Advisory Committee, and I was in close contact with the President's Science Adviser, George B. Kistiakowsky, and Roger Revelle, Science Adviser to the Secretary of the Interior. Encouraged by both Drs. Kistiakowsky and Revelle, we held conversations with the Atomic Energy Commission and the Department of the Interior about Oak Ridge working in this field. The two congressional committees involved—the Joint Committee on Atomic Energy and the House Committee on Interior and Insular Affairs—became interested in the possibility of Oak Ridge participating in this work. A rather formal agreement was executed between the two Government departments, and the agreement was officially sanctioned by the corresponding committees, setting ORNL up as a desalting laboratory for the Department of the Interior, but still operated as a contractor establishment of the AEC. The program, headed by Dr. K. A. Kraus, has involved about 20 chemists and engineers, and has been largely concerned with the physical chemistry of reverse osmosis. The budget for the work runs around $600,000 per year. In the 6 years since the work started, some very striking findings have been made, the most important being the discovery of "dynamic" membranes that have much higher capacities than any previous reverse osmosis membranes.

The second thread in the ORNL desalting story began in 1961 when Dr. R. P. Hammond of Los Alamos pointed out in a lecture at ORNL that heat from nuclear reactors could be used to desalt the sea economically if the whole process, including evaporation, were performed on a large enough scale. Though greeted at first with skepticism, we at ORNL finally were persuaded that Hammond was basically correct. These exciting findings were conveyed to Dr. Jerome B. Wiesner, the President's Science Adviser, to the AEC, and to the Office of Saline Water. A committee under Roger Revelle was formed to investigate the validity of these claims; the committee in the main substantiated these claims and as a consequence the AEC and the Department of the Interior expanded their programs in nuclear desalting. By this time Hammond had moved to Oak Ridge and, since ORNL was the Laboratory most interested in desalting, it was natural that the responsibility for research and development in nuclear desalting should devolve on the Oak Ridge National Laboratory.

At present we have about 90 scientists and technicians working on all phases of desalting, both its nuclear and nonnuclear aspects. The total budget for these activities is around $3.6 million per year, of which $2.2 million comes from the Department of the Interior, $1.4 million from the AEC. This makes ORNL one of the larger, if not the largest, desalting laboratories in the world. However, this represents only about 4 percent of the entire operating budget of the Laboratory.

Civil Defense.—In 1962 the distinguished Nobel laureate, Eugene P. Wigner, became deeply concerned about the state of civil defense in the United States. Largely under his urging, the National Academy of Sciences sponsored a summer study, Project Harbor, which tried to assess our knowledge of civil defense. One of the recommendations of Project Harbor was that one or several laboratories be set up to study civil defense in a coherent, integrated way.

Participating in Project Harbor were several Oak Ridgers. Moreover, Eugene Wigner, who was the guiding spirit of the effort, was a