Herbert D. Vogel

1900–1984
By Harry E. Bovay

Herbert D. Vogel, one of the world leaders in professional engineering and one of the most creative minds in the area of engineering progress, a retired brigadier general in the U.S. Army Corps of Engineers, a former chairman of the Tennessee Valley Authority, and a former engineer adviser of the World Bank, died on August 26, 1984, at Walter Reed Army Medical Center, in Washington, D.C.

General Vogel was born in Chelsea, Michigan, in 1900 and lived in Washington, D.C., at the time of his death. After graduating with a B.S. from the U.S. Military Academy at West Point in 1924, he obtained an M.S. in civil engineering from the University of California in 1928, a doctorate in hydraulic engineering from the Berlin Technical University the following year, and a professional civil engineering (C.E.) degree from the University of Michigan in 1933. During World War II, General Vogel served in the South Pacific.

Herbert Vogel married Loreine Elliott, daughter of Mr. and Mrs. Eugene Elliott of Washington, D.C., on December 23, 1925, while he was stationed at Fort Humphreys (now Fort Belvoir). Their close and happy marriage produced two sons, Colonel Herbert Davis Vogel, Jr., and Richard Elliott Vogel. Colonel Vogel, Jr. (Ret.), is also a graduate of the U.S. Military Academy and is now vice-president of Merrill Lynch Pierce Fenner & Smith Incorporated, and his brother Richard
is an attorney. General and Mrs. Vogel were enjoying four grandchildren at the time of his death. Mrs. Vogel, a lovely and active lady, fully supported Herbert in his endeavors for fifty-nine years.

Active in military and professional engineering matters throughout his career, General Vogel retired from the army in 1954 as division engineer of the U.S. Army Corps of Engineers' Southwestern Division. During this portion of his career, he contributed to the control of large waterways by proving and exploiting the validity of hydraulic models, a contribution that brought about a revolution in engineering concepts. The use of these models was prompted by the country's need to find methods of controlling the Mississippi River and its tributaries to prevent recurrences of the disastrous floods of 1927.

Major General Charles G. Holle (Ret.) stated that General Vogel attended the Berliner Technische Hochschule, graduating with the degree of doctor of engineering. Next he followed duty with the Mississippi River Commission in Vicksburg, Mississippi, to create the U.S. Waterways Experiment Station, which has become so well-known and highly regarded, worldwide. Full credit of the prestige of the WES is due to General Vogel having been the first director, 1929–1934, for the sound establishment and orientation of it, and for his expert counseling as the WES developed during the subsequent years.

Major General K. D. Nichols (Ret.) also contributed to the facts in this memorial, adding the following:

As a result of his early initiative, Vog combined his intelligence, engineering knowledge, superior judgment, fierce loyalty to his profession, high professional standards, sensitivity, and humor to become one of the world's outstanding hydraulic engineers, respected by his host of friends and associates worldwide.

Once the U.S. Waterways Experiment Station was constructed and in operation, Vogel and his colleagues opened new areas of research and convinced authorities of the reasonableness of using new methods and techniques for solving
the problems involved in the control of the Mississippi River and other sizable waterways. Their work required the use, for the first time, of extensive, small-scale models of large rivers. Although these models had some vertical distortion (because a very small horizontal scale had to be used), they were nevertheless useful for waterway control, and new techniques and methods were developed through these models that went far beyond the European concepts.

Indeed, the U.S. Waterways Experiment Station has become a model for practical hydraulic research institutions around the world and is now the most complete and active installation of its kind anywhere. It has been visited by thousands of people from all over the globe. In addition, during the past fifty years, hundreds of problems relating to all parts of the United States and many foreign countries have been brought to the experiment station for study. Millions of dollars have been saved as a result of its work, and major hydraulic structure design improvements have been made.

General Vogel was appointed chairman of the Tennessee Valley Authority (TVA) by President Dwight D. Eisenhower, a position he held until 1963. During his nine years as chairman, he had executive responsibility for the operation of the largest electric power system in the United States. During this period, the capacity of the system was more than doubled; it was supplying electric energy to an area of over eighty thousand square miles.

TVA is responsible for the unified development of natural resources over an area of forty-one thousand square miles and for the development of navigation and flood control of the Tennessee River System. Herbert also served as both president and consulting engineer of the Tennessee River and Tributaries Association.

