

Feb 27, 1997

FOR: The Commissioners

FROM: Carlton R. Stoiber, Director /s/
Office of International Programs

SUBJECT: PROPOSED LICENSE TO EXPORT GRAPHITE AND DEPLETED URANIUM TO CANADA FOR AVLIS FEED CONVERSION PROCESS
DEVELOPMENT (XMAT0393)

PURPOSE:

To request Commission review of the proposed issuance of a license to the Department of Energy (DOE) for the export to Canada of nuclear grade graphite and depleted uranium in support of a joint program to develop an atomic vapor laser isotope separation (AVLIS) feed conversion process.

DISCUSSION:

On December 23, 1996, DOE applied for a license on behalf of Lawrence Livermore National Laboratory to export to Cameco Corporation in Canada one graphite vessel containing 41 kilograms of nuclear grade graphite and other associated materials, including approximately 70 kilograms of depleted uranium ([Attachment 1](#)). The U.S. Enrichment Corporation and Lawrence Livermore are working with Cameco in the development of a process for the conversion of uranium tetrafluoride to uranium metal for use in the production of feed material for the AVLIS process. Cameco will use the material for chemical and metallography analysis.

Although the amounts of graphite and depleted uranium proposed for export are small, the case is being referred to the Commission, as specified in [10 CFR 110.40\(b\)\(4\)](#), because the end use is related to isotope separation.

DOE administers U.S. controls on foreign transfers of U.S. nuclear technology under its regulations in 10 CFR Part 810. DOE believes that the data sharing arrangement with Cameco on conversion of uranium tetrafluoride to uranium metal, while associated with the AVLIS process, does not constitute engaging in uranium enrichment activities outside the United States and, therefore, does not require specific DOE authorization. DOE also does not consider the data itself to be sensitive nuclear technology. DOE's views were accepted by the other Executive Branch agencies.

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The Executive Branch, by letter of January 22, 1997 ([Attachment 2](#)), recommends issuance of the license, noting that, as a party to the Nuclear Non-Proliferation Treaty, Canada accepts International Atomic Energy Agency safeguards on all of its peaceful nuclear activities and pledges not to produce or otherwise acquire any nuclear explosive device. The Executive Branch concludes that this satisfies Criteria (1) and (2) for exports of nuclear components, substances and items under Section 109b of the Atomic Energy Act, as amended. The Executive Branch advises that the no retransfer without prior U.S. consent criterion has been met by receipt of generic assurance letters from Canadian authorities. Accordingly, the Executive Branch judges that the subject export will not be inimical to the U.S. common defense and security and is consistent with the provisions of the Atomic Energy Act of 1954, as amended by the Nuclear Non-Proliferation Act of 1978.

In regard to the depleted uranium, the Executive Branch notes that Section 64 of the Atomic Energy Act, as amended, allows such export of source material to be authorized by NRC based on a finding that it is not inimical to the interests of the U.S.

RECOMMENDATION:

The staff concludes that the proposed export would not be inimical to the U.S. common defense and security and meets the export licensing criteria of Section 109(b) of the Atomic Energy Act of 1954, as amended. Accordingly, the staff recommends that the Commission authorize the issuance of the requested license to DOE.

Carlton R. Stoiber, Director
Office of International Programs

Attachments: 1. Appl. dtd 12/23/96
2. DOS ltr dtd 1/22/97