

No. 3301

**UNITED STATES OF AMERICA
and
CANADA**

**Agreement for co-operation concerning civil uses of
atomic energy. Signed at Washington, on 15 June
1955**

Official text: English.

Registered by the United States of America on 25 April 1956.

**ÉTATS-UNIS D'AMÉRIQUE
et
CANADA**

**Accord de coopération concernant les emplois civils de
l'énergie atomique. Signé à Washington, le 15 juin
1955**

Texte officiel anglais.

Enregistré par les États-Unis d'Amérique le 25 avril 1956.

No. 3301. AGREEMENT¹ FOR CO-OPERATION BETWEEN
THE GOVERNMENT OF THE UNITED STATES OF
AMERICA AND THE GOVERNMENT OF CANADA CON-
CERNING CIVIL USES OF ATOMIC ENERGY. SIGNED
AT WASHINGTON, ON 15 JUNE 1955

The Government of the United States of America, represented by the United States Atomic Energy Commission (hereinafter referred to as the "Commission"), and the Government of Canada, through its wholly-owned Corporations, Eldorado Mining and Refining Limited and Atomic Energy of Canada Limited, have for several years been engaged in atomic energy programs within their respective countries and from the inception of these programs have collaborated closely in certain areas. The principal objective of Canada's atomic energy program is the civil use of atomic energy and, in particular, the use of atomic energy as a source of electric energy. The objective of the atomic energy program in the United States is twofold: (1) the use of atomic energy for peaceful purposes, and (2) the use of atomic energy for defense purposes. There exists a unique tradition of cooperation between Canada and the United States. Based on similar national interests, this cooperation produces special industrial and economic inter-relationships. Consequently, progress in each country toward the full benefits of the peaceful uses of atomic energy will be accelerated through an arrangement which is consistent with the cooperation existing in other areas. Accordingly, the Government of the United States of America and the Government of Canada, the parties to this Agreement, agree, as provided herein, to assist each other in the achievement of the objectives of their respective atomic energy programs to the extent such assistance is relevant to current or projected programs and subject to applicable laws of the respective governments and the availability of material and personnel. While for the present and for the foreseeable future priority of materials and personnel must be given to defense needs, an increasing number of opportunities exist for the development of the peaceful applications of atomic energy. It is expressly understood that the design, fabrication, disposition, or utilization of atomic weapons are outside the scope of this Agreement.

¹ In accordance with article I, the Agreement came into force on 21 July 1955, the date of receipt by the Government of Canada of a notification from the Government of the United States of America that the period of thirty days required by the United States Atomic Act of 1954 had elapsed.

Article I

PERIOD OF AGREEMENT

This Agreement shall enter into force on the date of receipt by the Government of Canada of a notification from the Government of the United States of America that the period of thirty days required by Section 123c of the United States Atomic Energy Act of 1954 has elapsed, and it shall remain in force through July 31, 1965.

Article II

EXCHANGE OF INFORMATION

Classified and unclassified information will be exchanged between the Commission and the appropriate agencies of the Government of Canada with respect to the application of atomic energy to peaceful uses, including research and development relating thereto, and including problems of health and safety. There are set forth in this Article the specific fields in which classified information will be exchanged. The exchange of information provided for in this Article will be accomplished through the various means available, including reports, conferences, and visits to facilities.

A. Limitations

Of the information which is classified, only that relevant to current or projected programs will be exchanged. The parties to the Agreement will not exchange Restricted Data under this Agreement which, in the opinion of either country, is primarily of military significance, or exchange Restricted Data relating to the design or fabrication of atomic weapons. Within the subject matter of this Agreement, the parties may come into possession of privately developed and privately owned information and information received from other governments which the parties are not permitted to exchange.

It is mutually understood and agreed that, except as limitations are stated to apply specifically to one party or the other, any limitations to cooperation imposed pursuant to this Agreement shall be reciprocal.

B. Reactors

(1) Information on the development, design, construction, operation and use of research, production, experimental power, demonstration power, and power reactors, except as provided in Paragraph A and (2) and (3) of this paragraph.

(2) The development of submarine, ship, aircraft, and certain package power reactors is presently concerned primarily with their military uses. Accordingly, it is agreed that the parties to this Agreement will not communicate to each other under this Agreement Restricted Data pertaining primarily to such reactors, until such time as these types of reactors warrant civil application, and as the exchange of information on these types of reactors may be mutually agreed. Restricted Data pertaining to the adaptation of these types of reactors to military use, however, will not be exchanged under this Agreement. Likewise, the parties to the Agreement will not exchange under this Agreement Restricted Data pertaining primarily to any future reactor-types the development of which may be concerned primarily with their military use, until such time as these types of reactors warrant civil application and as exchange of information on these types of reactors may be mutually agreed; and Restricted Data pertaining to the adaptation of these types of reactors to military use will not be exchanged under this Agreement. Nevertheless, information pertaining to military nuclear power plants in furtherance of the joint Canada-United States defense effort in the development of an early-warning radar network may be exchanged.

