



United States Department of State

Washington, D.C. 20520

January 28, 2000

BUREAU OF NONPROLIFERATION AFFAIRS

PDR  
DCS/DOE  
NASS  
DOE/OR  
NAC/NASS

MEMORANDUM FOR JANICE DUNN LEE  
NUCLEAR REGULATORY COMMISSION

Enclosed is an Executive Branch analysis covering the proposed export to South Africa of 239,000 kilograms of uranium enriched to a maximum of 5 percent in U-235 for reload of Units 1 and 2 of the Koeberg Nuclear Power Station. In accordance with P.L. 95-242, the analysis explicitly addresses how the requirements of Section 126 a.(1) of the Atomic Energy Act are met, including the specific criteria of Sections 127 and 128, as well as certain additional factors, envisaged by Section 126 a (1).

As stated in my letter of January 28, 2000, the Executive Branch, on the basis of its review of this case, has concluded that the requirements of the Atomic Energy Act, as amended, have been met and that the proposed export would not be inimical to the common defense and security of the United States. South Africa has adhered to the provisions of the 1997 U.S.-South Africa Agreement for Cooperation.

Therefore, the Executive Branch recommends issuance of the requested export license.

Richard J. K. Stratford  
Director  
Nuclear Energy Affairs

Enclosure: analysis.

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EXPORT LICENSE APPLICATION ANALYSIS

XSNM03097

Destination: South Africa

Transaction: Westinghouse Power Corporation has applied for authorization to export to South Africa 11,950 kilograms of U-235 contained in 239,000 kilograms of uranium enriched to a maximum of 5 percent in the form of completed fuel assemblies for the Koeberg Nuclear Power Station. The low enriched uranium (LEU) will be shipped to ESKOM of Sandton, Johannesburg, the operator of the Koeberg Nuclear Power Station for loading into the Koeberg reactors.

Date of Application: July 28, 1999

1. Applicable Agreement for Cooperation

The proposed export will be subject to the terms and conditions of the Agreement for Cooperation Between the Government of the United States of America and the Government of the Republic of South Africa Concerning Peaceful Uses of Nuclear Energy which entered into force on December 4, 1997. This was confirmed by letter dated January 24, 2000 from South African Ministry of Minerals and Energy, with attachments, transmitted by the Embassy of South Africa on January 26, 2000, copies of which are enclosed with the Executive Branch cover letter.

South Africa has adhered to all provisions of that Agreement for Cooperation.

2. Extent to Which Export Criteria Are Met

A. Section 127 Criteria

As provided in Section 127 of the Atomic Energy Act, as amended, the following criteria govern exports for peaceful nuclear uses from the United States of source material, special nuclear material, production or utilization facilities, and any sensitive nuclear technology:

Criterion (1)

“IAEA safeguards as required by Article III(2) of the Treaty will be applied with respect to any such material or facilities proposed to be exported, to any such material or facilities previously exported and subject to the U.S.-South Africa Agreement for Cooperation, and to any special nuclear material used in or produced through the use thereof.”

South Africa is a Party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), having deposited its instrument of ratification on July 10, 1991 and has entered into an agreement with the International Atomic Energy Agency on September 16, 1991 (INFCIRC 394) to maintain safeguards on all its peaceful nuclear activities.

Therefore, it is the Executive Branch view that criterion (1) is met.

Criterion (2)

“No such material, facilities, or sensitive nuclear technology proposed to be exported or previously exported and subject to the applicable agreement for cooperation, and no special nuclear material produced through the use of such materials, facilities, or sensitive nuclear technology, will be used for any nuclear explosive device or for research on or development of any nuclear explosive device.”

As a non-nuclear weapon state Party to the NPT, South Africa is precluded from acquiring, developing or manufacturing nuclear explosive devices for any purpose.

It is therefore the Executive Branch view that criterion (2) is met.

