



ROGER D. CALDWELL

Recipient of the Elda E. Anderson Award, 1973

CITATION

for

ROGER DALE CALDWELL

In recognition of his outstanding accomplishments in applying scientific knowledge to the solution of technical and management problems in applied health physics

ROGER D. CALDWELL was born in Warren, Pennsylvania, on 19 July 1933, and graduated from Trinity High School in Washington, Pennsylvania, in 1951. After 1 yr at Washington and Jefferson College, he entered the U.S. Army and served with the Medical Corps in Korea as a preventive medicine specialist.

On returning to civilian life in 1955, Roger continued his education at Otterbein College, Columbus, Ohio, and graduated in 1958 with two degrees: a Bachelor of Arts in mathematics and physics; and a Bachelor of Science in chemistry and biology. Roger then became an AEC health physics fellow at the University of Kansas. Upon graduating in 1960 with a Master of Science degree in Radiation Biophysics, Roger accepted employment at the Brookhaven National Laboratory where he served as health physics supervisor for the Medical Research Reactor and conducted studies in beta and neutron dosimetry and in decontamination techniques.

In 1963, Roger became supervisor of health and safety for the plutonium plant of the Nuclear Materials and Equipment Company (NUMEC) in Apollo, Pennsylvania. There he applied his scientific abilities to the development of improved safety procedures for plutonium fuel processing, and as a result of his outstanding contributions, he was promoted in 1966 to Manager of Health and Safety for all NUMEC operations. While carrying out these responsibilities, he developed new management techniques for the design and implementation of nuclear safety programs, occupational health and safety activities, and health physics operations.

In 1970, Roger was awarded another AEC Fellowship and returned to the University of Kansas to study for the doctoral degree in Biophysics. His research involved the development of a new approach for relating LET distribution

to fundamental dosimetric quantities and quality factors. Roger was awarded a Ph.D. degree in 1972, and accepted a position as Associate Professor of Health Physics in the Department of Radiation Health, Graduate School of Public Health, University of Pittsburgh. He is currently pursuing further research in microdosimetry and is continuing his interests in applied health physics through graduate teaching and the preparation of a book on the health physics aspects of plutonium fuel processing.

Throughout his career, Roger has shown the ingenuity and ability to apply his scientific knowledge to the solution of technical and management problems of applied health physics. The wide range and diversity of his experience are exemplified by the fact he has studied, performed research and made contributions to health physics problems of reactors, radiation dosimetry, air monitoring and general hazard evaluation, as well as to the fabrication of plutonium and uranium fuels and neutron and gamma sources.

Roger has been active in the Western Pennsylvania Chapter of the Health Physics Society and served as Chapter Secretary from 1967 to 1968. He has also participated in many professional and civic activities including the presentation of talks to community organizations and high school science groups, and serving as health physics advisor to labor groups, safety councils, and community-oriented environmental organizations throughout Pennsylvania. He is currently Chairman of the Committee on Occupational Radiation Protection and Nuclear Fuel Plants for the American National Standards Institute and recently completed a term as a Member of the Advisory Committee for Transportation of Radioactive Materials for the Commonwealth of Pennsylvania. Roger has published over a dozen scientific papers and holds an equal number of patents on various

instruments and techniques he has developed for application in the field of health physics. He is certified by the American Board of Health Physics and is listed in *American Men of Science* and *Who's Who in Atoms*.

ROGER CALDWELL has contributed perspective and solutions to many health physics

problems related to a variety of nuclear facilities and is well on his way to a promising academic career in health physics teaching and research. He is an outstanding health physicist and exemplifies those qualities of leadership for which we remember Dr. ELDA E. ANDERSON so well.