

## NUCLEAR SECURITY – PHYSICAL PROTECTION OF NUCLEAR MATERIALS

Denying access to nuclear material is key to the prevention of nuclear terrorism. Canada's focus has been on perimeter security at some of the most vulnerable facilities in Russia. Canada has been very active in the physical protection of nuclear materials and facilities (fences, barriers and access control systems). In October 2005, Canada signed its first implementing agreement for cooperation on physical protection with the Petersburg Nuclear Physics Institute (PNPI), part of the Russian Academy of Sciences. It also concluded negotiations with the Institute of Theoretical and Experimental Physics (ITEP), which is overseen by Russia's Federal Agency for Atomic Energy (Rosatom), the main custodian of Russia's nuclear materials. This project has provided a model for expanded Canada-Russia cooperation at other Rosatom sites. It has allowed DFAIT and Rosatom to establish procedures for governing cooperation at these highly sensitive facilities, and for Canada to move ahead on three new projects, including sites within Rosatom's weapons complex. In November 2005, DFAIT engaged Raytheon Canada Limited through a competitive procurement process to provide technical expertise in support of these projects. As well, a Canada-Russia working group has been established to coordinate cooperation on nuclear security projects.

## RADIOLOGICAL SECURITY – SECURING HIGHLY RADIOACTIVE SOURCES

Russia has an estimated 700 radioisotope thermoelectric generators (RTGs), which are used to power navigational devices such as lighthouses in remote areas. These RTGs contain highly radioactive material, which could be used in a dirty bomb. Many are inadequately protected and vulnerable to theft. Russia is working with its Global Partnership members to address this threat and secure these sources as quickly as possible. Canada is now working bilaterally and with the IAEA on projects to remove some of the bottlenecks hindering work in this field. In January 2006, Canada completed an implementing agreement with Russia's Kurchatov Institute to fund a Master Plan, which will serve as a central guiding document for Russia and its international partners and ensure efficient coordination of efforts and allocation of funding. As well, Canada is finalizing an agreement to improve the infrastructure needed to ensure the safe and secure transportation of the RTGs. Canada is considering cooperating with other donors on additional projects aimed at removing and securing these vulnerable sources.



Upgrading physical protection measures is a key component of Canada's efforts to improve security of Russian nuclear materials. Photo Credit: Canadian Nuclear Safety Commission



Solar cell panels provide a sustainable alternative power source for lighthouses formerly powered by highly radioactive material. Photo Credit: County Governor of Finnmark (Norway)

"Our biggest challenge, and our biggest failing, is on nuclear proliferation and disarmament... Weapons of mass destruction pose a danger to us all, particularly in a world threatened by terrorists with global ambitions and no inhibitions."

— Kofi Annan, Secretary General, United Nations: Address to the 2005 World Summit (New York, September 14, 2005)