

No. 3038

**UNITED KINGDOM OF GREAT BRITAIN
AND NORTHERN IRELAND
and
BELGIUM**

**Agreement for co-operation in the peaceful uses of atomic
energy. Signed at London, on 18 November 1955**

Official text: English.

*Registered by the United Kingdom of Great Britain and Northern Ireland on 12
December 1955.*

**ROYAUME-UNI DE GRANDE-BRETAGNE
ET D'IRLANDE DU NORD
et
BELGIQUE**

**Accord de coopération en vue de l'utilisation de l'énergie
atomique à des fins pacifiques. Signé à Londres, le
18 novembre 1955**

Texte officiel anglais.

*Enregistré par le Royaume-Uni de Grande-Bretagne et d'Irlande du Nord le 12
décembre 1955.*

No. 3038. AGREEMENT¹ BETWEEN THE GOVERNMENT OF THE UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND AND THE GOVERNMENT OF THE KINGDOM OF BELGIUM FOR CO-OPERATION IN THE PEACEFUL USES OF ATOMIC ENERGY. SIGNED AT LONDON, ON 18 NOVEMBER 1955

The Government of the United Kingdom of Great Britain and Northern Ireland on its own behalf and on behalf of the United Kingdom Atomic Energy Authority (hereinafter referred to as the Authority) and the Government of the Kingdom of Belgium;

Considering that a special relationship exists between Belgium and the United Kingdom in the field of atomic energy;

Considering that the use of atomic energy for peaceful purposes is a major objective of both Contracting Parties;

Recognising the benefit accruing to the free world as a whole from the supplies of uranium ore made available from the Belgian Congo;

Believing that mutual benefit will result from further co-operation between the Contracting Parties;

Intending that the Government of Belgium should receive from the Authority, in the field of peaceful uses of atomic energy, information and materials on terms as favourable as those accorded to any other major uranium supplying country outside the British Commonwealth;

Have agreed as follows:—

Article I

SCOPE OF AGREEMENT

1. The design, fabrication, disposition and utilisation of atomic weapons shall be outside the scope of the present Agreement.

2. Nothing in the present Agreement shall require the exchange of:—

- (a) Any information which, in the opinion of the Authority, is primarily of military significance including classified information relating to the design and fabrication of atomic weapons, or

¹ Came into force on 18 November 1955, upon signature, in accordance with article X.

- (b) classified information concerning the production of special nuclear materials except that concerning the incidental production of such materials in a power reactor, or
- (c) any information which the Government of Belgium or the Authority are not permitted to communicate because it is privately developed and privately owned or is received from another Government or foreign atomic energy authority.

3. Nothing in the present Agreement shall require the transfer or export of any material, equipment or devices which, in the opinion of the Authority, are primarily of military significance.

4. The Authority will not communicate classified information required for the construction of any specific reactor unless the Government of Belgium are seriously considering the construction of a reactor of that type in Belgium, the Belgian Congo or Ruanda-Urundi. In addition, the Authority will not, except as may be agreed, communicate classified information on any specific type of reactor unless the Authority considers that that specific type of reactor has been sufficiently developed to be of practical value for industrial or commercial purposes in Belgium, the Belgian Congo or Ruanda-Urundi.

Article II

DEFINITIONS

For purposes of this Agreement:

- (a) "Atomic weapon" means any device utilising 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.
- (b) "By-product material" means any radio-active material (except special nuclear material) yielded in or made radio-active by exposure to the radiation incident to the process of producing or utilising special nuclear material.
- (c) "Classified" means a security designation of "Restricted" or higher applied, under the laws and regulations of either the Government of Belgium or the Government of the United Kingdom, to any data, information, materials, services or any other matter.
- (d) "Combined Development Agency" means the contracting Agency which acts on behalf of the United States and the United Kingdom with respect to the purchase of uranium and thorium ores and concentrates.
- (e) "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.

- (f) "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.
- (g) "Reactor" means an apparatus, other than an atomic weapon, in which a self-supporting fission chain reaction is maintained by utilising uranium, plutonium, or thorium, or any combination of uranium, plutonium, or thorium.
- (h) "Special nuclear material" means:
 - (i) plutonium, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Government of Belgium or the Authority determines to be special nuclear material; or
 - (ii) any material artificially enriched by any of the foregoing.

