TRANSNUCLEAR, INC.

April 11, 1979

Mr. N. Moore
Nuclear Regulatory Commission
Office of International Programs
7735 Old Georgetown Road
Bethesda, Maryland 20014

Re: Export License Application: TN Ref: 79-121/01
(NUK-278)

Dear Mr. Moore:

Enclosed is an export license application for your handling on the following:

20.050 Kg U, containing 18.707 Kg U235,
enriched to 93.30 percent U235.

Thanking you in advance for your help and cooperation.

Sincerely,

Vicki Matson
Assistant Manager
Washington Operations

Enclosure: Original E.U.S.
Original Reactor Checklist

VM/ak

FORM NRC-7
(7-78)
10 CFR 110

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY GAO
B-180225(R0082)

APPLICATION FOR LICENSE TO EXPORT NUCLEAR MATERIAL AND EQUIPMENT *(See Instructions on Reverse)*

1. APPLICANT'S USE	a. DATE OF APPLICATION	b. APPLICANT'S REFERENCE	2. NRC USE	a. LICENSE NO.	b. DOCKET NO.
	4/11/79	NUKC78 79121/01		XSNM01495	11000582

3. APPLICANT'S NAME AND ADDRESS	RIS	4. SUPPLIER'S NAME AND ADDRESS *(Complete if applicant is not supplier of material)*	RIS
a. NAME: Transnuclear, Inc.		U.S.D.O.E.	
b. STREET ADDRESS: 5205 Leesburg Pike		a. NAME: c/o Goodyear Atomic Corp.	
c. CITY: Falls Church; STATE: VA; ZIP CODE: 22041		b. STREET ADDRESS: Route One	
d. TELEPHONE NUMBER *(Area Code — Number — Extension)*: 703-820-2450		c. CITY: Piketon; STATE: OH; ZIP CODE: 45661	

5. FIRST SHIPMENT SCHEDULED	6. FINAL SHIPMENT SCHEDULED	7. APPLICANT'S CONTRACTUAL DELIVERY DATE	8. PROPOSED LICENSE EXPIRATION DATE	9. U.S. DEPARTMENT OF ENERGY CONTRACT NO. *(If Known)*
		to be determined	one year from date of issuance	to be assigned

10. ULTIMATE CONSIGNEE	RIS	11. ULTIMATE END USE *(Include plant or facility name)*
a. NAME: Commission of the European Communities (J.R.C.)		Will be used for the community reactor at Pettan, Netherlands (See attached End Use Statement)
b. STREET ADDRESS: Pettan Establishment, Postbus 2, 1755ZG		11a. EST. DATE OF FIRST USE
c. CITY – STATE – COUNTRY: Pettan The Netherlands		
12. INTERMEDIATE CONSIGNEE	**RIS**	**13. INTERMEDIATE END USE**
a. NAME: Nukem GmbH		Conversion and fabrication of fuel elements (See attached End Use Statement)
b. STREET ADDRESS: D-6450 Hanau		13a. EST. DATE OF FIRST USE
c. CITY – STATE – COUNTRY: Federal Republic of Germany		
14. INTERMEDIATE CONSIGNEE	**RIS**	**15. INTERMEDIATE END USE**
a. NAME: Transnuklear GmbH		Intermediate for transport purposes only.
b. STREET ADDRESS: 645 Hanau, Postfach 110030		15a. EST. DATE OF FIRST USE
c. CITY – STATE – COUNTRY: Wolfgang-bei-Hanau Industriegelande / Hessen, W.Germany		

16. NRC USE	17. DESCRIPTION *(Include chemical and physical form of nuclear material; give dollar value of nuclear equipment and components)*	18. MAX. ELEMENT WEIGHT	19. MAX. WT. %	20. MAX ISOTOPE WT.	21. UNIT
	Uranium in the form of uranium hexafluoride enriched to 93.30 percent U235.	20.050 KgU	93.3%	18.707 KgU235	Kg

22. COUNTRY OF ORIGIN – SOURCE MATERIAL	23. COUNTRY OF ORIGIN – SNM WHERE ENRICHED OR PRODUCED	24. COUNTRIES WHICH ATTACH SAFEGUARDS *(If Known)*
	U.S.	

