



*Dade W. Moeller*

## DADE W. MOELLER

1927–2011

Elected in 1978

*“For leadership in education and research and services to governmental agencies in the control of radiation in the environment.”*

BY MATTHEW P. MOELLER  
SUBMITTED BY THE NAE HOME SECRETARY

**D**ADE W. MOELLER, a pioneer in environmental engineering and radiation health physics, died on September 26, 2011, in New Bern, North Carolina, at the age of 84.

Dade was born in Grant, Florida, a small town on the intercoastal waterway, on February 27, 1927. Soon thereafter his family moved to the town of Malabar, population 200. As a young boy, Dade participated in the family’s primary activity of raising Leghorn hens on their 20-acre poultry and animal farm and selling eggs to local restaurants. The Moeller family was well known for their hard work and ethical business dealings, as well as for their charitable interactions with neighbors, despite their own humble circumstances.

A curious and dedicated student, Dade was the only person in his high school who passed the exam for the V-12 Navy College Training Program. After seeing a doctor for the first time in his life at the age of 17, he entered the U.S. Navy in 1944 during World War II. He took courses at the University of South Carolina and, because he liked math and had enjoyed building chicken houses with his dad, decided to become an engineer. He was told that the best engineering school in the south was the Georgia Institute of Technology and that, if he requested a transfer to Howard College in Birmingham, Alabama, he would thereafter be transferred to Georgia

Tech. So Dade spent a year at Howard College, a seminary school, and then transferred to Georgia Tech as planned. He graduated magna cum laude from the Georgia Institute of Technology with a B.Sc. in civil engineering and an M.Sc. in sanitary (environmental) engineering in 1948.

It was while at Georgia Tech that he met his lifelong inspiration and intellectual equal, Betty Jean Radford, whom he married on October 7, 1949, in Atlanta. She had majored in biology and was the director of laboratory classes at Agnes Scott College in Decatur, Georgia. During their first date (Dade's first ever), after admitting he was struggling with his parasitology coursework, Betty Jean gave him an hour-long tutorial on the subject over dinner. "She was beyond any doubt the smartest human I ever knew," Dade told a reporter in the months prior to his death.

In 1948, Dade then began his 18-year career as a commissioned officer in the U.S. Public Health Service. His early duty stations included the Oak Ridge, Tennessee, and Los Alamos, New Mexico, installations of the U.S. Atomic Energy Commission and the headquarters office of the Radiological Health Program in Washington, D.C. His principal responsibilities were related to the health impacts of nuclear reactor cooling water systems and the safe management of radioactive wastes. While stationed in New Mexico, Dade became a registered professional engineer, and, in 1957, under U.S. Public Health Service sponsorship, he earned his Ph.D. in nuclear engineering at North Carolina State University. In 1958 he became a certified health physicist and in 1959 a certified environmental engineer. His later assignments with the U.S. Public Health Service included serving as director of the Radiological Health Training Program at the Robert A. Taft Sanitary Engineering Center in Cincinnati, Ohio (1957–1961) and, at the age of 34, director of the Northeastern Radiological Health Laboratory in Winchester, Massachusetts (1961–1966), where workers studied radioactive fallout from weapons testing and conducted thyroid monitoring of children for radioactive iodine uptake.

After retiring from the U.S. Public Health Service in 1966, Dade was appointed to the faculty of the Harvard University School of Public Health as an associate professor, soon thereafter becoming a full professor. During his tenure at Harvard from 1966 to 1993, Dade served with the highest distinction in several positions, including associate director of the Kresge Center for Environmental Health (1966–1983), professor of engineering in environmental health (1968–1993), chairman of the Department of Environmental Health Sciences (1968–1983), and associate dean for continuing education (1984–1993). His activities at Harvard included research on natural background radiation, nuclear air cleaning systems, environmental radiation surveillance, and planning for nuclear emergencies. His primary teaching responsibilities were related to radiation protection and general environmental health. Referring to his appointment to Harvard as “a calling,” Dade loved teaching and was equally admired by his students, who awarded him Harvard’s “Golden Apple” award for teaching excellence in 1974. One of his students recalls being in Dade’s office in 1979 when he received a telephone call from then President-elect Reagan’s transition team, trying to entice Dade with one of a number of high-level posts in the federal government. “Gee, thanks,” replied Dade, “I’m very honored, but I really prefer being a college professor at Harvard.”