Article III

EXCHANGE OF INFORMATION

1. With the object of facilitating the development of peaceful uses of atomic energy, and particularly the development of atomic power, the Government of Belgium and the Authority shall exchange the following information:—

- (a) General information on the overall progress and economics of power reactor programmes;
- (b) Technological information required for the construction of specific reactors for the Belgian Government's power programme in Belgium, the Belgian Congo and Ruanda-Urundi.

2. The exchange of information provided for in this Article shall include:—

- (a) The communication to the Authority of information developed in the Belgian power programme, and
- (b) The communication to the Government of Belgium of such information as the Authority may possess and the Government of Belgium may require in connexion with any reactor which the latter intend to construct as a part of their current power programme, such information falling within one or other of the following fields:—
 - (i) *Specifications for Reactor Materials*.—Final form specifications including composition, shape, size and special handling techniques of reactor materials including uranium, heavy water, pile grade graphite, zirconium.

- (ii) *Properties of Reactor Materials*.—Physical, chemical, metallurgical, nuclear and mechanical properties of reactor materials including fuel, moderator and coolant and the effects of the reactor's operating conditions on the properties of these materials.
- (iii) *Reactor Components*.—The design and performance specifications of reactor components but not including the methods of production and fabrication.
- (iv) *Reactor Physics Technology*.—This field includes theory of and pertinent data relating to neutron bombardment reactions, neutron cross sections, criticality calculations, reactor kinetics and shielding.
- (v) *Reactor Engineering Technology*.—This field includes considerations pertinent to the overall design and optimisation of the reactor and theory and data relating to such problems as reactor stress and heat transfer analysis.
- (vi) *Environmental Safety Considerations*.—This field includes considerations relating to normal reactor radiations and possible accidental hazards and the effect of these on equipment and personnel and appropriate methods of waste disposal and decontamination.

3. The Authority will receive selected security-cleared personnel from Belgium to work with and participate in the construction of the two reactors now under construction at Calder Hall and such other reactors as may be agreed.

4. Unclassified reactor information and technology and unclassified information relating to the production of reactor materials such as heavy water, zirconium, hafnium, may also be exchanged.

5. Information obtained as a result of participation in the construction of the reactors at Calder Hall or such other reactors as may be agreed, or other technological information which may be obtained under this Agreement, shall not be disclosed to any third party by the Belgian Government without the prior consent in writing of the Authority.

6. The information provided for in this Article shall be exchanged through the most effective means available such as reports, conferences and visits to facilities.

Article IV

RESEARCH MATERIALS

Materials of interest in connexion with any subject on which information is to be exchanged in accordance with the provisions of Article III, including source materials, special nuclear materials, by-product material, other radio-isotopes and stable isotopes shall be exchanged for research purposes in such quantities and under such terms and conditions as may be agreed, provided that such materials are not available commercially to the Contracting Party wishing to receive them.

Article V

TRANSFER OF EQUIPMENT AND DEVICES

With respect to the subjects of agreed exchange of information as provided in Article III, equipment and devices may be transferred from one party to the other under such terms and conditions as may be agreed. It is recognised that such transfers will be subject to limitations which may arise from shortages of supplies or other circumstances existing at the time.

*Article VI*OTHER ARRANGEMENTS FOR MATERIALS, INCLUDING EQUIPMENT AND DEVICES,
AND SERVICES

With respect to the subjects of agreed exchange of information as provided in Article III, persons under the jurisdiction of the Government of the United Kingdom or the Government of Belgium shall be permitted to make arrangements to transfer and export materials, equipment and devices to, and to perform services for, the other Government and such persons under the jurisdiction of the latter Government as are authorised by them to receive and possess such materials and utilise such services, subject to:—

- (a) the relevant laws, regulations, and licence requirements of the Government of the United Kingdom and the Government of Belgium;
- (b) the approval of the Government to which the person is subject when the materials or services are classified or when the furnishing of such materials and services requires the communication of classified information.

