

No. 4234

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**UNITED STATES OF AMERICA  
and  
UNION OF SOUTH AFRICA**

**Agreement for co-operation concerning the civil uses of  
atomic energy. Signed at Washington, on 8 July 1957**

*Official text: English.*

*Registered by the United States of America on 21 March 1958.*

**ÉTATS-UNIS D'AMÉRIQUE  
et  
UNION SUD-AFRICAINE**

**Accord de coopération concernant l'utilisation de l'énergie  
atomique à des fins civiles. Signé à Washington, le  
8 juillet 1957**

*Texte officiel anglais.*

*Enregistré par les États-Unis d'Amérique le 21 mars 1958.*

No. 4234. AGREEMENT<sup>1</sup> FOR CO-OPERATION BETWEEN THE GOVERNMENT OF THE UNITED STATES OF AMERICA AND THE GOVERNMENT OF THE UNION OF SOUTH AFRICA CONCERNING THE CIVIL USES OF ATOMIC ENERGY. SIGNED AT WASHINGTON, ON 8 JULY 1957

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Whereas the Government of the United States of America, through the United States Atomic Energy Commission, and the Government of the Union of South Africa, through the South African Atomic Energy Board, are cooperating in the production of uranium ores; and

Whereas the Government of the United States of America and the Government of the Union of South Africa, mindful of the fact that atomic energy is capable of application for peaceful purposes which hold great promise for all mankind, desire to cooperate with each other in developing and furthering the beneficial uses of atomic energy; and

Whereas the Government of the Union of South Africa is now engaged in the development of facilities for the application of atomic energy for civil purposes;

The Parties agree as follows :

*Article I*

For the purposes of this Agreement :

(a) " United States Commission " means the United States Atomic Energy Commission.

(b) " South African Board " means the Atomic Energy Board of the Government of the Union of South Africa.

(c) " Equipment and devices " and " equipment or device " means any instrument, apparatus, or facility and includes any facility, except an atomic weapon, capable of making use of or producing special nuclear material, and component parts thereof.

(d) " Person " means any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, government agency, or government corporation but does not include the Parties to this Agreement.

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<sup>1</sup> Came into force on 22 August 1957, the date on which each Government received from the other Government written notification that it had complied with all statutory and constitutional requirements for the entry into force of such Agreement, in accordance with article II.

(e) "Reactor" means an apparatus, other than an atomic weapon, in which a self-supporting fission chain reaction is maintained by utilizing uranium, plutonium, or thorium, or any combination of uranium, plutonium, or thorium.

(f) "Restricted Data" means all data concerning (1) design, manufacture, or utilization of atomic weapons; (2) the production of special nuclear materials; or (3) the use of special nuclear materials in the production of energy, but shall not include data declassified or removed from the category of Restricted Data by the appropriate authority.

(g) "Atomic weapon" means any device utilizing atomic energy, exclusive of the means for transporting or propelling the device (where such means is a separable and divisible part of the device), the principal purpose of which is for use as, or for development of, a weapon, a weapon prototype, or a weapon test device.

(h) "Special nuclear material" means (1) plutonium, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the United States of America determines to be special nuclear material; or (2) any material artificially enriched by any of the foregoing.

(i) "Source material" means (1) uranium, thorium, or any other material which is determined by the United States Commission or the Government of the Union of South Africa to be source material; or (2) ores containing one or more of the foregoing materials, in such concentration as the United States Commission or the Government of the Union of South Africa may determine from time to time.

(j) "Parties" means the Government of the United States of America and the Government of the Union of South Africa, including the United States Commission on behalf of the Government of the United States of America and the South African Board on behalf of the Government of the Union of South Africa. "Party" means one of the above "Parties".

### *Article II*

This Agreement shall enter into force on the day on which each Government shall receive from the other Government written notification that it has complied with all statutory and constitutional requirements for the entry into force of such Agreement and shall remain in force for a period of ten years.

