

ACC



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

AUG 10 1979

Mr. Peter Tarnoff  
Executive Secretary  
U.S. Department of State  
Washington, D.C. 20520

Dear Mr. Tarnoff:

Enclosed please find an application from Transnuclear, Inc. for a license to export special nuclear material to South Africa.

Before taking action on this license application, we would appreciate your views, in accordance with established procedures and from the overall perspective of the Executive Branch, as to whether the issuance of the requested license would be inimical to the interests of the United States, including the common defense and security, and whether the proposed export meets the applicable criteria in the Atomic Energy Act as amended by the Nuclear Non-Proliferation Act of 1978.

Sincerely,

A handwritten signature in black ink, appearing to read "Lee V. Gossick".

for Lee V. Gossick  
Executive Director for Operations

Enclosure:  
Appl. dtd 7/31/79  
(XSNM01552)

cc w/ enclosure:  
Holsey G. Handyside, DOE  
Richard L. Williamson, ACDA/NP/NS  
Sheila Buckley, DOD  
Duane Sewell, DOE  
Kent N. Knowles, DOC  
Robin DeLaBarre, DOS

7909070543

927 316

# TRANSNUCLEAR, INC.



July 31, 1979

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

Re: Export License Applications - TN Ref: 79-220/01 (TNP-292)  
TN Ref: 79-221/01 (TNP-293)

Dear Mr. Moore:

Enclosed are two (2) Export License Applications for your handling on the following quantities:


73556.4 Kg U containing 1816.23 Kg U235,  
enriched to a maximum of 3.15 percent U235

73556.4 Kg U containing 1816.23 Kg U235  
enriched to a maximum of 3.15 percent U235

Please note that these quantities include the U.S.D.O.E. allowable tolerances on uranium and percent enrichment.

Thanking you in advance for your help and cooperation.

Sincerely,

  
Vicki Matson  
Assistant Manager  
Washington Operations

Encl: Original E.U.S.  
Letter dated 6/20/79  
Annex I  
Annex II

VM/ak

RECEIVED  
AUG 1 1979

1979 AUG 1 10 51

RECEIVED  
AUG 1 1979

DUPC

927 317 7908300337

TELEPHONE 500-8111  
TELEFOON 500-8111

P.O. BOX 1091, JOHANNESBURG 2000  
POSBUS 1091, JOHANNESBURG 2000



MEGAWATT PARK  
MAXWELL DRIVE  
SUNNINGHILL EXT. 3  
SANDTON

MEGAWATT PARK  
MAXWELLYLAAN  
SUNNINGHILL UITBR. 3  
SANDTON

CABLES/TELEGRAMS  
"ESCOM"

KABELS/TELEGRAMME  
"EVKOM"

ELEKTRISITEITSVOORSIENINGSKOMMISSIE

POOR ORIGINAL

TO WHOM IT MAY CONCERN

U Verso/Your Ref

Ons Verso/Our Ref

Navraag/Enquiries

Datum/Date

13 July 1979

Sirs

KOEBERG NUCLEAR POWER STATION UNIT NUMBER 2  
END USE STATEMENT : TECHNICAL DATA

Enrichment Contract Number E-(49-14)-UES/SA/101 with US-DOE (formerly US-ERDA) for Koeberg Unit 2.

In the frame of the above Contract, enriched uranium is to be delivered by US-DOE as UF<sub>6</sub> in accordance with the following schedule:

Maximum Quantity (kg U as UF <sub>6</sub> )	Maximum Assay % U <sub>235</sub>	Maximum Content in U <sub>235</sub> (kg U <sub>235</sub> )	Delivery Date
24 710	1,8	444,780	February 1982
24 240	2,4	581,760	April 1982
24 240	3,1	751,440	June 1982

The application for the export licence for the above material will be made to the United States Authorities by Transnuclear Inc., Skyline Centre, 5205 Leesburg Pike, Falls Church, Virginia 22041, USA.

