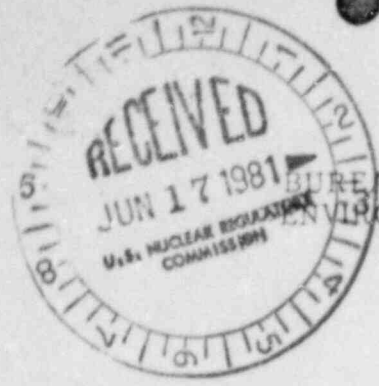


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DEPARTMENT OF STATE

Washington, D.C. 20520

BUREAU OF OCEANS AND INTERNATIONAL ENVIRONMENTAL AND SCIENTIFIC AFFAIRS

12 JUN 1981

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

XSNM 01808
HEU for FRJ-1 (Merlin)
+ FRJ-2 (Dido)
West Germany

Dear Mr. Shea:

This letter is in response to the letter from your office dated April 24, 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 of the Atomic Energy Act of 1954, as amended by the Nuclear Non-Proliferation Act of 1978:

NRC No. XSNM01808 — Application by Transnuclear, Inc. for authorization to export to the Federal Republic of Germany 29.202 kilograms of U-235 contained in 31.3 kilograms of uranium in the form of uranium metal enriched to a maximum of 93.3 percent and 29.374 kilograms of U-235 contained in 64.7 kilograms of uranium enriched to 45.4 percent. The amounts per reactor are: 18.66 kilograms U-235 in 20 kilograms uranium (93.3 percent) FRJ-2; 18.75 kilograms U-235 in 41.3 kilograms (45.4 percent) FRJ-2; 10.543 kilograms U-235 in 11.3 kilograms uranium (93.3 percent) FRJ-1; 10.624 kilograms U-235 in 23.4 kilograms uranium (45.4 percent) FRJ-1. This enriched uranium is to be converted and used in the fabrication of fuel elements by NUKEM, Hanau, FRG, for the FRJ-1 (Merlin) and FRJ-2 (Dido) Research Reactors.

The proposed export to the FRG 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 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 EURATOM was submitted December 8, 1978 for NRC application No. XSNM01241. In view of Executive Order 12295, 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, 1982, that detailed

According to information supplied by the operator of the FRJ-1 and FRJ-2 reactors, Kernforschungsanlage Julich, GmbH, a total of approximately 35 kilograms U-235 is currently on hand for the FRJ-1 (including material to be exported under license request XSNM01661), enough to permit operation until mid-1984, and approximately 50 kilograms for the FRJ-2 (including material to be exported under license XSNM01429), enough for operation until early 1984.

Included in this request is an additional 29.3 kilograms of U-235 contained in 64.7 kilograms of 45.4 percent enriched uranium for the production of test fuel elements in support of research into possible conversion of the FRJ-1 and 2 to use of lower enriched fuels conducted under the aegis of the German advanced fuels program. This would add 10.543 kilograms of U-235 for use in the FRJ-1, slightly over a one-year supply; and 18.75 kilograms of U-235 for use in the FRJ-2, slightly less than a one-year supply. An intermediate conversion step to use of 45 percent enriched fuel is currently envisaged. Standard specifications for 45 percent enriched fuel elements will not be available until 1983 when irradiation tests and evaluation are expected to be completed. Licensing the use of the new elements is expected to take at least another ten to twelve months, at a minimum. Testing of 45 percent enriched fuel in the FRJ-1 and 2 will begin this year, however, and conversion to use of such fuel is anticipated in mid-1984. Therefore, the operators conclude that highly-enriched uranium will be needed for the FRJ-1 and 2 until 1984.

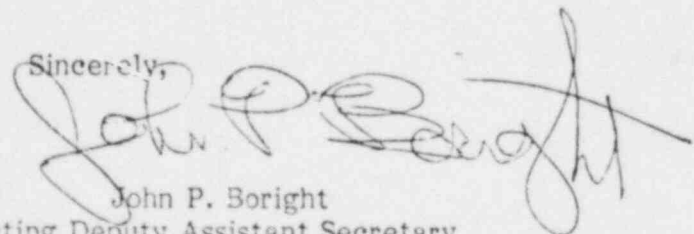
The annual U-235 requirement for the current operation level of the FRJ-1 is approximately 8.6 kilograms. The total amount of high- and medium-enriched uranium proposed for export under this request will allow normal operation for about 2½ years, or from mid-1984 to late 1986 when conversion to lower enriched fuel (i.e., 19.9 percent) may be possible.

The annual U-235 requirement for the current operation level of the FRJ-2 is approximately 20 kilograms. The total amount of high- and medium-enriched uranium proposed for export under this request will allow normal operation for about 1.9 years, or from early 1984 to late 1985 when conversion to lower enriched fuel (i.e., 19.9 percent) may be possible.

In view of the estimated lead time of 2 years required for enrichment, shipment, conversion and fabrication of fuel for both reactors, the current request appears reasonable.

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

Sincerely,



John P. Boright
Acting Deputy Assistant Secretary

Enclosure:
Assurance letter

DELEGATION OF THE COMMISSION OF THE EUROPEAN COMMUNITIES

Mr. J.A. Griffin
Director
Division of Politico-Military Security Affairs
Office of International Security Affairs
US DOE
Washington, D.C. 20585

11 May, 1981.

Dear Mr. Griffin:


Subject: Transnuclear, Inc. Application
368 81/28/01, dated April 13th
for West Germany. XSNM 1808

We certify that the material mentioned in this application, namely 29.203 kg of U235 contained in 31.3 kg of U and 29.374 kg of U235 contained in 64.7 kg of U and the transfer of this material will be subject to all terms and conditions of the Additional Agreement for Cooperation, dated July 25th, 1960, as amended.

Further, we certify that Transnuklear GmbH, Hanau, West Germany and NUKEM GmbH, Hanau, West Germany, as intermediate consignees and KfA Kernforschungsanlage Julich GmbH, as ultimate consignee are authorized by EURATOM to receive and process this material pursuant to the aforementioned Agreement for Cooperation.

The material, in the form of UF6 will be manufactured by NUKEM into fuel elements for use in the FRJ-1 and FRJ-2.

Yours sincerely,


Joseph Marchal
Secretary
Nuclear Supplies

CC: Mr. Robin De LaBarre, US DOS
Ms. Betty Wright, US NRC
Ms. Vicki Matson, Transnuclear, Inc.