### *Article III*

A. Restricted Data shall not be communicated under this Agreement, and no materials or equipment and devices shall be transferred, and no services shall

be furnished under this Agreement, if the transfer of any such materials or equipment and devices or the furnishing of any such services involves the communication of Restricted Data.

B. Subject to the provisions of this Agreement, the availability of personnel and material, and the applicable laws, regulations, and license requirements in force in their respective countries, the Parties shall assist each other in the achievement of the use of atomic energy for peaceful purposes.

C. This Agreement shall not require the exchange of any information which the Parties are not permitted to communicate because the information is privately owned or has been received from another government.

#### *Article IV*

Subject to the provisions of Article III, unclassified information, including information in the specific fields set out below, shall be exchanged between the Parties with respect to the application of atomic energy to peaceful uses including research and development relating to such uses, and problems of health and safety connected therewith :

(a) The development, design, construction, operation, and use of research, experimental power, demonstration power, and power reactors;

(b) Health and safety problems related to the operation and use of research, experimental power, demonstration power, and power reactors;

(c) The use of radioactive isotopes and radiation in physical and biological research, medical therapy, agriculture, and industry;

(d) Geology, exploration techniques, chemistry and technology of extracting uranium and thorium from their ores and concentrates, the chemistry, production technology, and techniques of purification and fabrication of uranium and thorium compounds and metals, including design, construction, and operation of plants.

#### *Article V*

The application or use of any information (including design drawings and specifications) and any material, equipment, and devices, exchanged or transferred between the Parties under this Agreement, shall be the responsibility of the Party receiving it, and the other Party does not warrant the accuracy or completeness of such information and does not warrant the suitability of such information, materials, equipment, and devices for any particular use or application.

*Article VI**A. Research Materials*

Materials of interest in connection with defined research projects related to the peaceful uses of atomic energy as provided by Article IV and under the limitations set forth in Article III, including source materials, special nuclear materials, byproduct material, other radioisotopes, and stable isotopes, will be exchanged for research purposes in such quantities and under such terms and conditions as may be agreed when such materials are not available commercially. In no case, however, shall the quantity of special nuclear materials under the jurisdiction of either Party, by reason of transfer under this Article, be, at any one time, in excess of 100 grams of contained U-235, 10 grams of plutonium, and 10 grams of U-233.

*B. Research Facilities*

Subject to the provisions of Article III, and under such terms and conditions as may be agreed, and to the extent as may be agreed, specialized research facilities and reactor materials testing facilities of the Parties shall be made available for mutual use consistent with the limits of space, facilities, and personnel conveniently available, when such facilities are not commercially available.

*Article VII*

It is contemplated that, as provided in this Article, private individuals and private organizations in either the United States or the Union of South Africa may deal directly with private individuals and private organizations in the other country. Accordingly, with respect to the subjects of agreed exchange of information as provided in Article IV, persons under the jurisdiction of either the Government of the United States of America or the Government of the Union of South Africa will be permitted to make arrangements to transfer and export materials, including equipment and devices, to and perform services for the other Government and such persons under its jurisdiction as are authorized by the other Government to receive and possess such materials and utilize such services, subject to :

(a) The limitations in Article III;

(b) Applicable laws, regulations, and license requirements of the Government of the United States of America and the Government of the Union of South Africa.

*Article VIII*

A. The United States Commission will sell to the Government of the Union of South Africa uranium enriched up to twenty per cent (20%) in the isotope U-235, except as otherwise provided in paragraph C of this Article, in

such quantities as may be agreed in accordance with the terms, conditions, and delivery schedules set forth in sales contracts for fueling defined research, experimental power, demonstration power, and power reactors which the Government of the Union of South Africa, in consultation with the Commission, decides to construct or authorize private organizations to construct in the Union of South Africa and as required in experiments related thereto; provided, however, that the net amount of any uranium sold hereunder during the period of this Agreement shall not exceed 500 kilograms of contained U-235. This net amount shall be the gross quantity of contained U-235 in uranium sold to the Government of the Union of South Africa during the period of this Agreement less the quantity of contained U-235 recovered from uranium which has been re-sold and has been delivered to the Government of the United States of America during the period of this Agreement or transferred to any other nation or international organization with the approval of the Government of the United States of America.

