

ments coming out of our Federal laboratories, such as the Sidewinder missile which is still one of our best air-to-air weapons, were started or nurtured with funds that would not have been available if the laboratory director had taken the rules too literally.

I will leave the details of this problem for laboratory directors such as Dr. Weinberg and Dr. McLean who will follow me.

Let me now turn to the adaptation of Federal laboratories as they complete the tasks for which they were established, or the immediacy of tasks changes, or the nature of the problem is modified by subsequent events. How to assign new tasks to existing laboratories, when to establish new laboratories, and when and how to disband existing organizations and abandon existing facilities are closely related questions.

It is certainly true that the roles of some of the Federal laboratories have changed significantly or diminished with time, leaving a substantial combination of talent and capital investment without a clearly defined job. At the same time, the changing needs of the Nation from time to time require inauguration of new research programs, whether in the effects of pollutants and the setting of standards, the abatement of pollution, improved transportation systems, or crime control. The question, of course, is how to manage the total collection of Federal laboratories to take account of the changing mix of priorities.

One of the suggestions which has been made is to establish a Federal agency to operate laboratories and perform what is in effect contract research for the rest of the Federal establishment. This hypothetical agency has sometimes been termed a "GSA for Federal research." This is essentially what is done in the Soviet Union for everything but defense research, atomic energy research, and basic research.

The feasibility of such an approach depends, I think, on how the agency is conceived and what kinds of work are assigned to it. As a housekeeping and general management device, it might be successful in the same way as the industrial contractors who operate the AEC laboratories. However, I have serious misgivings about this approach. An effective R. & D. program involves a dynamic give and take between the laboratory and its parent agency. It must not only carry out assigned tasks, but spell out the tasks which need to be performed; it must be a source of ideas for its parent agency and help the agency to put the laboratory's output into practice. All of this requires a very close identification between a laboratory and its sponsoring agency.

Nonetheless, under certain conditions, we have seen that one Federal agency can perform research effectively for another. The Office of Saline Water in the Department of the Interior, for example, is one of the best examples we have of a technically oriented Federal agency which has performed an important part of its research and development work through "contract" with other Federal agencies. Since part of this work is being done at AEC's Oak Ridge National Laboratory, you may want to go into some detail about it with Dr. Weinberg. OSW work has also been performed by other Federal agencies such as the National Bureau of Standards and the Bureau of Reclamation.

In general, OSW experience suggests that work performed by other Federal agencies can be highly successful provided the performing laboratory shares fundamental objectives and research traditions with the sponsoring agency. The question really comes down to compati-