We certify that the above material will be used in the Republic of South Africa, as first core of the Koeberg Unit 2 Nuclear Power Plant.

Intermediate consignee will be : 1979 AUG 1 AM 11 54  
Franco-Belgian Fuel Company (F.B.F.C.), Romans 26100, France, for conversion of UF<sub>6</sub> to UO<sub>2</sub> and fuel fabrication.

Yours faithfully

*Jan H. Smith*

Jan H. Smith  
GENERAL MANAGER

927 318

ELECTRICITY SUPPLY COMMISSION

TELEPHONE - 800 6111  
TELEFOON

P.O. BOX - 1091, JOHANNESBURG 2000  
POSBUS

ELEKTRISITEITSVOORSIENINGSKOMMISSIE



TELEX - 86691  
TELEKS

MEGAWATT PARK  
MAXWELL DRIVE  
SUNNINGHILL EXT. 3  
SANDTON

MEGAWATT PARK  
MAXWELLRYLAAN  
SUNNINGHILL UITBR. 3  
SANDTON

CABLES/TELEGRAMS  
"ESCOM"

KABELS/TELEGRAMME  
"ESKOM"

FRAMATOME (Fuel Projects Division)  
Tour Fiat  
Cedex 16  
92084 PARIS LA DÉFENSE  
FRANCE

Attention : Messrs Simon and Peytan

U Verw./Your Ref.

Ons Verw./Our Ref.

Navres/Enquiries

Datum/Date

OPN 11230

Letter Number 45

ARRIVÉE CPK le 29/6/79	
ACTION CP ; C ;	
DIFFUSION sans P.J   avec P.J C/CA CPK	
CLASSEMENT Avec P.J   A.S   CP Doc N°	

20 June 1979

NUCLEAR SECRET

IN DUPLICATE

POOR ORIGINAL

Sirs

KOEBERG NUCLEAR POWER STATION - CONTRACT OPN 11230  
APPLICATION FOR EXPORT PERMIT

The enriched uranium to be used by Framatome for the fabrication of fuel elements supplied under the foregoing contract is to be enriched in the facilities operated for the Department of Energy in the United States of America. You require to obtain export licences from the relevant authorities in the United States. The applications for the licences will be made on your behalf by Transnuclear Inc., Skyline Centre, 5205 Leesburg Pike, Falls Church, Virginia 22041, USA. The material is to be consigned to the Franco-Belgian Fuel Company, Romans 26100, France.

To enable you to apply for the export permits I attach as Annex I the relevant technical data for use in the preparation of the End Use Statements. I also attach as Annex II background information and statements to support the application for the permits. Please arrange for this information to be attached to the application for the guidance of the United States Authorities.

Please do not hesitate to let me know if further information is required for the preparation of, or to support, the application.

Yours faithfully

*Jan H. Smith*

Jan H. Smith  
GENERAL MANAGER

1979 AUG 1 AM 10 54

RECEIVED  
U.S. NRC

927 319

ANNEX I

KOEBERG NUCLEAR POWER STATION, UNITS 1 & 2  
END USE STATEMENT : TECHNICAL DATA

Enrichment Contract Numbers E-(49-14)-UES/SA/100 and UES/SA/101 with US-DOE (formerly US-ERDA) for Koeberg Units 1 and 2 respectively.

In the frame of the above Contract, enriched uranium is to be delivered by US-DOE as  $UF_6$  in accordance with the following schedule :

Maximum Quantity (kg U as $UF_6$ )	Maximum Assay % $U_{235}$	Maximum Content in $U_{235}$ (kg $U_{235}$ )	Delivery Date
Koeberg Nuclear Power Station - Unit Number 1 Initial Core Loading			
24 710	1,8	444,780	February 1981
24 240	2,4	581,760	April 1981
24 240	3,1	751,440	June 1981
		1777.92	
Koeberg Nuclear Power Station - Unit Number 2 Initial Core Loading			
24 710	1,8	444,780	February 1982
24 240	2,4	581,760	April 1982
24 240	3,1	751,440	June 1982

