for the future. Their productivity must be measured by their effect on current and future programs, public and private, of the entire Nation, usually involving expenditures many times greater than those directly involved in laboratory operations. Because of this "multiplier effect" it is important that the utilization of the Federal laboratories be viewed in the context of their overall contribution to national progress rather than a narrow problem of the administration of the laboratories themselves.

The most critical questions are: (1) The choice of problems, their significance, and the feasibility of finding solutions through research and development; (2) the creation of capabilities in the laboratories which can, in fact, solve the most difficult problems; and (3) the translation of the results of the laboratories' work into action in either the public or the private sectors. The variations in how these questions are answered may far outweigh such other questions as whether one agency uses the capabilities of another agency or whether all facilities are used to the maximum extent.

These questions have received a great deal of consideration and thought from my office through the years. I must tell you frankly that I am not satisfied with our performance; I cannot give you a solution myself, but I know of no one else who thinks he has final answers, either. Of course, there are no final answers, but we can look for the best provisional answers in a constantly changing situation.

There has been a Committee on the Federal Laboratories in the Federal Council for Science and Technology since 1959, chaired by Dr. Allen Astin, Director of the National Bureau of Standards. It has studied the salary and nonsalary factors that bear on the ability