John R. Bartlit, Ph.D.

Dr. Bartlit had a distinguished 31-year career at Los Alamos National Laboratory (LANL) in chemical engineering and the varied aspects of that formal discipline that began some 125 years ago. His professional work products used many of the historical elements of the field: from process design and unit operations; to the design, control and automation of integrated processing systems; and extending to safety concerns, research, economics and technical management. Dr. Bartlit has had a concurrent career as a nationally-influential volunteer participant in the formative years of the public environmental movement, to which he applied the same engineering skills.

Bartlit was born and raised in the town of Harvey, Illinois, along the railroad running south out of Chicago. The diverse town was home to local factory workers, small shopkeepers, and professionals commuting to Chicago. Small farms and a research lab in petroleum products adjoined the town. In the mid 1950's and early 1960's, Bartlit earned a Bachelor of Science in Chemical Engineering from Purdue University, a Master of Science in Engineering from Princeton University and a Doctor of Chemical Engineering from Yale University. During these years, he had summer jobs at three large oil refineries from New Jersey to California, at a major chemical company in Connecticut and at then the Los Alamos Scientific Laboratory in New Mexico. Before leaving Yale, he taught a course in chemical engineering to Yale undergraduates.

Dr. Bartlit joined LANL in the engineering section of the cryogenics group. He produced improvements in the methods of storing and handling large quantities of liquid hydrogen used for tests of nuclear rockets at a remote site in Nevada. Meanwhile, worldwide research in a different field found new pathways to electric power via nuclear fusion. The U.S. Department of Energy invited proposals for a DOE laboratory to design, build and operate a full-scale facility for processing the small flow rates of deuterium and tritium isotopes of hydrogen that are needed to fuel a commercial-scale fusion power plant. Bartlit made major contributions to all aspects of this facility and its operation. He was a principal author of the winning technical proposal for building the Tritium Systems Test Assembly at LANL. He was the leader of the three-person team that received a U.S. patent for the innovative process design of a system for separating the three isotopes of hydrogen by means of cryogenic distillation. The tritium test facility and its operations were jointly funded by the U.S. DOE and by the Japan Atomic Energy Research Institute and staffed by scientists and engineers from LANL and from Japan. Dr. Bartlit, as deputy project manager, was involved in key annual negotiations with Japan and created much of the international documentation on the facility design, costs and operations.

Outside of his “day job” as a research engineer and manager, Bartlit volunteered his talents of leadership and engineering analysis to help cut back regional industrial air and water pollution in the early days of national environmental laws. His vehicle was New Mexico Citizens for Clean Air & Water, a group he co-founded and led from its inception. The citizens group won a landmark lawsuit for breach of contract against owners of the coal-fired Four Corners Power Plant, which resulted in the installation of $300 million worth of SO_2 scrubbers in the late 1970s. His most frequent forum was a regulatory hearing, in which New Mexico's rules allow interested citizens to testify as well as cross-examine witnesses. Dr. Bartlit published the cost analysis he gave

at a hearing in the peer-reviewed American Journal of Public Health in a paper entitled, “Putting environmental economics in perspective: case study of Four Corners Power Plant, New Mexico.” He also brought ideas for emission controls to copper smelters, a large molybdenum mine, woodwaste burners, and more recently a computer chip manufacturing plant. Since 2004, he has led monthly meetings involving Intel in Rio Rancho, NM, and environmental activists, with the goal and result of bringing voluntary reductions in Intel's air emissions. His volunteer work was honored by awards for outstanding environmental achievement from the Rocky Mountain Center on Environment in 1973 and the American Lung Association of New Mexico in 1985. Dr. Bartlit consistently interacts effectively with industry on environmental matters, as evidenced by his work for the U.S. Office of Technology Assessment in Washington, D.C.; the National Coal Policy Project at the Center for Strategic and International Studies at Georgetown University, five years as a member of the New Mexico Mining Commission and the monthly meetings with Intel and community members.

From this background in engineering and regulation, Dr. Bartlit began writing a biweekly environmental column in the local newspaper in 1971 and still continues writing the column monthly. His topics give broad meaning to “environment.” His topics led to his being named communication advisor to LANL in the aftermath of a major nearby wildfire. Over the last several years, the core concepts of regulatory engineering slowly took shape in these newspaper essays. For these 44 years of essays, his volunteer work with the environment and the Los Alamos Historical Society, Bartlit was honored by his community as a Living Treasure.

John and his wife Nancy have lived in Los Alamos for more than 50 years, where they raised their two children, now living in Albuquerque.

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