



United States Department of State

Washington, D.C. 20520

BUREAU OF OCEANS AND INTERNATIONAL
ENVIRONMENTAL AND SCIENTIFIC AFFAIRS

May 10, 1985

XSNM 01905

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

Dear Mr. Shea:

This letter is in response to the letter from your office dated December 30, 1981, requesting Executive Branch views as to whether issuance of the export license in accordance with the application hereinafter described meets the applicable criteria of the Atomic Energy Act of 1954, as amended by the Nuclear Non-Proliferation Act of 1978:

NRC No. XSNM01905 — Application by Transnuclear, Inc. for authorization to export to the Federal Republic of Germany 10.916 kilograms of U-235 in 11.7 kilograms of uranium enriched to 93.3 percent. The enriched uranium in the form of UF₆ will be shipped to NUKEM (FRG) and CERCA (France) for conversion and fabrication into fuel elements for the KFA FRJ-2 (DIDO) research reactor.

The proposed export 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 Executive Branch has reviewed this 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 EURATOM was submitted December 8, 1978 for NRC applications XSNM01212, -1232 and -1241. In view of Executive Order 12506 extending the duration of the period specified in the first proviso to Section 126a(2) of the Atomic Energy Act of 1954, as amended, to March 10, 1986, that detailed analysis remains valid. There has been no other material change in circumstances since that submission.

The FRJ-2 is a DIDO-type D₂O moderated and cooled 23 MW research and test reactor. The reactor is used for neutron beam experiments in solid state and nuclear physics, radioisotope production, and for testing power reactor fuels and structural materials. The duty factor is 70% and the average burnup about 43%. The annual fuel requirement is about 18.7 kg U-235.

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PDR XPORT
XSNM-1905 PDR

* Argonne Analysis
received 5/15/85

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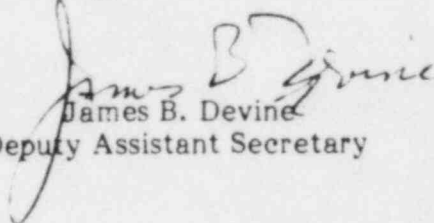
BDR

The inventory as of November 19, 1984 was 36.1 kg U-235. Estimated annual fabrication loss is 2%. Therefore, the inventory is sufficient to fuel the reactors 1.9 years or until about November 1986. The current request for 10.9 kg U-235 (in 11.7 kg HEU) is sufficient for about 7 months of operation, or until June 1987. Average lead time for enrichment, shipment, conversion, and fabrication for these elements is from 18 months to two years.

The Argonne National Laboratory (ANL), in its technical and economic analysis of the reactors, dated February 15, 1985, noted that KFA plans to convert the FRJ-2 to LEU U_3Si_2 fuel using a roll-swaged fuel design beginning in November 1987. As part of the German RERTR program, KFA is actively participating in the irradiation testing of MEU and LEU fuel elements. A five-step conversion schedule has been worked out by KFA with FRG licensing authorities, starting with test irradiation of prototype elements followed by gradual conversion of the present core to the new LEU elements. This process is scheduled to be completed by June 1988. Thus, it is likely that KFA will need one more HEU export to cover reactor operation until conversion.

On the basis of the foregoing, the Executive Branch recommends that the license be issued.

Sincerely,


James B. Devine
Deputy Assistant Secretary

Enclosure:

Assurance letter

JSN 174905

DELEGATION OF THE COMMISSION OF THE EUROPEAN COMMUNITIES

EURATOM SUPPLY AGENCY

Washington, January 27, 1982
JM/ck.

Mr. J.A. GRIFFIN
Director, Division of Politico-
Military Security Affairs
Office of International Security Affairs
Department of Energy

Forrestal Building Mail Stop 5F-066
1000 Independence Ave., S.W.
WASHINGTON D.C. 20585

Subject: Transnuclear, Inc. - No.81-283/01 (NUK392) of
December 28, 1981, for export of HEU to Germany

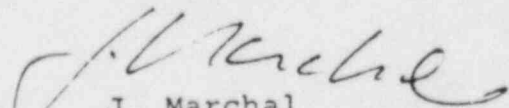
Dear Mr. Griffin,

We certify that the material mentioned in this application, namely 10.916 kg of U_{235} contained in 11.7 kg of total uranium 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 Transnuclear GmbH., Hanau, West Germany and NUKEM GmbH. as intermediate consignees and Kernforschungsanlage Juelich GmbH. as ultimate consignee are authorized by Euratom to receive and possess this material pursuant to the aforementioned Agreement for Cooperation.

The above material will be used in the fuel ing. of the reactor FRJ-2 (DIDO) at KFA, West Germany.

Sincerely,


J. Marchal
Secretary - Nuclear Supply

cc.: Mr. Robin De LaBarre ✓
Department of State
Ms. Betty Wright, Nuclear Regul.Comm. - Barbara Hannette