B. Within the limitations contained in paragraph A of this Article, the quantity of uranium enriched in the isotope U-235 transferred by the United States Commission under this Article and in the custody of the Government of the Union of South Africa shall not at any time be in excess of the amount of material necessary for the full loading of each defined reactor project which the Government of the Union of South Africa or persons under its jurisdiction decide to construct and fuel with fuel obtained from the United States of America, as provided herein, plus such additional quantity as, in the opinion of the United States Commission, is necessary to permit the efficient and continuous operation of such reactor or reactors while replaced fuel elements are radioactively cooling or, subject to the provisions of paragraph E, are being reprocessed in the Union of South Africa, it being the intent of the United States Commission to make possible the maximum usefulness of the material so transferred.

C. The United States Commission may, upon request and in its discretion, make a portion of the foregoing special nuclear material available as material enriched up to ninety per cent (90%) for use in a materials testing reactor, capable of operating with a fuel load not to exceed six (6) kilograms of contained U-235 in uranium.

D. It is understood and agreed that although the Government of the Union of South Africa may distribute uranium enriched in the isotope U-235 to authorized users in the Union of South Africa, the Government of the Union of South Africa will retain title to any uranium enriched in the isotope U-235 which is purchased from the United States Commission at least until such time as private users in the United States of America are permitted to acquire title in the United States of America to uranium enriched in the isotope U-235.

E. It is agreed that when any source or special nuclear material received from the United States of America requires reprocessing, such reprocessing shall be performed at the discretion of the United States Commission in either United States Commission facilities or facilities acceptable to the United States Commission, on terms and conditions to be later agreed; and it is understood, except as may be otherwise agreed, that the form and content of any irradiated fuel elements shall not be altered after their removal from the reactor and prior to delivery to the United States Commission or the facilities acceptable to the United States Commission for reprocessing.

F. With respect to any special nuclear material produced in reactors fueled with materials obtained from the United States of America which is in excess of the need of the Government of the Union of South Africa for such material in its program for the peaceful uses of atomic energy, the Government of the United States of America shall have and is hereby granted :

(a) A first option to purchase such material at prices then prevailing in the United States of America for special nuclear material produced in reactors which are fueled pursuant to the terms of an agreement for cooperation with the Government of the United States of America, and

(b) The right to approve the transfer of such material to any other nation or international organization in the event the option to purchase is not exercised.

### *Article IX*

As may be necessary and as may be mutually agreed in connection with the subjects of agreed exchange of information as provided in Article IV, and under the limitations set forth in Article III, and under such terms and conditions as may be mutually agreed, specific arrangements may be made from time to time between the Parties for lease, or sale and purchase, of quantities of materials, other than special nuclear material, greater than those required for research when such materials are not available commercially.

### *Article X*

A. The Government of the United States of America and the Government of the Union of South Africa emphasize their common interest in assuring that any material, equipment, or device made available to the Government of the Union of South Africa pursuant to this Agreement shall be used solely for civil purposes.

B. Except to the extent that the safeguards provided for in this Agreement are supplanted, by agreement of the Parties as provided in Article XII, by safeguards of the proposed International Atomic Energy Agency, the Govern-

ment of the United States of America, notwithstanding any other provisions of this Agreement, shall have the following rights :

1. With the objective of assuring design and operation for civil purposes and permitting effective application of safeguards, to review the design of any

- (i) reactor and
- (ii) other equipment and devices the design of which the United States Commission determines to be relevant to the effective application of safeguards,

which are to be made available to the Government of the Union of South Africa or any person under its jurisdiction by the Government of the United States of America or any person under its jurisdiction, or which are to use, fabricate, or process any of the following materials so made available : source material, special nuclear material, moderator material, or other material designated by the United States Commission.