(3) It is agreed that neither of the parties to this Agreement will exchange Restricted Data on any specific production, experimental power, demonstration power, and power reactor, unless that type of reactor is being operated currently by the other party, or is being considered seriously for construction by the other party as a source of power or as an intermediate step in a power production program. There will, however, be exchanged such general information on design and characteristics of various types of reactors as is required to permit evaluation and comparison of their potential use in a power production program.

C. *Source Materials*

Geology, exploration technique, 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, except as provided in Paragraph A.

D. *Materials*

(1) Physical, chemical and nuclear properties of all elements, compounds, alloys, mixtures, special nuclear materials, by-product material, other radioiso-

topes, and stable isotopes and their behavior under various conditions, except as provided in Paragraph A.

(2) Technology of production and utilization, from laboratory experimentation and theory of production up to pilot plant operations (but not including design and operation of pilot plants and full scale plants, except as may be agreed), of all elements, compounds, alloys, mixtures, special nuclear material, by-product material, other radioisotopes, and stable isotopes, relevant to and subject to the limitations of Paragraphs B, E, and F of this Article, except as provided in Paragraph A and (a), (b), (c) and (d) of this subparagraph.

(a) The Commission will not communicate Restricted Data pertaining to design, construction and operation of production plants for the separation of U-235 from other uranium isotopes. The Commission, however, will supply the Government of Canada with uranium enriched in U-235 as provided in Article III A and Article VI.

(b) The Commission will not communicate Restricted Data on the design, construction and operation of specific production plants for the separation of deuterium from the other isotopes of hydrogen until such time as the Government of Canada shall determine that the construction of such plants is required. The Commission will, however, supply the Government of Canada with heavy water as provided in Article III A and Article VI.

(c) No Restricted Data will be exchanged pertaining to the design, construction and operation of production plants for the separation of isotopes of any other element, except as may be agreed.

(d) No Restricted Data will be exchanged pertaining to the underlying principles, theory, design, construction and operation of facilities, other than reactors, capable of producing significant quantities of isotopes by means of nuclear reactions, except as may be agreed.

E. Health and Safety

The entire field of health and safety as related to this Article. In addition, those problems of health and safety which affect the individual, his environment, and the civilian population as a whole and which arise from nuclear explosion (excluding such tests data as would permit the determination of the yield of any specific weapon or nuclear device and excluding any information relating to the design or fabrication of any weapon or nuclear device), and except as provided in Paragraph A.

F. *Instruments, Instrumentation and Devices*

Development, design, manufacture, and use of equipment and devices of use in connection with the subjects of agreed exchange of information provided in this Article, except as provided in Paragraph A.

Article III

RESEARCH MATERIALS AND RESEARCH FACILITIES

A. *Research Materials*

Materials of interest in connection with the subjects of agreed exchange of information as provided in Article II, and under the limitations set forth therein, including source materials, special nuclear material, by-product 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, except as provided in Article VII, when such materials are not available commercially. These materials for non-research purposes may be supplied by one party of this Agreement to the other as provided in Article VI.

B. *Research Facilities*

Under such terms and conditions as may be agreed, and to the extent as may be agreed, specialized research facilities and reactor testing facilities will be made available for mutual use consistent with the limits of space, facilities and personnel conveniently available, except that it is understood that the Commission will not be able to permit access by Canadian personnel to facilities which, in the opinion of the Commission, are primarily of military significance.

Article IV

TRANSFER OF EQUIPMENT AND DEVICES

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

Article V

OTHER ARRANGEMENTS FOR MATERIALS, INCLUDING EQUIPMENT AND DEVICES, AND SERVICES

It is contemplated that, as provided in this Article, private individuals and private organizations in either the United States or Canada 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 II, and under the limitations set forth therein, persons under the jurisdiction of either the Government of the United States of America or the Government of Canada 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 the jurisdiction of the other government as are authorized by the other government to receive and possess such materials and utilize such services, subject to :

(a) The limitation in Article VII ;

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

(c) 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 VI

NON-RESEARCH QUANTITIES OF MATERIALS

A. The Commission will sell to Atomic Energy of Canada Limited, a wholly-owned corporation of the Government of Canada, under such terms and conditions as may be agreed, such quantities of uranium enriched in the isotope U-235 as may be required in the power reactor program in Canada during this period, subject to any limitations in connection with the quantities of such material available for such distribution by the Commission during any year, and subject to the limitation that the quantity of uranium enriched in the isotope U-235 of weapon quality in the possession of Atomic Energy of Canada Limited by reason of transfer under this Agreement shall not, in the opinion of the Commission, be of military significance. It is agreed that the uranium enriched in the isotope U-235 which the Commission will sell to Atomic Energy of Canada Limited under this Article will be limited to uranium enriched in the isotope U-235 up to a maximum of 20 percent U-235. It is understood and agreed that, although Atomic Energy of Canada Limited intends to distribute uranium enriched in the isotope U-235 to authorized users in Canada, Atomic Energy of Canada Limited will retain title to any uranium enriched in the isotope U-235 which is purchased from the Commission until such time as private users in the United States are permitted to acquire title to uranium enriched in the isotope U-235.

