



Edward J. Cleary

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1906–1984

By Alexander H. Flax

Edward John Cleary, formerly one of the major spokesmen on water pollution control practices in the United States and the creator of the ORSANCO Robot Monitor System, a set of devices that maintains day-and-night river quality vigilance, died on March 31, 1984. A dedicated and pleasant man, Ed Cleary was instrumental in blazing new trails in the water pollution control arena and developing innovations that have been approved and implemented on an international basis.

Born in Newark, New Jersey, on June 16, 1906, Ed Cleary began his education by attending public schools. He entered Rutgers University, where he was awarded a four-year competitive-examination scholarship and a two-year graduate fellowship. He graduated in 1929 with a B.S. in general engineering. He continued his education at Rutgers, receiving an M.S. in sanitary engineering in 1933 and a Ph.D. in civil engineering in 1935.

During his undergraduate schooling, Cleary worked as a field engineer on tunnel and power plant construction projects at the Management and Engineering Corporation in Chicago (from 1929 to 1931) and at Parker and Graham, Inc., in New York City (from 1931 to 1932). While attending graduate school, Cleary worked as a research assistant at Rutgers University and then as a manager at the William J.

Howe Coal Company in New York City. After completing his master's degree, he became the executive editor of the *Engineering News-Record*, a weekly publication of the McGraw-Hill Publishing Company in New York. From 1937 to 1941 Ed Cleary was also a lecturer on public works administration at New York University's College of Engineering.

In 1949 Dr. Cleary was appointed executive director and chief engineer of the Ohio River Valley Water Sanitation Commission (ORSANCO). In these capacities, he presided over the administration of the largest regional water pollution control project ever undertaken. Eight states, in addition to the U.S. Army Corps of Engineers and the U.S. Department of the Interior, joined in this water control effort, which has succeeded in safeguarding the regional water resources of the Ohio River. The successful operation of the Ohio Valley program involved uniting the water supply needs of eleven million people and thousands of industries in constructing more than \$1 billion worth of waste control facilities. In addition, the Ohio Valley facilities' international acceptance introduced Cleary's work to the international arena.

Dr. Cleary lectured on the commission's work in Latin America, England, Holland, Germany, Switzerland, and Yugoslavia. In Yugoslavia, he also conducted a seminar for public health authorities from twenty European countries. In addition, he served as a water control consultant to the Federal Republic of Germany and worked with the five-nation Rhine River Commission. In 1960 he was selected by the Economic Commission for Europe as a member of an international team to promote further collaboration in water pollution control.

At the First International Conference on Water Pollution Research in September 1962, Dr. Cleary described a unique electronic water quality monitoring system he had devised for the Ohio River. The Robot Monitor System is a unique combination of control devices that monitors river quality day and night. The system safeguards water supplies for cities,

reports water characteristics to industries, and observes conditions that may affect recreational use. In addition, it issues accidental discharge alerts, identifies violations of standard pollution control laws, and serves to reduce the cost of water and waste management.

In 1963 Edward Cleary took a leave of absence from the Ohio River Valley Water Sanitation Commission to join the staff of Resources for the Future as a research associate. For fifteen months, he worked on a book that became *The ORSANCO Story: Water Quality Management in the Ohio Valley Under An Interstate Compact*; it was published by Resources for the Future in 1967. This book documented his work at ORSANCO and fully explained the Robot Monitor System.

In 1965 Cleary was elected to the board of directors of Resources for the Future. He was the first staff member to be elected to this position and served in this capacity until 1967. He then became an honorary director, although he remained both an active participant in water quality research and a familiar face at all of the board meetings until his death.

On December 31, 1971, after twenty-two years of service, Ed Cleary retired from the staff of ORSANCO, which he had served as executive director and chief engineer until 1967, when he relinquished his administrative duties to become a consultant to the commission. An excerpt from the Ohio River Valley Water Sanitation Commission Council minutes of September 15, 1971, reveals how Dr. Cleary's work was acknowledged at his retirement:

In his long tenure, since 1949, as leader and counselor in the activities of this Commission he has touched the interests of scores of industrial leaders, administrators and public officials—local, state and national—as well as multitudes of citizens in the Ohio River Valley. In so doing he has earned acclaim and unbounded respect.

After his retirement, Ed Cleary accepted a part-time appointment to the faculty of the University of Cincinnati in the Department of Environmental Health.

In addition to lecturing on the practice of environmental quality management, he served as a consultant to the National Water Commission, the International Bank for Reconstruction and Development, the White House Office on Science and Technology, the Miami Conservancy District, the Agency for International Development, the World Health Organization in Geneva, the Atomic Energy Commission, and Bechtel Incorporated's Environmental Resources Projects.

The quality of Edward Cleary's work has been recognized through the many honors bestowed upon him. He was elected to membership in Sigma Xi and Tau Beta Pi. He received the Hemispheric Award of the Inter-American Association of Sanitary Engineering (1954), the Emerson Award of the Water Pollution Control Federation (1963), the Man-of-the-Year Award of the American Public Works Association (1962), two separate Resource Division Awards of the American Water Works Association (AWWA) (1963, 1971), the LaDue Citation of the Ohio State Section of AWWA (1965), and an honorary doctorate of engineering from Rose-Hillman Institute of Technology (1972).

Cleary was also inducted into prestigious societies. He was named a member of the National Academy of Engineering in 1967; he was a diplomate in the American Academy of Environmental Engineers; and he was a member of the American Water Resources Association. He served as president of the American Public Works Association and vice-president of the Public Works Historical Society. His honorary memberships included the American Society of Civil Engineers, the American Water Works Association, the Water Pollution Control Federation, the British Institute of Sewage Purification, and the Engineering Society of Cincinnati.

At the time of Edward Cleary's retirement in 1971, a colleague at the Ohio River Valley Water Sanitation Commission stated:

We are mindful of the fact the Dr. Cleary has been the recipient of many awards and praiseworthy messages from scientific organizations, civic and industrial leaders and, especially, from his fellow engineers. We believe, however, that the richest rewards and highest praises due him reside in the silent gratitude in the hearts of the many people whose well-being has been heightened, in part at least, as a result of his monumental efforts in connection with the noble task of improving and preserving the God-given supply of water upon which life depends.