

May 6, 1999

FOR: The Commissioners

FROM: Janice Dunn Lee, Acting Director /s/  
Office of International Programs

SUBJECT: PROPOSED LICENSE TO EXPORT NATURAL URANIUM TO CANADA FOR TEST AND EVALUATION OF AVLIS FEED MATERIAL (APPLICATION NO. XSOU8762)

**PURPOSE:**

To request Commission approval of a license to Aerojet Ordnance Tennessee, Inc. (Aerojet), authorizing the export to Canada of natural uranium rods for testing and evaluation as feed material for the Atomic Vapor Laser Isotopic Separation (AVLIS) program. The application is being referred to the Commission in accordance with 10 CFR 110.40(b)(4) because the end use is related to uranium isotope separation.

**DISCUSSION:**

On March 2, 1999, Aerojet applied for a license (Attachment 1) to export to Cameco Corporation (Cameco) in Canada 113,398 kilograms of natural uranium, in the form of rods, for AVLIS feed material conversion research and development. Cameco, as a sub-contractor to U.S. Enrichment Corporation (USEC), is performing studies on the conversion of uranium tetrafluoride to uranium metal for use as AVLIS feed material. Aerojet has a contract to supply approximately 1,742 kilograms of uranium rods to Cameco and hopes to receive additional orders within the next five years (through the R&D phase). On this basis, Aerojet has applied for an NRC license which would authorize exports to Canada of as much as 113,398 kilograms of natural uranium rods over the next several years.

**CONTACT:**

B.L. Wright, OIP/NEMR  
415-2342

In response to NRC's request for views on the proposed export, the Executive Branch, in a letter dated April 16, 1999 (Attachment 2), recommends that the license be approved. The letter notes that the proposed export to Canada would take place pursuant to the U.S.-Canada Agreement for Peaceful Nuclear Cooperation, as confirmed in a letter dated April 15, 1999, from the Atomic Energy Control Board of Canada. The Executive Branch judges that the proposed export will not be inimical to the common defense and security of the United States, and is consistent with the provisions of the Atomic Energy Act of 1954, as amended by the Nuclear Non-Proliferation Act of 1978.

**International Safeguards**

Canada is a party to the Non-Proliferation Treaty and, as such, accepts IAEA safeguards on all source and special nuclear material in its peaceful nuclear activities.

The latest IAEA Annual Report shows that an IAEA Facility Attachment has been negotiated and is in force for Cameco.

The staff notes that the IAEA Safeguards Implementation Report for 1997 states that, with the exception of the DPRK situation, "...the Secretariat did not find any indication that nuclear material which had been declared and placed under safeguards had been diverted for any military purpose or for purposes unknown, or that safeguarded facilities, equipment or non-nuclear material were being misused. All the information available to the Agency supports the conclusion that the nuclear material and other items which had been declared and placed under Agency safeguards remained in peaceful nuclear activities or were otherwise adequately accounted for."

**Physical Protection**

With regard to physical protection, an evaluation was performed during a visit to Canada in September 1996. The conclusion of this review was that Canada's physical protection program was consistent with the then-current version of IAEA INFCIRC/225, i.e., Rev. 3. Staff has reviewed subsequent information received to date, none of which indicates any degradation of physical protection in this country. In addition, staff has determined, on the basis of currently available information, that physical protection in Canada is in conformance with the current version of INFCIRC/225/Rev. 4.

**Review of Other Information**

OIP has reviewed available State Department telegrams and other information and has identified no basis for concern about Canada's commitment to full-scope international safeguards or its fulfillment of obligations to the U.S. under the U.S.-Canada Agreement for Peaceful Nuclear Cooperation.

**CONCLUSION:**

The staff concurs with the Executive Branch judgment that the proposed export would not be inimical to the common defense and security of the United States and is consistent with the provisions of the Atomic Energy Act of 1954, as amended by the Nuclear Non-Proliferation Act of 1978. The Office of the Executive Director for Operations concurs. The Office of General Counsel has no legal objection.

**RECOMMENDATION:**

That the Commission authorize the issuance of the requested license to Aerojet Ordnance Tennessee, Inc.

Janice Dunn Lee, Acting Director  
Office of International Programs

---

**Attachments:**

1. 3/2/99 Aerojet Export License Application
2. 4/16/99 DOS Letter R.J.K. Stratford to J.D. Lee