

the laboratory director, who should be held subject to postaudit and fully accountable for the end results.

Thank you very much, Mr. Chairman.
(The prepared statement follows:)

PREPARED STATEMENT OF ALLAN V. ASTIN, DIRECTOR OF THE NATIONAL BUREAU OF STANDARDS

Mr. Chairman, members of the Subcommittee, I am pleased to have this opportunity to participate in these discussions on the utilization of Federal laboratories.

The National Bureau of Standards, which observed its 67th birthday this month, is among the oldest and largest of the Federal laboratories. Since its inception, the Bureau has been concerned primarily with providing the central basis within the United States for a complete and consistent system of physical measurement. This responsibility for measurement standards and techniques, and for reliable data on the properties of matter and materials constitutes a unique continuing mission that will exist so long as we have scientific and technological activities in this country.

Furthermore, it is a most demanding mission. This was well expressed by the Ad Hoc Committee of the National Academy of Sciences that evaluated the Bureau's functions and responsibilities in 1953. Their report stated:

"It is not sufficient to have fairly good standards of measurements, fairly good methods of testing materials, mechanisms, or structures, or reasonably good determinations of important physical constants. The standards, the measurements, the test procedures must be the very best, the most accurate, the most reliable that can possibly be achieved at any given time, limited only by the state of the art at the time. It is thus more than a play on words to say that the 'standards' by which the Bureau is judged must be the very highest and best."

By its very nature, the measurement standards mission grows with each passing year. As our Nation's science and technology advances at an ever accelerating rate, our measurement capabilities must keep pace. As our Nation becomes increasingly dependent upon science and technology for industrial growth, and for solutions to a variety of pressing national problems ranging from environmental pollution to safety on our highways, the measurement standards mission of the Bureau becomes increasingly important to our national welfare and national goals.

While this basic measurement mission has provided the prime focus of NBS activities through the years, the Bureau also has served since its inception as a central resource of scientific and technical competence within Government. Other agencies have made extensive use of the Bureau's competence and facilities, particularly in the exploratory stages of new technical endeavors. This has been a constantly changing role that has involved the Bureau, at least temporarily, in a great variety of technical activities, some of which have continued and have grown to become major national programs involving new Federal laboratories.

A brief résumé of the Bureau's historical development may help to illustrate ways in which its program has changed to meet changing requirements of the Government and of the Nation.

ESTABLISHMENT OF NBS

The National Bureau of Standards was established in 1901, after over 20 years of effort toward this goal by the Nation's scientists and engineers.

Standards laboratories in other countries had been meeting the needs of industry for measurement instruments of maximum reliability, accuracy, and range. Outstanding among these were the Physikalisch-Technische Reichsanstalt established in 1887 in Germany and the National Physical Laboratory authorized in 1899 in Great Britain. At the same time the United States was emerging from a primarily agricultural nation to a primarily industrial one with a rapidly expanding export market.

In 1900, the National Academy of Sciences, supported by unanimous endorsements from professional societies and the country's leading physicists, chemists, and engineers strongly urged the Congress that the establishment of a National Bureau of Standards was indispensable to the Nation's scientific, technical, and economic progress.