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## Alvin M. Weinberg, 91, Dies; Advocated Nuclear Power

By [JEREMY PEARCE](#)

Alvin M. Weinberg, a top nuclear scientist and leading advocate for commercial nuclear power who helped steer the Oak Ridge National Laboratory throughout the cold war, died on Wednesday in his home in Oak Ridge, Tenn. He was 91.

Dr. Weinberg's death was confirmed by his family.

From 1955 to 1973, he was director of the Oak Ridge laboratory, where he coined the term "Big Science" to describe the advent of nuclear power and other huge technological projects invariably financed by governments and powerful research institutions. The laboratory among other things made crucial parts for weapons in the nation's nuclear arsenal.

In the 1970's and earlier, Dr. Weinberg continually emphasized the viability — and the necessity — of commercial reactors, even after a watershed nuclear accident at Three Mile Island, near Harrisburg, Pa., where a plant malfunction caused a low-level release of radiation in 1979. He argued for better pay and more intensive training for reactor workers and proposed that nuclear plants be operated by a federal entity, instead of being entrusted to commercial utilities.

At the time, Dr. Weinberg noted that Three Mile Island might become the "salvation of nuclear energy," since a large-scale meltdown had been averted, and therefore should increase public confidence in the safety of commercial reactors. He cited a climbing demand for electricity in the United States, a relative scarcity of oil and pervasive pollution caused by burning coal as prime reasons for increasing the role of nuclear generation.

In an interview at Oak Ridge in 1995, Dr. Weinberg conceded that "one of the prices of nuclear energy is the commitment of certain pieces of real estate in perpetuity to nuclear activity, including waste disposal."

He added, "This is not all that big a commitment, because there are only 85 reactor sites and 50 other nuclear-related sites throughout the United States."

As early as 1945, he foresaw the advantage of nuclear energy to power fleets of submarines, to extend American naval influence into the Arctic and regions similarly remote.

Dr. Weinberg's opinions on energy were frequently sought by federal lawmakers, and he served on presidential science advisory committees in the Kennedy, Johnson and Nixon administrations. Although he stepped down from his post at Oak Ridge, he continued to advise the federal government on technology and energy policies.

In 1975, he helped to found the Institute for Energy Analysis at Oak Ridge Associated Universities, a federal consortium, and initiated studies of reactor safety, carbon dioxide emissions and other subjects related to national

energy use. At the institute, where he was director until 1985, he advocated increasing the number of commercial reactors as a means of cutting emissions of heat-trapping gases.

With Eugene P. Wigner, Dr. Weinberg wrote a textbook on reactor operations, "The Physical Theory of Neutron Chain Reactors" (1958). He also wrote extensively about defense and arms control, and chronicled his role in a memoir, "The First Nuclear Era: The Life and Times of a Nuclear Fixer" (1997). Earlier, he wrote about his experiences in another book, "Reflections on Big Science" (1969).

Alvin Martin Weinberg was born in Chicago. He earned his doctorate in mathematical biophysics from the [University of Chicago](#) in 1939.

After working on atomic development at the University of Chicago, he joined Oak Ridge as the laboratory's research director in 1948. In the following decades, he helped to oversee research on the use of isotopes in nuclear medicine, the effects of radiation exposure on humans and the environmental impact of energy generation.

He was a member of the [National Academy of Sciences](#) and the National Academy of Engineering.

Dr. Weinberg's first wife, the former Margaret Despres, died in 1969. He later married Genevieve DePersio, who died in 2004.

He is survived by a son, Dr. Richard J. Weinberg, a biologist, of Durham, N.C.; a sister, Fay Goleman of Stockton, Calif.; and three grandchildren.

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