

L. WILLARD RICHARDS

Vice President Emeritus



Educational Background

Ph.D., Physical Chemistry, Harvard University
A.M., Physical Chemistry, Harvard University
B.S., Chemistry, California Institute of Technology

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Professional Experience

Dr. Richards is one of the founders of STI. From 1981 to 1985 he conducted a series of studies for the California Air Resources Board in which airborne measurements were made of cloud chemistry in the Los Angeles Basin. He interpreted the optical data from the 1987-1988 Denver Brown Cloud study; estimated the effect of reduced visibility on the military test and evaluation operations in the Mojave Desert using model calculations of the radiances of targets and the background sky; and developed three methods for measuring the atmospheric light extinction coefficient. He managed the data analyses for the \$15 million Navajo Generating Station Visibility Study sponsored by Salt River Project. His work included calculating the contribution of a point source to fine-sulfur concentrations and light scattering at a distance of 100 km. He performed the visibility analyses for the PSD permit and participated in the negotiations with the National Park Service and EPA for the Healy Clean Coal Project, a coal-fired power plant to be built near a national park in Alaska. He wrote the section on visibility in the U.S. EPA's 1996 Air Quality Criteria for Particulate Matter. His work in the Mt. Zirkel Visibility Study included modeling the transport of plumes from two generating stations for 11 months, measuring light scattering by fine particles and using those data to determine the contribution of SO₂ emissions to light scattering, and calculating contrast and contrast transmittance for sight paths from calculated particle concentrations.

From 1974 to 1979, Dr. Richards was a project manager at the Environmental Monitoring and Services Center of Rockwell International. His projects there included in-roadway measurements of sulfuric acid and other pollutants from vehicles for the EPA and field studies to determine the impact of power plants, freeways, and other sources in the South Coast and San Joaquin Valley Air Basins for the California Air Resources Board.

From 1966 to 1974, Dr. Richards was at the Billerica Research Center of the Cabot Corporation, where he worked primarily on the optical properties of pigments. He developed radiative transfer calculation methods, optical methods for determining pigment particle size distributions, tests for process control, and improvements in process equipment.

Memberships

American Chemical Society
American Geophysical Union
Optical Society of America