DEPARTMENT OF STATE

Washington, D.C. 20520

BUREAU OF OCEANS AND INTERNATIONAL
ENVIRONMENTAL AND SCIENTIFIC AFFAIRS

NOV 05 1980

MEMORANDUM FOR JAMES R. SHEA
NUCLEAR REGULATORY COMMISSION

Enclosed is an Executive Branch analysis covering two license applications for export of highly enriched uranium to the Federal Republic of Germany, a member of the European Atomic Energy Community (EURATOM). In accordance with the requirements of Section 126 a. (2) of the Atomic Energy Act, as amended, the Executive Branch has determined that there is no material changed circumstance with respect to the specific criteria in Sections 127 and 128 associated with these new applications from those existing at the time of the applications cited below.

A detailed analysis for the European Community was submitted December 8, 1978 for NRC applications Nos. XSNM01212, 1232, 1238 and 1241. In view of Executive Order 12193, extending the duration of the period specified in the first proviso to Section 126 a. (2) of the Atomic Energy Act of 1954, as amended, to March 10, 1981, that detailed analysis remains valid.

The Executive Branch, on the basis of its review of these cases, has concluded that the requirements of the Atomic Energy Act and P.L. 95-242 have been met and that the proposed exports would not be inimical to the common defense and security of the United States. Moreover, the members of EURATOM have adhered to the provisions of the Additional Agreement for Cooperation, as amended. Therefore, the Executive Branch recommends issuance of the requested export licenses.

Louis V. Nosenzo
Deputy Assistant Secretary

Enclosures:
As stated

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EXPORT LICENSE APPLICATION

XSNM01425

Country:	Federal Republic of Germany
Transaction:	The export of 32.72 kilograms of U-235 contained in 35.07 kilograms of uranium enriched to 93.3 percent in the form of uranium hexafluoride for manufacture of fuel elements for the FRG-1 and FRG-2 Research Reactors
Applicant:	Delegation of the Commission of the European Communities
Date of Application:	November 24, 1978

Purpose of Export

The export of the 35.07 kilograms of 93.3 percent enriched uranium will permit operation of the FRG 1 and 2 Research Reactors until late 1983.

The FRG-1 (5 MW) and FRG-2 (15 MW) reactors are both used for isotope production, neutron beam experimental research in nuclear and solid state physics and for research related to the FRG power reactor and nuclear safety program, such as irradiation of pressure vessel steels.

Both reactors are operated within the same building at Geesthacht-Tesperhude, FRG, by Gesellschaft Fur Kernenergieverwertung in Schiffbau and Shiffahrt (GKSS).

Special Non-Proliferation and Other Foreign Policy Considerations

The proposed export was approved by the President after review by the NSC Ad Hoc Group determined that the request was within the scope of the President's HEU export policy, would not be inimical to U.S. common defense and security and met the requirements of the Atomic Energy Act, as amended by the Nuclear Non-Proliferation Act of 1978.

Argonne National Laboratory (ANL) has identified the FRG-1 and -2 as candidates for reduced enrichment (45%) fuel, when such fuel is demonstrated and available. The FRG began an enrichment reduction program in 1979. Ten prototype fuel elements of 45% enrichment are scheduled for fabrication by the end of 1980. Testing of these elements in the FRG-2 is expected to be completed by late 1982, with a final decision on conversion expected by late 1983. FRG licensing procedures to permit use of the 45% fuel could, however, take an additional 2-1/2 years or until 1985-86.

Justification of the Need for HEU at this Time

The current inventory of unirradiated fuel for the FRG-1 and FRG-2 reactors is sufficient to fuel the reactor through the end of 1981. The estimated lead time for conversion and fuel fabrication once the enriched uranium has arrived in the FRG is about nine months. Thus, allowing about 3 months for transportation arrangements and shipment, the material requested under this license application is needed before the end of the year. The current request, for 35.02 kg. of 93.3% enriched uranium (32.72 kg. of U-235) is sufficient to operate the reactors until the end of 1983 based on a manufacturing loss of 15% (to be retained as working stock by Nukem) and an annual useage rate for both reactors of about 13 kg. of U-235. This is the earliest possible date when lower-enriched fuel (45%) could be available and approved for use in the FRG. It should be noted that there could be some increase in the fuel requirements of the FRG-2 if the planned increase in power level from 15 MW to 21 MW is actually implemented in 1982.

DELEGATION OF THE COMMISSION OF THE EUROPEAN COMMUNITIES

January 30, 1979

Mr. Vance H. Hudgins
Assistant Director for Politico-
Military Security Affairs
Division of International Security Affairs
Department of Energy
Washington, D.C. 20545

Dear Mr. Hudgins:

Subject: Delegation application GKSS dated November 24, 1978
for West Germany, XSNM-1425 (our ref.: AGT/01/...)

