

DEPARTMENT OF STATE

Washington, D.C. 20520

BUREAU OF OCEANS AND INTERNATIONAL
ENVIRONMENTAL AND SCIENTIFIC AFFAIRS

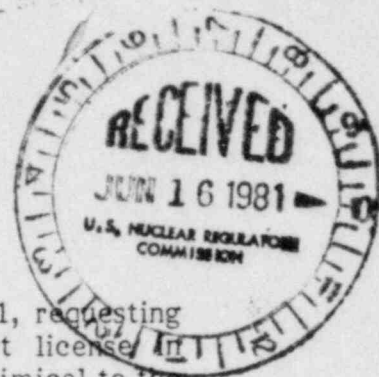
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XMAT0176

11002445

12 JUN 1981

Mr. James R. Shea
Director of International Programs
United States Nuclear Regulatory Commission
Bethesda, Maryland



Dear Mr. Shea:

I refer to the letter from your office dated April 21, 1981, requesting Executive Branch views as to whether issuance of an export license in accordance with the application hereinafter described would be inimical to the common defense and security of the United States and whether the proposed export meets the applicable criteria in the Atomic Energy Act as amended by the Nuclear Non-Proliferation Act of 1978:

NRC No. XMAT0176 — Application by Sigma Chemical Company for authorization to export to 22 countries (listed in the application) compounds containing the equivalent of 5,000 kilograms of heavy water (D₂O) over a five-year period for basic nuclear magnetic resonance research. Individual shipments would not exceed the equivalent of 100 kilograms of contained liquid D₂O and no more than the equivalent of 500 kilograms of liquid D₂O would be shipped per year to any one country.

It is the judgment of the Executive Branch that the export contemplated will not be inimical to the common defense and security of the United States, and that this export is consistent with the provisions of the Atomic Energy Act of 1954, as amended by the Nuclear Non-Proliferation Act of 1978, provided that the 200 kilogram annual limit for exports of deuterium atoms (equivalent to 1,000 kilograms of liquid D₂O) to any one country established under the Zangger Committee Trigger List and the Nuclear Suppliers Guidelines is not exceeded, and provided that exports of over 10 kilograms contained D₂O are limited to countries which have provided generic assurances to meet the requirements of Section 109 b. with respect to retransiers. These are: Belgium, Denmark, France, Ireland, Italy, Luxembourg, Netherlands, United Kingdom and West Germany which are covered by the EURATOM assurance dated January 25, 1979; and Canada, Sweden and Switzerland which have provided similar assurances.

It is the view of the Executive Branch that exports of individual shipments of up to 10 kilograms contained D₂O and up to a total of 250 kilograms of D₂O per year to any one country may be authorized under the proposed license for the remaining countries listed in the application. These are: Austria, Australia, Finland, Mexico, New Zealand, Norway, Singapore, USSR and Venezuela. Such amounts of D₂O are exempted under INFCIRC/209

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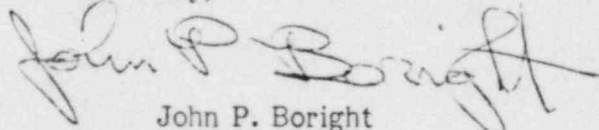
Mr. Shea, Mr. Service, 640

from safeguards application obligations and are not significant from the standpoint of production of fissionable materials for nuclear explosive use. Retransfers of such quantities of heavy water are covered by the Department of Energy's general authorization which constitutes prior approval. Therefore, it is the judgment of the Executive Branch that the requirements of Section 109 b. are met for the purposes of this export subject to the proviso set forth above.

The Executive Branch recommends that the license be amended by the NRC to allow exports of D₂O up to the higher levels (i.e. 100 kilograms D₂O per shipment and up to 500 kilograms per year to any one country) for any of the latter countries, except the USSR, upon notification by the Executive Branch that the appropriate assurances have been received to meet the retransfer requirement of Section 109 b.

On the basis of the foregoing, the Executive Branch recommends that the license be issued in accordance with the provisos set forth above.

Sincerely,

A handwritten signature in cursive script, appearing to read "John P. Boright".

John P. Boright
Acting Deputy Assistant Secretary