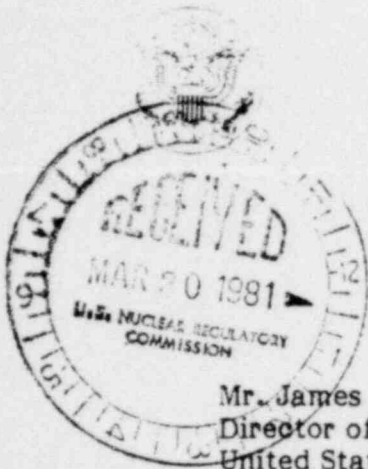


DEPARTMENT OF STATE

Washington, D. C. 20520

BUREAU OF OCEANS AND INTERNATIONAL
ENVIRONMENTAL AND SCIENTIFIC AFFAIRS



MAR 20 1981

Mr. James R. Shea
Director of International Programs
United States Nuclear Regulatory Commission
Room 6714 - MNBB
Bethesda, Maryland

*XSNM01679
HEU for R-2
Studsvik*

Dear Mr. Shea:

This letter is in response to the letter from your office dated May 6, 1980, 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 of the Atomic Energy Act of 1954, as amended by the Nuclear Non-Proliferation Act of 1978:

NRC No. XSNM01679 — Application by Transnuclear, Inc. for authorization to export to Sweden, via the Federal Republic of Germany and France, 32.737 kilograms U-235 in 35.088 kilograms uranium enriched to 93.3 percent. The enriched uranium in the form of uranium hexafluoride will be shipped to NUKEM for conversion and then fabricated into fuel elements by NUKEM and CERCA for use in the R-2 Studsvik Research Reactor.

The proposed export to the intermediate consignees in the FRG and France for conversion and fabrication would take place pursuant to the Additional Agreement for Cooperation Between the United States and the European Atomic Energy Community (EURATOM) as confirmed in a letter from the Delegation of the Commission of the European Communities, a copy of which is enclosed. EURATOM has adhered to the provisions of its Agreement for Cooperation with the United States.

The proposed export to the ultimate consignee for loading into the R-2 Studsvik Research Reactor would take place pursuant to the Agreement for Cooperation Between the United States and Sweden as confirmed in a letter from the Embassy of Sweden, a copy of which is enclosed. Sweden has adhered to the provisions of its Agreement for Cooperation with the United States.

The Executive Branch has reviewed the application and concluded that the requirements of the Atomic Energy Act, as amended by the Nuclear Non-Proliferation Act of 1978, have been met and that the proposed export will not be inimical to the common defense and security of the United States. A detailed analysis for Sweden was submitted January 18, 1980 for NRC application No. XSNM1494. There has been no material change in circumstances since that submission. A detailed analysis for EURATOM was submitted December 8, 1978 for NRC application Nos. XSNM01212, -1232, -1238 and -1241. In view of Executive Order 12295, extending the duration of

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the period specified in the first proviso to Section 126a(2) of the Atomic Energy Act of 1954, as amended, to March 10, 1982, that detailed analysis remains valid. There has been no other material change in circumstances since that submission.

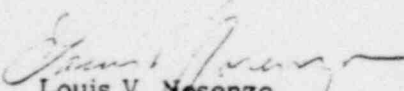
The R-2 reactor is a 50 MW research and test facility operated by the Studsvik Energiteknik AB for use in materials testing, general research and fuel development and testing for power reactors. The annual fuel requirement is approximately 32.7 kilograms U-235. Inventory of unirradiated fuel on hand totalled 72.19 kilograms U-235 as of late 1980, including fabricated fuel on site and fuel in process of fabrication, which is enough to supply the reactor until mid-1982. The additional 32.7 kilograms U-235, requested in this application, would be sufficient to permit operation until mid-1983.

The Argonne National Laboratory (ANL) completed a technical and economic evaluation of the reactor in 1978 and concluded that it is a candidate for use of 45 percent enriched fuel when such fuel is demonstrated and available on a commercial basis. The R-2 operators, however, would prefer, if possible, to convert directly to use of 20 percent enriched fuel and avoid the expense of the intermediate step of conversion to use of the 45 percent fuel. ANL and the R-2 staff have been working on a joint study to develop a prototype LEU fuel element for the R-2. Test irradiation of the prototype LEU fuel elements is tentatively set for May 1982. Actual conversion of the R-2 to use of LEU may be possible by mid-1984.

Average approximate time required for enrichment, shipment, conversion and fabrication is 18 to 24 months and, therefore, both the R-2 operators and the fuel fabricators at NUKEM and CERCA are anxious that the requested license be issued as soon as possible.

On the basis of the foregoing, the Executive Branch recommends that the NRC review this request on an expedited basis to permit early issuance of the license.

Sincerely,


Louis V. Nosenzo
Deputy Assistant Secretary

Enclosure:
As stated

DELEGATION OF THE COMMISSION OF THE EUROPEAN COMMUNITIES

EURATOM SUPPLY AGENCY

August 25, 1980

Mr. Vance H. Hudgins
Director, Division of Politico-
Military Security Affairs
Office of International Security Affairs
U. S. Department of Energy
Washington, D. C. 20585

Subject: Transnuclear, Inc. application NUK-326 80/104/01
dated April 30, 1980, for Studsvik, Sweden
XSNM-01679

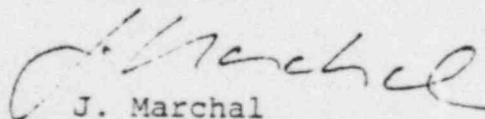
Dear Mr. Hudgins:

We certify that the material mentioned in this application, namely 35.088 kg of U, enriched to 93.3% in U-235, and the transfer of this material will be subject to all terms and conditions of the Additional Agreement for Cooperation, dated July 25, 1960, as amended.

* Further we certify that NUKEM GmbH, Hanau, West Germany ~~is~~ authorized by EURATOM to receive and possess this material (as delineated by the above referenced application) pursuant to the aforementioned Agreement for Cooperation.

This material will be used for the manufacture of fuel elements for the R-2 reactor, Studsvik, Sweden.

Sincerely,



J. Marchal
Secretary, Nuclear Supply

cc: Mr. Robin De LaBarre, State Department
Ms. Betty Wright, Nuclear Regulatory Commission
Mrs. Vicki Matson, Transnuclear, Inc.

* and CEA, Roman-sur-Isère, France

SWEDISH EMBASSY

Washington, D.C., July 31, 1980

Mr. Vance H. Hudgins
International Security Affairs
Department of Energy
Washington, D.C. 20545


Re: application XSNM 1679

Dear Mr. Hudgins:

I wish to refer to your letter of May 14, 1980 regarding an application from Transnuclear, Inc., Falls Church, Virginia, for a license to export 35 088 kgs U containing 32 737 kgs U-235 to Studsvik Energiteknik AB, Nyköping, Sweden. The material will be used in Studsvik R-2.

I am now able to inform you that the above mentioned material will be subject to all terms and conditions of the US-Swedish agreement of cooperation regarding civil uses of atomic energy. Studsvik Energiteknik AB is authorized to receive and possess the material.

Sincerely yours,


Olof Allgårdh
Economic Counselor

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