RECEIVED  
U.S. NRC

1979 AUG 1 AM 10 54

EXPORT  
CONTROL RECORDS

927 320

## ANNEX II

### KOEBERG NUCLEAR POWER STATION, UNITS 1 AND 2 END USE STATEMENT : BACKGROUND INFORMATION AND STATEMENTS

The following information and statements are being supplied by the Electricity Supply Commission ("ESCOM") of the Republic of South Africa to explain and support the End Use Statements submitted by Transnuclear Inc. for the purpose of obtaining an export licence for quantities of enriched uranium hexafluoride required for the manufacture of fuel elements for Units 1 and 2 of the Koeberg Nuclear Power Station.

ESCOM is a South African public corporation which was established in 1923 in accordance with the Electricity Act No. 42 of 1922. The function of ESCOM is to provide a cheap and abundant supply of electricity in the Republic of South Africa. It supplies 90% of the electricity used in South Africa and exports electricity to the neighbouring territories of Bophuthatswana, Lesotho, Mozambique, South West Africa/Namibia, Swaziland, Transkei and Zimbabwe/Rhodesia. Whilst ESCOM provides an annual report to the South African Parliament on its technical and financial activities it is responsible for raising its own funds and receives no financial support from the government.

The Koeberg Nuclear Power Station is being constructed on the farm Duynfontein, approximately 28 km north of the city of Cape Town in the Cape Province of the Republic of South Africa. Unit 1 of the station is due to enter commercial operation at the end of 1982 and Unit 2 one year later. The construction of both units is currently on schedule and these dates are expected to be met. The units are based on three loop PWR Nuclear Steam Supply Systems provided by FRAMATOME under licence from Westinghouse. Each unit will have an output of 920 MW electric.

The power requirements of the Western Cape are presently met by a number of small fossil fueled power stations in the region, supplemented by supplies from the national grid system via transmission lines.

The present load growth in the region is such that local generation plus grid supplies would be inadequate to meet demands by the early years of the next decade. ESCOM is required to determine which energy resource can most economically provide the electric power requirements of a given geographical area.

Based on major system studies in the early 1970's the decision was taken to build the Koeberg Nuclear Power Station to meet the load demands of the early 1980's. A further consideration was the desirability of conserving scarce water resources in inland areas.

The decision to proceed with units 1 and 2 for Koeberg led to the conclusion in 1974 of contracts between the United States of America and ESCOM for the supply of enrichment services. ESCOM's commitment to the construction and bringing into operation of the project, including all the nuclear fuel services, is irrevocable and there are no plans to reconsider or delay the project.

The fuel proposed to be exported would be subject at all times to the Agreement for Cooperation between the United States of America and the Union of South Africa, signed July 8, 1957, as amended, including the peaceful use assurances contained in Articles III.B., X.A., and XI(2), as well as the trilateral agreement between the United States, South Africa and the International Atomic Energy Agency, signed July 26, 1967. It also would be governed by the exchange of notes between the Governments of South Africa and the United States, dated May 22, 1974, regarding peaceful nuclear explosives. The fuel will be used for the manufacture of fuel elements for Units 1 and 2 of the Koeberg Nuclear Power Station.

ESCOM is prepared to arrange for the safe storage, permanent disposal or reprocessing of fuel after its use in the power station, in accordance with such arrangements as may be agreed with the governments of the United States of America and France and with the International Atomic Energy Agency. To assure the United States of America that ESCOM will use the enriched material in question only for peaceful purposes, ESCOM is willing to send the fuel once used back to the United States of America in accordance with President Carter's spent fuel offer of October, 1977.

The enrichment levels and maximum content of  $U_{235}$  data given in the End Use Statements differ slightly from those given in the current appendices to the enrichment agreements. This arises from a recent decision by ESCOM, based on an economic reoptimisation, to make minor changes to the proposed fuel cycle for the two units. A proposal to the Department of Energy for the amendment of the affected appendices is in preparation and will be submitted shortly.

