

Canadian NRU Extended; Medical Isotope Partnership Announced

The government of Canada, through cooperative private/public initiatives, is continuing to address the challenges of medical radioisotope supply that began with worldwide shortages after reactor shutdowns over the last decade. On February 6 Canadian officials announced a decision to support the extension of operations at the National Research University (NRU) reactor in Chalk River, Ontario, from a previously scheduled decommission date of October 31, 2016, to March 31, 2018. The NRU, which produced its first medical isotopes in 1957, is operated by Canadian Nuclear Laboratories Ltd. (CNL), a subsidiary of Atomic Energy of Canada Limited (AECL). The announcement was made by Greg Rickford, Canada's Minister of Natural Resources, who noted that the extension is designed to help support global medical isotope demand between 2016 and 2018 and to remedy any shortages during that period. An application to extend the operating license of the NRU will be subject to approval by the Canadian Nuclear Safety Commission, Canada's independent nuclear regulator.

In 2010, the government of Canada announced its decision to stop routine production of ^{99}Mo from the NRU in 2016. Phasing out production over 6 years was intended to allow producers around the world to adjust production schedules and facilities. A press release from Rickford's office noted that "The global market has been diversifying, and it is now projected that under normal conditions global supply will remain sufficient to meet demand." Canada has invested more than \$60 million in scientific research and development of alternative sources of isotope supplies, with a goal of creating a commercially viable alternative to reactor-based isotopes beyond 2016. Recent announcements by TRIUMF (Vancouver, BC), Prairie Isotope Production Enterprise (Winnipeg, Manitoba), the University of Alberta (Edmonton), and the Centre Hospitalier Universitaire de Sherbrooke (Québec) have demonstrated

progress toward commercialization of these alternative approaches.

CNL confirmed its intention to continue to advance world-class nuclear science and technology, providing valuable expertise to government and industry. The restructuring of AECL's nuclear laboratories announced in 2009 is among a number of important initiatives to establish a solid foundation for the future of Canada's nuclear industry. Recent initiatives include a more than \$325 million commitment over 5 years to modernizing facilities at the Chalk River Laboratories, updating nuclear liability legislation, and continuing to explore partnerships enhancing nuclear innovation.

One such cooperative venture was announced on February 20. Canada's Nordion and its U.S. parent company Sterigenics International (Deerfield, IL) signed partnership agreements with General Atomics (San Diego, CA) and the University of Missouri Research Reactor Center (Columbia, MO) to ensure availability of ^{99}Mo into the future. Nordion's current supply of ^{99}Mo is from the NRU in Chalk River. The new supply will be produced using General Atomics' selective gaseous extraction technology. The targets will incorporate low-enriched uranium, in line with Nordion's previous commitment to the U.S. National Nuclear Security Administration's Global Threat Reduction Initiative. "Today's announcement highlights the latest achievement in the production of medical isotopes, supporting global cooperation and ensuring security of supply," said Rickford. "We're pleased to be working with Nordion and others as part of our global cooperation to advance development and production of medical isotopes." Project planning and preliminary work are underway, and Nordion and its partners expect routine supply to begin in 2017.

*Government of Canada
Sterigenics International LLC*