25. ADDITIONAL INFORMATION *(Use separate sheet if necessary)*

AND INTERNATIONAL SAFEGUARDS

26. The applicant certifies that this application is prepared in conformity with Title 10, Code of Federal Regulations, and that all information in this application is correct to the best of his/her knowledge.

27. AUTHORIZED OFFICIAL	a. SIGNATURE	b. TITLE
		Assistant Manager, Washington Opers.

COPE

7904250443

Commission of the European Communities

JOINT RESEARCH CENTRE

PETTEN ESTABLISHMENT
Postbus 2, 1755 ZG Petten, The Netherlands
Tel. (02246) 6442 - Telex 57211 REACP

TO WHOM IT MAY CONCERN

Our reference: FD/mh/83.530 Your reference:

Petten 26th March 1979

END USE STATEMENT

The undersigner certifies that the following material, i.e. 20.050 kgs of uranium (93,3% U-235 enriched) in the form of UF6 and containing 18.707 kgs of U-235 which will be furnished to us under a Short-Term Fixed Commitment Contract with US-DOE will be used for the community reactor at Petten, Netherlands.

NUKEM GmbH, D 6450 Hanau, Federal Republic of Germany, shall perform the conversion work for us. Manufacturing of the fuel elements shall be performed by NUKEM, Hanau.

We authorize Transnuclear Inc., Falls Church, Va., to apply for the export license.

Mr. E.J. VAN WESTEN
(director)

ROPESE GCO Petten

PETTEN ESTABLISHMENT.

CHECKLIST FOR USE IN PETTEN OF REQUESTS FOR HIGHLY ENRICHED URANIUM TO DETERMINE TECHNICAL AND ECONOMIC JUSTIFICATION

RECEIVED 2 APR 1979

Date: 1st April 1979

1. Name of Facility: HIGH FLUX REACTOR / PETTEN

2. Quantity of Uranium Requested (Kgs): 20,050 KGS TERMATL OF GROS AND

3. Enrichment in the Isotope U-235 (%): 93%

4. Sale or Toll Enriching:

5. Current Core Loading (Kgs of U-235): 10,9 Kgs.

6. Current Power Level (KWth): 45 MW

7. Criticality and Full Operating Power Dates and Power Rating (if request involves new facility): --

8. Name of Convertor and Fabricator of Fuel: NUKEM GmbH - HANAU

FEDERAL REPUBLIC OF GERMANY

9. Breakdown of Fuel Inventory (Kgs of U-235): as per 1st April 1979.

a. Amount of U-235 in Fabrication outside USA Including Scrap Allowances: 39 Kgs (NUKEM) + 5,5 Kgs (CERCA)

b. Amount of U-235 in Storage in Completed, Unirradiated Fuel Elements:

22,4 Kgs.

c. Amount of U-235 in Core: 10,9 Kgs

d. Amount of U-235 in Spent Fuel Storage within the Community Including Chemical Reprocessing Plants, and the Reprocessing Schedule for Such Material:
a. spent fuel in HFR pools: 10,3 Kgs partly BU + 21,5 Kgs full BU
b. TO RECALL: 41,7 Kgs 75% at DOE-Savannah River (after reprocessing).

e. Amount of U-235 Lost and/or Consumed During Operation of Above Facility:
consumption: averages 16 Kgs / year (burn-up rate 50%)
losses: averages 0,4 Kgs / year (in fabrication plants)

f. Amount of U-235 per Fuel Element: 390 gms per fuel elem. and 270 gms per rod.

g. Average Core Life: one cycle covers 28 operation days.

h. Average Lead Time for Conversion and Fuel Fabrication if Conversion and Fabrication is to be Done Abroad:

approx. 12 months.