We certify that the material mentioned in this application, namely 32,720 grams of U-235 contained in 35,070 grams of uranium (93.3 % enriched), 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, Inc., Falls Church, Virginia, Transnuklear GmbH, Hanau, West Germany and NUKEM GmbH, Hanau, West Germany, as intermediate consignees, and the Gesellschaft für Kernenergieverwertung in Schiffbau und Schiffahrt mbH (GKSS), Geesthacht-Tesperhude, West Germany, as ultimate consignee, are authorized by EURATOM to receive and possess this material pursuant to the aforementioned Agreement for Cooperation.

The material will be transported by Transnuclear, Inc. and Transnuklear GmbH to NUKEM for conversion and fuel fabrication for use as fuel in the FRG-1 and FRG-2 reactors at the GKSS facility in Hamburg - West Germany.

Sincerely,

F. Spaak
Head of Delegation

JM/ajs

cc: Mr. Robert DeLabarre, State Department
Ms. Betty Wright, NRC
Ms. Vicki Matson, Transnuclear, Inc.

2100 M Street NW Suite 707 Washington DC 20037 / telephone: (202) 862-9500 / telex: 89-539 EURCOM

EXPORT LICENSE APPLICATION

XSNM01429

Country:	The Federal Republic of Germany
Transaction:	The export of 20.11 kilograms of U-235 in 21.554 kilograms of uranium enriched to 93.3 percent to be used in the FRJ-2 Research Reactor
Applicant:	Transnuclear, Inc.
Application Date:	December 7, 1978

Purpose of Export

The export of the 93.3 percent-enriched uranium is intended for the fabrication of fuel elements for the FRJ-2, a 23 MW research and test reactor located at the Juelich Nuclear Research Center. It is used for neutron beam experiments for research in solid-state and nuclear physics, for production of radioisotopes and for irradiation testing of power reactor fuels and structural materials.

Special Non-Proliferation and Other Foreign Policy Considerations

The proposed export was approved by the President after review by the NSC Ad Hoc Group determined that the request was within the scope of the President's HEU export policy, would not be inimical to U.S. common defense and security and met the requirements of the Atomic Energy Act, as amended by the Nuclear Non-Proliferation Act of 1978.

The Argonne National Laboratory has identified the FRJ-2 as a candidate for conversion to use of lower enriched (45% or 19.9%) fuels, when such fuels are available commercially and have been demonstrated. An enrichment reduction program, sponsored by the FRG Government, was initiated by the operators of FRJ-2 in January 1980 and a plan for conversion is being formulated. The operators prefer that the FRJ-2 be first converted to 45% enriched fuel when this fuel has been licensed for use in the FRG, prior to any attempt to convert to lower enrichments. Conversion to 45% enriched fuel use may be possible by 1984.

Justification of Need for HEU at this Time

The current inventory of HEU fuel is estimated at approximately 30 kgs. U-235, sufficient for normal operation of the FRJ-2 through December 1982. The annual fuel requirement for the FRJ-2 at normal rate of operation is approximately 20 kgs. U-235. Lead time for fuel conversion and fabrication plus transportation arrangements is approximately 2 years. As conversion to use of 45% enriched fuel is not expected to be possible prior to 1984, the amount of 21.5 kgs. of 93 percent enriched material is requested to assure normal operation of the reactor through early 1984.

DELEGATION OF THE COMMISSION OF THE EUROPEAN COMMUNITIES

January 16, 1979

Mr. Vance H. Hudgins
Assistant Director for Politico-
Military Security Affairs
Division of International Security Affairs
Department of Energy
Washington, D.C. 20545

Dear Mr. Hudgins:

Subject: Transnuclear, Inc. application NUK-256 UES/EU 78-348/01 dated December 7, 1978 for West Germany, XSNM-1429 (our ref. AGT/01/..)

We certify that the material mentioned in this application, namely 20.110 kilograms of U-235 contained in 21.554 kilograms of uranium (HEU 93.3 % enriched), 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 and Transnuklear GmbH, Hanau, West Germany, as intermediate consignees, and Kernforschungsanlage Jülich Gmbh, Jülich, West Germany, as ultimate consignee, are authorized by EURATOM to receive and possess this material pursuant to the aforementioned Agreement for Cooperation.

The material will be converted and manufactured into fuel elements by NUKEM. The resulting fuel elements will be used in the KFA reactor FRJ-2 at Jülich - West Germany.

Sincerely,

F. Spaak
Head of Delegation

JM/ajs

cc: Mr. Robert DeLabarre, State Department
Ms. Betty Wright, NRC
Ms. Vicki Matson, Transnuclear, Inc.

2100 M Street NW Suite 707 Washington DC 20037 / telephone: (202) 862-9500 / telex: 89-539 EURCOM