Article VII

QUANTITIES OF MATERIALS FOR PURPOSES OTHER THAN RESEARCH

1.—(a) The Authority shall sell to the Government of Belgium, under such terms and conditions as may be agreed, such quantities of uranium enriched in

the isotope U-235 as the Government of Belgium may require during the period of this Agreement for use in research and power reactors situated in Belgium, the Belgian Congo and Ruanda-Urundi, subject to any limitations imposed by the quantities of such materials available for distribution by the Authority during any year and to the condition that the quantity of uranium enriched in the isotope U-235 of weapon quality in the possession of the Government of Belgium by reason of transfer under the present Agreement shall not, in the opinion of the Authority, be of military significance. It is agreed that the uranium enriched in the isotope U-235 which the Authority will sell to Belgium under this Article will be limited to uranium enriched in the isotope U-235 up to a maximum of 20 per cent U-235. The Government of Belgium undertake to retain title to any uranium enriched in the isotope U-235 which is purchased from the Authority, until such time as private users in the United Kingdom are permitted to acquire title to uranium enriched in the isotope U-235, but may distribute such uranium to authorised users in Belgium, the Belgian Congo and Ruanda-Urundi.

(b) When any fuel elements received from the United Kingdom or fabricated from uranium of normal isotopic composition or uranium enriched in the isotope U-235 received from the United Kingdom, require re-processing, such re-processing shall be performed by the Authority on terms and conditions to be agreed. Except as may be agreed, the form and content of the irradiated fuel elements shall not be altered after their removal from the reactor and prior to delivery to the Authority for re-processing.

2. The Authority shall sell to the Government of Belgium subject to the availability of supply, such quantities of uranium of normal isotopic composition as the Government of Belgium may require, and, to the extent practicable, in such form as the Government of Belgium may request, for use in research and power reactors situated in Belgium, the Belgian Congo and Ruanda-Urundi.

3. The Authority shall have an option to purchase any special nuclear materials produced in Belgium, the Belgian Congo or Ruanda-Urundi, from materials sold in accordance with paragraphs 1 and 2 of this Article and which are in excess of the Belgian Government's need for such materials in their programme for the peaceful use of atomic energy. The Government of Belgium shall not transfer to any country other than the United Kingdom or the United States of America any special nuclear material produced in Belgium, the Belgian Congo or Ruanda-Urundi, unless they have received an assurance that the material will not be used for military purposes, and the Government of Belgium shall further consult with the Government of the United Kingdom on the international significance of any proposed transfer of any uranium and thorium ores or special nuclear materials to any country other than the United States of America.

4.—(a) Existing commercial contracts between the Combined Development Agency and the African Metals Corporation acting for the producing company (Union Minière du Haut Katanga), for the sale of uranium ores and concentrates to the said Agency shall continue in effect until their expiration as provided in those contracts.

(b) The Government of Belgium shall use its best endeavours to see that the Combined Development Agency will have a first option to purchase:

- (i) Ninety per cent of the uranium and thorium ores and concentrates produced in Belgium and the Belgian Congo during the calendar years 1956 and 1957.
- (ii) Seventy-five per cent of the uranium and thorium ores and concentrates produced in Belgium and the Belgian Congo during the calendar years 1958, 1959 and 1960.

(c) In addition to those percentages which the Combined Development Agency shall have first option to purchase with respect to any calendar year, the Combined Development Agency shall also be entitled to purchase such additional quantities of uranium ores and concentrates as may be required for the production of the materials sold to Belgium by the Authority in accordance with sub-paragraphs (b) (i) and (ii) of this paragraph during any one year. The formulæ for the purpose of making computations required to give effect to this provision are:—

- (i) 102 kilograms of contained elemental uranium in the form of ore or ore concentrates will produce 100 kilograms of elemental uranium of natural isotopic composition in the form of purified metal or compounds.
- (ii) The preparation of uranium enriched in U-235 content will be assumed to be accomplished by the isotopic separation of uranium of natural isotopic composition into enriched material having the required U-235 content and depleted material having a U-235 content of 0.4 per cent.

(d) If the Government of Belgium does not require for its own use all or part of the uranium and thorium ores produced in Belgium and the Belgian Congo during the foregoing period and which are not covered by the options in sub-paragraphs (b) and (c) above, it will consult with the Authority concerning the sale of such uranium and thorium ores to the Combined Development Agency.