George H. Kimmons, retired manager of TVA’s Office of Engineering Design and Construction, wrote:

During one's career there is always one person who stands out above all the others. For me that person is General Herbert D. Vogel. He was respected by his associates for his achievements and leadership abilities.
Not only was General Vogel an outstanding engineer and a great Army officer, he was also one of the most likeable men with whom I have ever had the pleasure of working. I worked directly with General Vogel during his term as chairman of the board of the Tennessee Valley Authority and later when each of us was serving as a member of the Permanent International Association of Navigation Congresses.

As an engineering adviser to the World Bank from 1963 to 1967, General Vogel contributed greatly to the success of the bank, which relies largely on the successful engineering of its projects. He also served in an ex officio capacity as an engineer member of the bank's working party for the Indus Basin Project during its construction, which required many trips to Pakistan. His influence was felt in the supervision of a dam site study and in the authorship of a work entitled "Water and Power Resources of West Pakistan."

In his practice as a consultant and founder of Herbert D. Vogel and Associates (1967 to 1984), his attributes of creative thinking and leadership were highlighted. For example, during this time, he presented papers at several meetings of the Permanent International Association of Navigation Congresses that defined the U.S. position on inland navigation problems. This position included the exchange of planning and engineering technologies with developing countries and their relationship to improving maritime ports and inland terminals. In more recent years, he expressed the view that the entire watershed of the Potomac River should be developed with a view to meeting the long-range water needs of the Washington metropolitan area.

An authority on water and soil conservation and flood control, General Vogel authored numerous papers and articles on hydraulic models, river and harbor engineering, and the development and operation of large electric power systems. As a result, his professional efforts have had a large and beneficial impact on society. His small-scale river model testings for waterways have provided viable solutions to otherwise unsolvable complex problems; they have also saved millions of dollars in addition to improving and adding increased safety features in hydraulic structure designs.
Because of the proof provided by the experiment station as to the validity of models, engineers today do not build large, expensive hydraulic structures until they are first tested on a small-scale basis. Model tests have saved untold millions of dollars in construction costs and have prevented further heavy losses of life and property resulting from disastrous flooding.

A planner, builder, and former director of the U.S. Water-ways Experiment Station in Vicksburg, Mississippi, Vogel also served as lieutenant governor of the Panama Canal Zone. He was a member of both the Mississippi River Commission and the Board of Engineers for Rivers and Harbors and served as chairman of the Arkansas-White-Red River Basins Interagency Committee.

His many awards and honors include the Distinguished Honorary Graduate Award of the U.S. Army Engineer School; the Colon Alfaro Medal; the Knight of the Grand Cross (Thailand); the Distinguished Alumnus Award of the University of Michigan; the Award for Meritorious Service to the Engineering Profession of the Year 1967, given by the Consulting Engineers Council; and the Liberation and Independence Medals of the Philippines. General Vogel was also selected in 1972 as the Elected Occupant of the George W. Goethals Chair of Military Construction, Army Engineer School at Fort Belvoir, Virginia.

In 1972 he was also cited by Joint Resolution No. 250 of the House of Representatives and the Senate, State of Tennessee. He received the Knight of the Golden Circle Award of the Army and Navy Club of Washington and the President's and Honorary Member Award of the American Society of Civil Engineers in 1979. General Vogel's military decorations included the Distinguished Service Medal and the Legion of Merit.

His memberships were extensive and impressive. He was elected to the National Academy of Engineering in 1977. He was an honorary member of the Public Works Historical Society and the Society of American Military Engineers; a fellow of the American Consulting Engineers Council; and an
honorary member of the Engineers Club of Pennsylvania. In addition, General Vogel was a member of the Royal Society of Arts in London, the Permanent International Association of Navigation Congresses, the International Commission on Large Dams, and the National Society of Professional Engineers.

In reviewing General Vogel's accomplishments, Major General Charles Noble (Ret.) completed his tribute by stating:

Never one to retire from the business of humanity, Dr. (General) Vogel died with his boots on, serving to the end the profession he loved. He left behind a loving wife and family and thousands of professional and personal friends. His funeral service at Arlington Cemetery was the occasion for a large assemblage of the most distinguished and famous crowd of professionals and high-ranking service personnel, friends, and West Point classmates, a crowning tribute to the selfless life of a great soldier, engineer, and public servant.