Nuclear Proliferation Prevention Project

University of Texas at Austin
www.NPPP.org

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Shipment to Canada of Bomb-Grade Uranium Is Final One, Says U.S. Expert

AUSTIN – After decades of shipping bomb-grade, highly enriched uranium to Canada for the production of medical isotopes, the United States has approved the final such export, according to a leading expert, Prof. Alan J. Kuperman, coordinator of the Nuclear Proliferation Prevention Project at the University of Texas at Austin.

The U.S. Nuclear Regulatory Commission last week approved an export license [attached] to Canada for 8.1 kilograms of 93.35 percent enriched uranium. The uranium is intended to be fabricated into "targets," then irradiated in a nuclear reactor in Chalk River, Ontario – known as the National Research Universal (NRU) – to produce radioisotopes for medical diagnostic tests. Under the license, the shipment must occur by the end of this year.

Kuperman, who has tracked such U.S. exports to Canada for two decades, says that based on past usage, this batch of bomb-grade uranium should be sufficient for isotope production through the end of 2016, and is the last one Washington will approve.

Canada announced in 2010 that the NRU would halt production of medical isotopes by the end of 2016. Earlier this year, it reiterated that decision, adding that the reactor would be licensed to operate until March 2018 but only as a backup in case of an unexpected worldwide shortage of medical isotopes that necessitated temporary resumption of production. In the future, Canada plans to produce such medical isotopes without a reactor, at a cyclotron in British Columbia, or to import them.

Canada's usage of bomb-grade uranium, posing nuclear security risks, is increasingly controversial as other worldwide producers of medical isotopes opt for alternative production methods avoiding risks of nuclear proliferation and nuclear terrorism. Three countries – Australia, Argentina, and South Africa – already use safer, low-enriched uranium to produce medical isotopes. Belgium is slated to do likewise by 2016, and the Netherlands a year later. Even Russia has committed to make the switch.

That leaves Canada as the only country that has refused to phase out bomb-grade uranium in its reactor-based production of medical isotopes, despite a 1990 Canadian pledge to do so by 2000. Kuperman says this failure has been a longstanding source of embarrassment for Canada in the international arena, and an irritant in U.S.-Canada relations.

"Canada, which prides itself on being a nonproliferation leader, has to the contrary been the main violator of the international norm to phase out bomb-grade uranium in the production of medical isotopes using nuclear reactors," Kuperman says. Washington has grudgingly continued to export highly enriched uranium to Canada, he explains, because the United States depended on its northern neighbor for medical isotopes. Now, however, several U.S. companies are building plants to produce such isotopes without highly enriched uranium.

"The game is over for Canada's unnecessary and irresponsible use of bomb-grade uranium to produce medical isotopes," says Kuperman, adding: "Better late than never."

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EXPORT LICENSE

NRC FORM 250
(10-07)

UNITED STATES OF AMERICA

Nuclear Regulatory Commission
Washington, D.C. 20555

NRC LICENSE NO.: XSNM3761

NRC DOCKET NO.: 11006193

LICENSE EXPIRES December 31, 2015

Pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974 and the regulations of the Nuclear Regulatory Commission issued pursuant thereto, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued to the licensee authorizing the export of the materials and/or production or utilization facilities listed below, subject to the terms and conditions herein.

LICENSEE	ULTIMATE CONSIGNEE(S) IN FOREIGN COUNTRY(IES)
U.S. Department of Energy (DOE) National Nuclear Security Administration Y-12 National Security Complex 301 Bear Creek Road Oak Ridge, TN 37831 Attn: Becky G. Eddy	Canadian Nuclear Laboratories Chalk River Laboratories 286 Plant Road Chalk River, Ontario K0J 1J0 Canada (Target Irradiation/Mo-99 Production)
INTERMEDIATE CONSIGNEE(S) IN FOREIGN COUNTRY(IES)	**OTHER U.S. PARTY(IES) TO EXPORT**
Canadian Nuclear Laboratories Chalk River Laboratories 286 Plant Road Chalk River, Ontario K0J 1J0 Canada (Target Fabrication)	See Page 3 (Supplier/Transporter; DOE/NNSA Contractor)
APPLICANT'S REFERENCE NO.: CNL-EU15	ULTIMATE DESTINATION: Canada

QUANTITY	DESCRIPTION OF MATERIALS OR FACILITIES
7.56 Kilograms	Uranium-235 Contained in 8.1 kilograms uranium, enriched to 93.35 WGT % maximum, in the form of broken uranium metal. Conditions 4, 6, and 7 on Page 2 of this license apply to this export.

Neither this license nor any right under this license shall be assigned or otherwise transferred in violation of the provisions of the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974.

This license is subject to the right of recapture or control by Section 108 of the Atomic Energy Act of 1954, as amended, and to all of the other provisions of said Acts, now or hereafter in effect and to all valid rules and regulations of the Nuclear Regulatory Commission.

THIS LICENSE IS INVALID UNLESS SIGNED BELOW BY AUTHORIZED NRC REPRESENTATIVE

SIGNATURE: 

NAME AND TITLE: David L. Skeen, Deputy Director
Office of International Programs

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