



Canadian Nuclear Society / Société Nucléaire Canadienne

Chalk River Branch, c/o Dr. Blair P. Bromley, AECL-Chalk River Laboratories, Chalk River, ON K0J 1J0

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*“Supporting nuclear science and technology for over 25 years”
“plus de 25 ans de promotion de la science et de la technologie nucléaires”*

Politicized Nuclear Issues: Proliferation, Energy Security, and Environmental Protection

From the viewpoint of those keenly interested in nuclear power, the Cold War left behind both beneficial and detrimental legacies. Important examples of benefits are the application of nuclear fission for the production of useful heat and electrical energy, medical radioisotopes, food sterilization, water desalination, and marine propulsion. But the negative legacies provide significant present-day challenges, perhaps with more potential consequences than other technologies. This presentation will be in the form of a colloquy trying to place nuclear issues in an informed and constructive perspective, with emphasis on the *politicization* of proliferation, energy security, and the environment.

Alexander DeVolpi has been an arms-control physicist, active in nuclear-arms policy and treaty-verification technology studies, for more than 25 years. Now retired after 40 years at Argonne National Laboratory, he has coauthored from first-hand experience a recent comprehensive 2-volume collaborative book about nuclear weapons and fissile materials during and since the Cold War: *Nuclear Shadowboxing: Contemporary Threats From Cold War Weaponry*. On the subject of nuclear-weapons nonproliferation, DeVolpi is author or coauthor of many articles, two other books (*Proliferation, Plutonium, and Policy*, as well as *Born Secret: The H-bomb, The Progressive Case, and National Security*).

Dr. DeVolpi has initiated numerous projects on the methodology and technology of treaty verification, including a technique for relatively unintrusive counting of nuclear-warhead multiplicity, described in a 1970 paper. Other proposals and research projects have pertained to nuclear-warhead detection and inspection on Earth and in space, fissile-material conversion, nuclear-facility monitoring, aerosol applications, weapons dismantlement, tagging and sealing, chemical-weapons verification, laser-brightness monitoring, cargo and luggage inspection, contraband-drug detection, and cooperative treaty-verification measures. He has given papers on these subjects at many national and international conferences.

DeVolpi has considerable hands-on experience in neutron physics and nuclear diagnostics, having served as principal investigator in a variety of experimental research projects. He was manager of nuclear diagnostics in the Reactor Analysis and Safety Division at Argonne, and then became technical manager of the arms-control and nonproliferation program. He holds a half-dozen patents, one of which is for the neutron/gamma hodoscope, a unique instrument system used in the United States and France to image the motion of fissile material which was being tested under simulated accident conditions in special transient reactors. He contributed to various technical arms-control projects at Argonne during the Cold War, becoming Principal Investigator for tamper-resistant tags and seals and for assessment of foreign verification technology.

Alex DeVolpi

Argonne National Laboratory (ret'd)

7:30 PM

Tuesday, June 12, 2007

Bennett / Mackenzie Room, J.L. Gray Centre
(Entry via rear security entrance)

Refreshments will be served – ALL ARE WELCOME

Further information: Blair Bromley at 584-8811 Ext. 3676, or 613-584-1518