(e) Belgium will in due course evaluate its requirements of uranium and thorium ores and concentrates for the period of this Agreement remaining after the calendar year 1960, and the Parties hereto will consult each other for the purpose of establishing an agreed percentage of such materials which the Combined Development Agency shall have the first option to purchase.

(f) The Government of Belgium shall be kept informed of the division, between the United Kingdom and the United States of America, of uranium and thorium ores and concentrates sold to the Combined Development Agency

in accordance with the present Agreement. The Government of Belgium agree that if so requested by the United States Atomic Energy Commission and the United Kingdom Atomic Energy Authority, the options to the Combined Development Agency in sub-paragraphs (b), (c), (d) and (e) of this paragraph may be exercised as follows:—

- (i) Through a contract or contracts with either the Commission or the Authority; or
- (ii) Through a contract or contracts with the Commission and a contract or contracts with the Authority.

5.—(a) If before the termination of the present Agreement—

- (i) the diminution of available ore results in a decline in the rate of production of uranium ores and concentrates in Belgium and the Belgian Congo by as much as eighty per cent of the rate of production in 1955; and
- (ii) If the strategic stockpiles of special nuclear material in the United States of America and the United Kingdom have been demilitarised or if the civilian needs of the United States and the United Kingdom are covered without limitation by means of production and current imports of uranium ores and uranium concentrates, the Government of Belgium shall have the right to purchase from the Authority on such terms as may be agreed a total quantity of material, in the form and manner described in sub-paragraph (b) below, equivalent to the total quantity of uranium ores and concentrates sold under and during the period of the present Agreement.

(aa) to the Combined Development Agency and acquired by the Authority, and

(bb) directly to the Authority if uranium ores and concentrates are sold to the Authority in accordance with paragraph 4 (f) of this Article.

(b) (i) At the election of the Combined Development Agency or the Authority, whichever is appropriate, the material so sold to the Government of Belgium may be in the form of ores and concentrates, or uranium of normal isotopic composition in the form of purified metals or compounds or any combination of these.

(ii) In determining that quantity of one of these materials which is equivalent to a given quantity of another, the formulæ in paragraph 4 (c) (i) shall be used.

(iii) The material shall be delivered in accordance with an agreed schedule of deliveries within five years after this provision comes into effect.

6. Specific arrangements may be made as necessary between the Parties to the present Agreement, in connexion with the subjects of agreed exchange of information as provided in Article III, for the lease, sale or purchase from time to time of quantities of materials, other than special nuclear materials, greater than those required for research, under such terms and conditions as may be agreed between the Government of Belgium and the Authority.

Article VIII

PATENTS

The Authority shall have all rights, title and interest within the jurisdiction of the Government of the United Kingdom as to any invention or discoveries made by any person under the jurisdiction of the Government of Belgium as a result of such person's access to classified information communicated to Belgium under the present Agreement, provided such invention or discovery is made during the period of the present Agreement or within three years thereafter.

Article IX

SECURITY

1. The security classifications established by the Authority shall be applicable to all information and material, including equipment and devices, exchanged under the present Agreement. The Authority shall keep the Government of Belgium informed of any modification of these classifications and the Parties shall consult from time to time concerning their practical application.

2. All information and material, including equipment and devices, which warrant a classification in accordance with paragraph 1 of this Article, shall be safeguarded in accordance with security safeguards and standards to be arranged between the competent authorities in Belgium and the United Kingdom.

3. The Parties to the present Agreement who receive any materials, including equipment and devices, or any classified information under the Agreement shall not further disseminate such information, or transfer such material (including equipment and devices) to any other country, without the consent in writing of the Party who has provided such information or material. Moreover, neither Party shall transfer to any other country any equipment or device, the transfer of which would involve the disclosure of any classified information received from the other Party, without the consent in writing of such other Party.

Article X

DURATION OF AGREEMENT

The present Agreement shall enter into force on signature and shall remain in force for a period of ten years thereafter. The Contracting Parties shall

re-examine the basis of the present Agreement at such time as world disarmament may be realised or should a threat to world peace so require.

IN WITNESS WHEREOF, the undersigned, being duly authorised by their respective Governments have signed the present Agreement.

DONE in duplicate at London this eighteenth day of November, 1955.

For the Government of the United Kingdom:
Harold MACMILLAN

For the Government of Belgium:
P. H. SPAAK