

land reclamation, where this can be done on a planned basis, perhaps with the use of new technology such as greater density and compaction, so that otherwise useless lands could be put into very productive uses.

So far I have talked almost entirely about the question of treatment, processing and disposal. I would like to note that we are thinking now more about a series of processes, a treatment approach here rather than just a single action of disposal. I think this point is very important. But I haven't mentioned the question of collection of waste, and here we are talking about an area which economically and from the standpoint of health and aesthetic questions is an important one. As a matter of fact, from the cost point of view some 60, 70, or 80 percent of the total cost of solid waste disposal is involved in the collection question, and here research, development and innovation hold a great deal of promise and certainly need to be worked on. I think that here we probably most effectively can carry out our activities in perhaps what you might call new communities or new towns. Perhaps these facilities will require the same kind of thinking, the same kind of early planning and development as we now have involved in the basic public utilities. So, our work here, will be directed primarily at innovations that can be incorporated in the completely new cities. And in connection with this, the use of systems management, beginning with the interrelationships among the waste systems supports the fact that, if you move to a somewhat larger scale of operations geographically, new potentials come into view. We recently have asked the newly established National Academy of Engineering to work with us in looking at some of the practical ways in which steps could be taken to apply some of the concepts that we have been working with.

The National Academy of Engineering has agreed to do this. We also have held two or three national meetings, including a national conference on systems analysis and waste management earlier this year, and this I think developed further interest in the field.

The Federal role in generating activities in the private sector is worthy of brief comment. It seems to me that there are opportunities here for us to work with industry. There are several ways that industry can and undoubtedly will participate in the program. The information derived from the national R. & D. program will help industry to meet its own solid waste problems. Then, of course, we feel that industry will be looking toward the possibility of a significant expansion in the solid waste management industry itself. We have some specific examples of that already.

We have developed certain Federal interagency relationships with reference to the solid waste planning question. We have developed a working understanding with the Department of Housing and Urban Development whereby the State solid waste planning activities and the so-called 701 planning activities of HUD will be coordinated through the State agencies concerned, and we have a working memorandum of agreement with the Bureau of Mines of the Department of the Interior regarding the mutual and respective responsibilities under the Solid Waste Disposal Act, and we will be glad to furnish that to the committee if it is desired.