It must be noted that ESCOM has a vital need for early approval of this application to ensure that the planned operating dates for the Koeberg Nuclear Power Station are adhered to.

RECEIVED  
U.S. NRC/NRC

1979 AUG 11 12:54 55

INTERNATIONAL  
NRC/NRC

927 322

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

1. APPLICANT'S USE		a. DATE OF APPLICATION 7/31/79		b. APPLICANT'S REFERENCE TNP 293 79-221/01		2. NRC USE		a. LICENSE NO. <b>XSNM 01552</b>		b. DOCKET NO. <b>11000748</b>			
3. APPLICANT'S NAME AND ADDRESS						4. SUPPLIER'S NAME AND ADDRESS							
a. NAME Transnuclear, Inc.						U.S.D.O.E. c/o Union Carbide Corp.							
b. STREET ADDRESS One Skyline Place, 5205 Leesburg Pike						a. NAME K-25 Plant O.R. TN or Goodyear Atomic							
c. CITY Falls Church				STATE Va.		ZIP CODE 22041		b. STREET ADDRESS Corp., Route One, Piketon, Ohio					
d. TELEPHONE NUMBER (Area Code - Number - Extension) 703-820-2450						c. CITY			STATE		ZIP CODE		
5. FIRST SHIPMENT SCHEDULED 2/82		6. FINAL SHIPMENT SCHEDULED 6/82		7. APPLICANT'S CONTRACTUAL DELIVERY DATE same as item 5 & 6		8. PROPOSED LICENSE EXPIRATION DATE One year from date of issuance		9. U.S. DEPARTMENT OF ENERGY CONTRACT NO. (If Known) UES/SA/101					
10. ULTIMATE CONSIGNEE						11. ULTIMATE END USE							
a. NAME Electricity Supply Commission						Will be used as first core of Koeberg Unit 2 Nuclear Power Plant. (See attached E.U.S.)							
b. STREET ADDRESS P.O. Box 1091, Johannesburg 2000						11a. EST. DATE OF FIRST USE							
c. CITY - STATE - COUNTRY Republic of South Africa						13. INTERMEDIATE END USE							
12. INTERMEDIATE CONSIGNEE						Conversion from UF6 to UO2 and fuel fabrication (See attached E.U.S.)							
a. NAME Franco-Belgian Fuel Company (F.B.F.C.)						13a. EST. DATE OF FIRST USE							
b. STREET ADDRESS Romans 26100						15. INTERMEDIATE END USE							
c. CITY - STATE - COUNTRY France						Intermediate for transport purposes only.							
14. INTERMEDIATE CONSIGNEE						15a. EST. DATE OF FIRST USE							
a. NAME Transnucleaire, S.A.						18. MAX. ELEMENT WEIGHT 73556.4 KgU							
b. STREET ADDRESS 11 bis rue Christophe Colomb						19. MAX. WT. % 3.15% U235		20. MAX. ISOTOPE WT. 1816.23 Kg U235		21. UNIT Kg			
c. CITY - STATE - COUNTRY 75 Paris 8 France						16. NRC USE							
17. DESCRIPTION Uranium in the form of uranium hexafluoride enriched to a maximum of 3.15 percent U235						23. COUNTRY OF ORIGIN-SNM WHERE ENRICHED OR PRODUCED INTERNATIONAL SFORDS							
18. NRC USE						24. COUNTRIES WHICH ATTACH SAFEGUARDS (If Known)							
19. NRC USE						25. ADDITIONAL INFORMATION (Use separate sheet if necessary)  927 323 DUPE 7908300342							
20. NRC USE						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.							
21. NRC USE						27. AUTHORIZED OFFICIAL				a. SIGNATURE 		b. TITLE Asst. Mgr. Washington Operations	

POOR ORIGINAL

RECEIVED  
U.S. NRC

1979 AUG 1 AM 10 54