2. With respect to any source or special nuclear material made available to the Government of the Union of South Africa or any person under its jurisdiction by the Government of the United States of America or any person under its jurisdiction and any source or special nuclear material utilized in, recovered from, or produced as a result of the use of any of the following materials, equipment, or devices so made available :

- (i) source material, special nuclear material, moderator material, or other material designated by the United States Commission,
- (ii) reactors,
- (iii) any other equipment or device designated by the United States Commission as an item to be made available on the condition that the provisions of this subparagraph B2 will apply,

(a) to require the maintenance and production of operating records and to request and receive reports for the purpose of assisting in ensuring accountability for such materials; and

(b) to require that any such material in the custody of the Government of the Union of South Africa or any person under its jurisdiction be subject to all of the safeguards provided for in this Article and the guaranties set forth in Article XI;

3. To require the deposit in storage facilities designated by the United States Commission of any of the special nuclear material referred to in subparagraph B2 of this Article which is not currently utilized for civil purposes in the Union of South Africa and which is not purchased pursuant to Article VIII,



paragraph F (a) of this Agreement, transferred pursuant to Article VIII, paragraph F (b) of this Agreement, or otherwise disposed of pursuant to an arrangement mutually acceptable to the Parties;

4. To designate, after consultation with the Government of the Union of South Africa, personnel who, accompanied, if either Party so requests, by personnel designated by the Government of the Union of South Africa, shall have access in the Union of South Africa to all places and data necessary to account for the source and special nuclear materials which are subject to subparagraph B2 of this Article to determine whether there is compliance with this Agreement and to make such independent measurements as may be deemed necessary;

5. In the event of non-compliance with the provisions of this Article, or the guaranties set forth in Article XI, and the failure of the Government of the Union of South Africa to carry out the provisions of this Article within a reasonable time, to suspend or terminate this Agreement and require the return of any materials, equipment, and devices referred to in subparagraph B2 of this Article;

6. To consult with the Government of the Union of South Africa in the matter of health and safety.

C. The Government of the Union of South Africa undertakes to facilitate the application of the safeguards provided for in this Article.

### *Article XI*

The Government of the Union of South Africa guarantees that :

(a) Safeguards provided in Article X shall be maintained.

(b) No material, including equipment and devices, transferred to the Government of the Union of South Africa or authorized persons under its jurisdiction pursuant to this Agreement, by lease, sale or otherwise, will be used for atomic weapons or for research on or development of atomic weapons or for any other military purposes, and that no such material, including equipment and devices, will be transferred to unauthorized persons or beyond the jurisdiction of the Government of the Union of South Africa except as the United States Commission may agree to such transfer to another nation or international organization and then only if in the opinion of the United States Commission such transfer falls within the scope of an agreement for cooperation between the Government of the United States of America and the other nation or international organization.

*Article XII*

The Government of the United States of America and the Government of the Union of South Africa affirm their common interest in the establishment of an international atomic energy agency to foster the peaceful uses of atomic energy. In the event such an international agency is created :

(a) The Parties will consult with each other to determine in what respects, if any, they desire to modify the provisions of this Agreement for Cooperation. In particular, the Parties will consult with each other to determine in what respects and to what extent they desire to arrange for the administration by the international agency of those conditions, controls, and safeguards including those relating to health and safety standards required by the international agency in connection with similar assistance rendered to a cooperating nation under the aegis of the international agency.

(b) In the event the Parties do not reach a mutually satisfactory agreement following the consultation provided in subparagraph (a) of this Article, either Party may by notification terminate this Agreement. In the event this Agreement is so terminated, the Government of the Union of South Africa shall return to the United States Commission all source and special nuclear materials received pursuant to this Agreement and in its possession or in the possession of persons under its jurisdiction.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed pursuant to duly constituted authority.

DONE at Washington, in duplicate, this eighth day of July, 1957.

For the Government of the United States of America :

William M. ROUNTREE

Assistant Secretary of State for Near Eastern, South Asian and African Affairs

Lewis L. STRAUSS

Chairman, United States Atomic Energy Commission

For the Government of the Union of South Africa :

W. C. DU PLESSIS

Ambassador of the Union of South Africa