plete job of solid waste management—the approach to which the Solid Wastes Program of the Public Health Service is dedicated.

I should point out that the full financial and personnel resources of the Solid Wastes Program are utilized on an integrated basis to get the results we desire. Problem areas discovered in fact-finding surveys lead to intra and extra-mural research activity which in turn leads to development and demonstration activity to show the practicability of a solution. As a final step public information documents and solid waste training conducted by universities and the Public Health Service convey this information to personnel in the field to aid them in making wise solid waste management decisions and meet pollution control criteria imposed upon them by regulatory agencies. The lack of valid information effectively describing the present status of solid waste practices in the United States presents a major obstacle to effective assessment of the solid waste problem in this country and what type action programs should be undertaken to assure proper solid waste management now and in the future. The paucity of such information has been recognized in previous testimony before this and other committees investigating solid waste management in this country.

Recognizing this need, we have utilized State Planning Grants to help fill this void. These grants have been awarded to 38 State and interstate agencies to first survey solid waste practices within the State and then develop a comprehensive State solid waste plan. Our own technical staff are at this moment taking the results of all the surveys which have been totally or partially completed and preparing a report which for the first time will show, on a statistically reliable basis, the following:

(a) The magnitude of municipal and commercial solid wastes being handled in the United States today and future use projections.

(b) The type of disposal and collection techniques being used today and their frequency of distribution.

(c) The adequatecy of present practices.

(d) Solid waste management needs for today and for the future (financial and technological).

This activity has a high program priority and is scheduled to be completed this summer. At the same time our technical personnel are conducting specialized studies of selected industries to get better insight into the solid waste problems associated with industrial operation.

A solid waste information retrieval system has been established within the Solid Wastes Program and is now operational. Technical journals and other periodicals and reports have been abstracted, categorized, and catalogued. A researcher interested in what information is available in a broad or very specific field can inquire and be furnished appropriate material.

Incinerator technology represents a pressing problem facing many solid waste managers and city officials today. Incineration of solid waste is a volume reduction technique to materially reduce the amount which must ultimately be disposed by some other technique such as land disposal. Since combustion of waste is an integral process of all incinerators, air pollution can and has resulted unless effective control measures are utilized. Furthermore inadequate or improper design and/or operation have resulted in pollution of our land and water resources. Some cities have received rather shocking news lately when construction bids have been opened on incinerators which have incorporated air pollution control devices required by regulatory officials. The increased capital investment and operation unit costs represent a ⅓ to ½ increase over costs previously associated with this type of disposal facility without effective air pollution controls. We believe that all incinerators must be designed and operated to assure adequate protection of our air and water resources. We, however, are appalled when these increased costs prevent effective community action to eliminate open burning in dumps, and incineration in outmoded facilities which cannot even be modified to assure efficient operation and protection of air resources. The answer to this debacle in our opinion is to either find effective substitutes for costly incineration or where this does not appear to be feasible, develop new incineration methods which are economically feasible and effective in controlling air pollution. The Public Health Service's Solid Wastes Program is addressing itself to both approaches.

The City of Brockton, Massachusetts, supported by a Public Health Service solid waste demonstration grant is evaluating a newly developed ultra high temperature incinerator purported to have low capital and operating costs and great flexibility in the size and type of solid waste it can receive. This incinerator operates at such a high temperature that it produces an inoffensive residue