

Robert M. Bernero

EXPERIENCE SUMMARY

Mr. Bernero is currently active as a nuclear safety consultant on several projects in the United States. The projects in the U.S. include membership on the Plant Performance Review Committee for the gaseous diffusion uranium enrichment plants operated by USEC, Inc. He has served as a reviewer and consultant for spent reactor fuel storage at facilities in the United States, and recently for a facility in Russia for the storage of weapons grade uranium and plutonium. Mr. Bernero also provides consulting services from time to time to companies engaged in the uranium fuel cycle. In late 1999 and early 2000 Mr. Bernero was a member of a 3-person team formed to conduct special reviews of nuclear criticality safety and emergency management at U.S. commercial fuel cycle facilities in light of the nuclear criticality accident at the JCO facility in Tokaimura, Japan.

Part of Mr. Bernero's consulting activity has been in the area of radioactive waste management, working directly with contractors for and the U. S. Department of Energy, particularly with regard to determinations of waste incidental to reprocessing. Mr. Bernero has worked with committees of the National Research Council of the U. S. National Academy of Science. He completed a six-year term as a member of the Board on Radioactive Waste Management (later reorganized as the Nuclear and Radiation Studies Board) at the National Research Council.

Immediately upon his retirement from U. S. Federal service in 1995, Mr. Bernero served as a foreign member, reviewer and contributing author of SOU 1996:73, a Report by the Commission of inquiry for an international review of Swedish nuclear regulatory activities, which was published in Swedish and English in April 1996. This work was performed for the Swedish Ministry of the Environment. Mr. Bernero more recently engaged in a short study of methods for compliance with waste disposal regulations for the Swedish Radiation Protection Institute.

In April of 1995, Mr. Bernero retired after 23 years of service with the Nuclear Regulatory Commission (NRC) where he received both the Distinguished and Meritorious Executive Rank from the President and many other performance awards. Prior to his NRC service, he worked for 13 years with the General Electric Company in naval reactor and space power nuclear technology.

In his last positions at the NRC Mr. Bernero was Deputy Director, for 2 years, and then Director, for 6 years, of NRC's Office of Nuclear Material Safety and Safeguards (NMSS). He was responsible for licensing, inspection, and the environmental reviews of most activities regulated by the NRC, except for nuclear reactors. These activities include:

- Uranium recovery and nuclear fuel enrichment, fabrication and development
- Industrial, medical, academic and commercial uses of radioisotopes
- Security and safeguards measures
- Transportation and storage of radioactive materials, including spent nuclear reactor fuel
- High-level and low-level radioactive waste management and disposal. As part of his waste management activities, Mr. Bernero served as an active U. S. delegate to the Radioactive Waste Management Committee of the Nuclear Energy Agency at the OECD.

From 1972, when he began service with the U. S. Atomic Energy Commission (the predecessor of the NRC) until 1987, when he returned to NMSS, Mr. Bernero held many other responsible positions in most of the functions of NRC reactor and material regulation, listing the last first:

- Division Director in Reactor Regulation for boiling-water reactor licensing, reactor systems safety and radiological safety. In his reactor licensing position in 1986, Mr. Bernero had to prepare and present the technical testimony on seismic safety, appearing with the entire Nuclear Regulatory Commission before a hearing in the U. S. House of Representatives, to justify issuing an Operating License to a large power reactor which endured a major earthquake days before it was to be licensed.
- Division Director in NRC Research for probabilistic risk analysis, and the analysis of severe reactor accident sequences and consequences. Early in this work he was the lead author of NUREG-0715, Task Force Report on Interim Operation of Indian Point (1980). He led the task force at the request of the Commission, in the aftermath of the Three Mile Island accident, to enable the Commission to respond to petitions to shut down the Indian Point and Zion reactors because of the high population in their vicinity. The Report marshaled all available reactor risk analysis to relate the risk of these reactors to other U. S. reactors. He led the effort with the Institute of Electrical and Electronic Engineers (IEEE) and the American Nuclear Society (ANS) that developed NUREG/CR 2300 PRA Procedures Guide—A Guide to the Performance of Probabilistic Risk Assessments for Nuclear Power Plants (1983).
- Assistant manager in the NRC sponsored investigation of the Three Mile Island Unit 2 accident in 1979. Mr. Bernero was responsible for investigating and evaluating the response of the NRC itself to the accident. He was a contributing author of Three Mile Island, A Report to the Commissioners and to the Public, by The Nuclear Regulatory Commission Special Inquiry Group. This Report was released by the Group Director, Mitchell Rogovin, in January of 1980.
- Assistant director for material safety standards in most areas of NMSS responsibility. In this position, Mr. Bernero was the agency wide manager for efforts to develop decommissioning standards and regulations for all facilities licensed by the NRC. He also sponsored studies of the risks of radioactive material transportation.
- Chief of licensing for nuclear fuel reprocessing and spent fuel storage. He was a witness in the hearings for the Generic Environmental Statement on the Use of Recycle Plutonium in Mixed Oxide Fuel in Light Water Cooled Reactors (GESMO) as well as the licensing hearings for the Barnwell Nuclear Fuel Plant.
- Licensing project manager for several light water reactors (including final licensing of Arkansas One Unit 1 and Three Mile Island Unit 1), the Clinch River Breeder Reactor and the Barnwell Nuclear Fuel Plant

At the General Electric Company from 1959 to 1972, Mr. Bernero served the Knolls Atomic Power Laboratory (KAPL) for seven years as a design, construction and test engineer for nuclear reactors in U. S. Navy ships, which included three years as a field engineer. Later, he worked for six years in the Space Division on isotope power devices for space applications, becoming the manager of design and construction for the isotope-powered generator used on the Voyager missions to the outer planets.



Robert M. Bernero

Mr. Bernero served from 1952 to 1955 in the U. S. Army Security Agency as a Chinese translator. He holds a Bachelor of Arts degree (1952) from St Mary of the Lake University in Illinois. He also holds a Bachelor of Science degree in Chemical Engineering from the University of Illinois (1959), and a Master of Science degree in Chemical Engineering (1961) from Rensselaer Polytechnic Institute in Troy, New York.