Dade was appointed to several national technical committees, including the National Academy of Sciences/ National Research Council Committee on the Biological Effects of Ionizing Radiation (1977–1980) and its Subcommittee on Environmental Effects (1970–1972). He also served on and chaired committees for the U.S. Nuclear Regulatory Commission, U.S. Environmental Protection Agency, National Council of Radiological Protection and Measurements, International Commission on Radiological Protection, and American Academy of Environmental Engineers. He was very active in the Health Physics Society, becoming the New England chapter’s president in 1966 and the society’s national president in 1971. Dade was chair of the American Board of

Health Physics for four years (1967–1970) and a consultant to the World Health Organization for 15 years. From 1988 to 1993 he was the founding chairman of the U.S. Nuclear Regulatory Commission's congressionally mandated Advisory Committee on Nuclear Waste.

After his retirement from Harvard, Dade knew that he wanted to continue to consult. Together with son Matt, a certified health physicist who had graduated from the Harvard School of Public Health, colleague Steve Merwin, and his wife Betty Jean, Dade helped found the environmental consulting firm that bears his name. Headquartered near the Hanford nuclear site in Richland, Washington, Dade Moeller & Associates (today known simply as "Dade Moeller") provides professional and technical services to federal, state, and commercial clients in support of environmental, nuclear, radiological, and worker safety operations. Since its start in 1994, the company has grown from 4 to nearly 300 employees and has more certified health physicists than any other company in the United States.

Dade was elected to membership in the National Academy of Engineering in 1978, the same year as Neil Armstrong. He loved telling the story of how he shared an elevator with the astronaut on their way to the induction ceremony in Washington, D.C. Noting that Mr. Armstrong was well known for rarely giving autographs, Dade was touched to later receive an autographed picture of the legendary astronaut.

Throughout his life, Dade earned numerous other honors and awards, including the Health Physics Society Distinguished Achievement Award (1982), the U.S. Nuclear Regulatory Commission Meritorious Achievement Award (1988), being named Distinguished Emeritus Member of the National Council on Radiological Protection and Measurements (1997), induction into the Georgia Institute of Technology Engineering Hall of Fame (1999), the Health Physics Society Robley D. Evans Commemorative Medal (2003), the American Academy of Health Physics William McAdams Outstanding Service Award (2005), and the Harvard University School of Public Health Professor Emeritus Award of Merit (2006).

He was a fellow of the Health Physics Society (1968), the American Public Health Association (1988), and the American Nuclear Society (1988). Dade served for over 30 years on the National Council on Radiation Protection and Measurements and became a distinguished emeritus member of the council.

Always thinking and contributing, Dade was a prolific writer who authored or coauthored 250 journal articles, 75 letters to the editor, and two patents for radon reduction units. His textbook, *Environmental Health* (Harvard University Press, 1992), for which Dade published a fourth edition in June 2011, is the Harvard University School of Public Health's preferred text for its course on the topic.

Despite his lifetime of achievements and accolades, Dade was a genuinely humble "country gentleman." He was a monumental leader in every sense of the word, a skilled mentor to so many of us, and an inspiration to the thousands of students, employees, and colleagues who knew him. He was one of those rarefied gentle giants in our profession with a work ethic and moral compass for all of us to emulate.

Dade leaves 5 children and 16 grandchildren and a legacy of intellect, kindness, and humor. He was preceded in death by his beloved wife Betty Jean, a most extraordinary woman in her own right. We will miss him sorely, yet we celebrate his accomplishments and are so thankful for the riches he bestowed on us.