Criterion (3)

“Adequate physical security measures will be maintained with respect to such material or facilities proposed to be exported and to any special nuclear material used in or produced through the use thereof. Following the effective date of any regulations promulgated by the Commission pursuant to Section 304(d) of the Nuclear Non-Proliferation Act of 1978, physical security measures shall be deemed adequate if such measures provide a level of protection equivalent to that required by the applicable regulations.”

The Executive Branch has assessed the physical security measures maintained by the Government of South Africa with respect to nuclear material and determined that they are adequate for the material covered by this license application.

Article 7 “ Physical Protection” of the U.S.-South Africa Agreement for Cooperation provides that adequate physical protection shall be maintained with respect to source or special material and equipment transferred pursuant to the Agreement and special nuclear material used in or produced through the use of material or equipment so transferred. Article 7 further provides that these measures shall as a minimum provide protection comparable to the recommendation set forth in IAEA Document INFCIRC/225/Revision 2, concerning the physical protection of nuclear material, or in any revision of that document agreed to by the parties.

A U.S. team of physical protection experts visited South Africa in May 1998 and concluded that physical protection measures at the Koeberg Nuclear Power Station met the criteria of INFCIRC/225/Rev. 3 for Category III nuclear material.

Therefore it is the view of the Executive Branch that criterion (3) is met.

Criterion (4)

“No such materials, facilities or sensitive nuclear technology proposed to be exported, and no special nuclear material produced through the use of such material will be retransferred to the jurisdiction of any other nation or group of nations unless the prior approval of the United States is obtained for such retransfer. In addition to other requirements of law, the United States may approve such retransfer only if the nation or group of nations designated to receive such retransfer agrees that it shall be subject to the conditions required by this section.”

Article 5 “Storage and Retransfers” of the 1997 U.S.-South Africa Agreement for Cooperation provides that material, equipment and components transferred to pursuant to the Agreement and any special nuclear material produced through the use of any such material or equipment shall not be retransferred beyond the jurisdiction of the recipient party’s territorial jurisdiction unless the parties agree.

Therefore it is the Executive Branch view that criterion (4) is met.

Criterion (5)

“No such material proposed to be exported and no special nuclear material produced through the use of such material will be reprocessed, and no irradiated fuel elements containing such material removed from a reactor shall be altered in form or content, unless the prior approval of the United States is obtained for such reprocessing or alteration.”

Article 6 “Reprocessing and Enrichment” of the 1997 U.S.-South Africa Agreement for Cooperation provides that material transferred pursuant to the Agreement or produced through the use of material or equipment so transferred shall not be reprocessed, altered in form or content, or further enriched unless the parties agree.

Therefore, it is the view of the Executive Branch that criterion (5) is met.



Criterion (6)

“No such sensitive nuclear technology shall be exported unless the foregoing conditions shall be applied to any nuclear material or equipment which is produced or constructed under the jurisdiction of the recipient nation or group of nations by or through the use of any such exported sensitive nuclear technology.”

The proposed export does not involve the transfer of sensitive nuclear technology. Criterion (6) is, therefore, not applicable.

B. Section 128 Criterion

Section 128 A. (1) of the Atomic Energy Act, as amended, establishes the following additional criterion: "As a condition of continued United States export of source material, special nuclear material, production or utilization facilities, and any sensitive nuclear technology to non-nuclear-weapon states, no such export shall be made unless IAEA safeguards are maintained with respect to all peaceful nuclear activities in, under the jurisdiction of, or carried out under the control of such state at the time of the export."

Since South Africa is a Party to the NPT and has entered into an agreement with the IAEA to maintain safeguards on all of its peaceful nuclear activities, it is the view of the Executive Branch that this criterion is met.

### 3. Additional Factors

The Executive Branch believes the framework of commitments, assurances, and safeguards is adequate for the purposes of this export.

4. Inimicality Judgment

Based on review of the proposed export, it is the judgment of the Executive Branch that the proposed export will not be inimical to the common defense and security and that the requested license should be issued.