POLICY ISSUE
(Notation Vote)

August 2, 2001 **SECY-01-0145**

FOR: The Commissioners

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

SUBJECT: PROPOSED LICENSE TO EXPORT HEAVY WATER TO JAPAN FOR NON-NUCLEAR END USE (XMAT0401)

PURPOSE:

To request Commission review of the proposed issuance of a license to Sigma-Aldrich Corporation involving the export of heavy water. The application is being referred to the Commission in accordance with 10 CFR 110.40(b)(3).

DISCUSSION:

On April 24, 2001, Sigma-Aldrich Corporation applied for a license (Attachment 1) to export 2,500 kilograms of heavy water, deuterium gas, and deuterium compounds to Japan over a three-year period for non-nuclear end use. The applicant plans to sell the various deuterium compounds to Sigma-Aldrich Japan and Nippon Sanso Corporation in Japan for further distribution into the Japanese medical, pharmaceutical, chemical, and industrial markets. Typically, the Sigma-Aldrich customers in Japan use these materials in relatively small quantities (i.e., less than 1 kg) for scientific research which may include identification of chemicals in reaction pathways, metabolic studies, or environmental analysis.

The applicant also noted that most of the products are sold to Japan in prepackaged units; however, some heavy water is sold to Nippon Sanso in bulk form for further labeling of compounds for distribution throughout Japan.

In response to NRC's request for views on the proposed export, the Executive Branch, in a letter dated July 9, 2001 (Attachment 2), recommends that the license be issued to Sigma-Aldrich. It is the Executive Branch judgment 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.

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The Executive Branch letter notes that, as a party to the NPT, Japan has committed itself to maintain IAEA safeguards on all its peaceful nuclear activities and has pledged not to produce or otherwise acquire any nuclear explosive device, therefore satisfying criteria (1) and (2) of section 109b of the Atomic Energy Act, as amended, for exports of nuclear components, substances and items. The remaining criterion, agreement not to retransfer any of the U.S.-supplied heavy water or deuterium gas without prior U.S. consent, has been satisfied by the receipt of generic assurance letters dated October 5, 1978, and February 28, 1979, from the Embassy of Japan, the subject of previous correspondence on exports of nuclear moderator material to Japan.

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 also meets the three specific export licensing criteria of Section 109b of the Atomic Energy Act of 1954, as amended. There are no applicable international safeguards or foreign physical protection requirements for the proposed export.

RECOMMENDATION:

That the Commission authorize the issuance of the requested license to Sigma-Aldrich Corporation.

/RA/

Janice Dunn Lee, Director
Office of International Programs

Attachments:
1. 4/24/01 Sigma-Aldrich Corp. Export License Application
2. 7/09/01 DOS Letter R.J.K. Stratford to JDLee

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