The Government of Canada, or its appropriate agent, will give to the Commission a first refusal of any special nuclear materials which the Government of Canada may desire to transfer outside of Canada, where such special nuclear materials have been produced from the irradiation of fuel elements enriched with U-235 purchased from the Commission under the terms of this Agreement.

In addition, any special nuclear material transferred by Atomic Energy of Canada Limited to the United States may be retransferred to Canada on such terms and conditions as may be agreed.

B. The Commission will continue the present understanding with Atomic Energy of Canada Limited, a wholly-owned corporation of the Government of Canada, covering the sale of uranium of normal isotopic composition for use in the NRX and NRU reactors.

The Commission will also sell to Atomic Energy of Canada Limited such quantities of uranium of normal isotopic composition, and to the extent practical in such form, as may be required for the power reactor program in Canada and under such terms and conditions as may be agreed, subject to the availability of supply and the needs of the United States program.

C. The Commission will continue the present understanding with Atomic Energy of Canada Limited, a wholly-owned corporation of the Government of Canada, covering the sale of heavy water for use in the NRX and NRU reactors. The Commission will also sell to Atomic Energy of Canada Limited, under such terms and conditions as may be agreed, such quantities of heavy water as may be required in the power reactor program in Canada, subject to the availability of supply and the needs of the United States program.

D. It is understood and agreed that the existing contract between the Commission and Atomic Energy of Canada Limited relating to the sale of plutonium, and extensions thereof, will continue in full force and effect.

E. Collaboration between the two countries in the field of raw materials has resulted in the development of substantial uranium production in Canada which has been made available to the United States under arrangements and contracts now in effect. These arrangements and contracts shall remain in full force and effect except as modified or revised by mutual agreement.

F. As may be necessary and as mutually agreed in connection with the subjects of agreed exchange of information as provided in Article II, and under the limitations set forth therein, specific arrangements may be made from time to time between the parties for lease or sale and purchase of non-research quantities of other materials under such terms and conditions as may be mutually agreed, except as provided in Article VII.

Article VII

MATERIALS AND FACILITIES PRIMARILY OF MILITARY SIGNIFICANCE

The Commission will not transfer any materials under Article III A or Article VI F and will not transfer or permit the export of any materials or equipment and devices under Article IV and Article V if such materials or equipment and devices are in the opinion of the Commission primarily of military significance.

Article VIII

CLASSIFICATION POLICIES

The Governments of the United States of America and Canada agree that mutually agreed classification policies shall be maintained with respect to all information and materials, including equipment and devices, exchanged under this Agreement. In addition, the parties intend to continue the present practice of periodic consultation with each other on the classification of atomic energy information.

Article IX

PATENTS

A. With respect to any invention or discovery employing information which has been communicated hereunder and made or conceived thereafter during the period of this Agreement, and in which invention or discovery rights are owned by the Government of the United States or by the Government of Canada or an agency or corporation owned or controlled by either, each party :

(1) Agrees to transfer and assign to the other all right, title, and interest in and to any such invention, discovery, patent application or patent in the country of the other, to the extent owned, subject to a royalty-free, non-exclusive, irrevocable license for its own governmental purposes and for purposes of mutual defense.

(2) Shall retain all right, title, and interest in and to any such invention, discovery, patent application or patent in its own or third countries but will, upon request of the other party, grant to the other party a royalty-free, non-exclusive, irrevocable license for its own governmental purposes in such countries including use in the production of materials in such countries for sale to the other party by a contractor of such other party. Each party may deal with any such invention, discovery, patent application or patent in its own country and all countries other than that of the other party as it may desire, but in no event shall either party

discriminate against citizens of the other country in respect of granting any license under the patents owned by it in its own or any other country.

(3) Waives any and all claims against the other party for compensation, royalty or award as respects any such invention or discovery, patent application or patent and releases the other party with respect to any such claim.

B. (1) No patent application with respect to any classified invention or discovery made or conceived during the period of this Agreement in connection with subject matter communicated hereunder may be filed by either party except in accordance with mutually agreed upon conditions and procedure.

(2) No patent application with respect to any such classified invention or discovery may be filed in any country not a party to this Agreement except as may be mutually agreed and subject to Article X.

(3) Appropriate secrecy or prohibition orders will be issued for the purpose of effectuating this provision.

Article X

SECURITY

A. The Governments of the United States of America and Canada have adopted similar security safeguards and standards in connection with their respective atomic energy programs. The two governments agree that all classified information and material, including equipment and devices, within the scope of this Agreement, will be safeguarded in accordance with the security safeguards and standards prescribed by the security arrangement between the Commission and the Atomic Energy Control Board of Canada in effect on June 15, 1955.

B. It is agreed that the recipient party of any material, including equipment and devices, and of any classified information under this Agreement, shall not further disseminate such information, or transfer such material, including equipment and devices, to any other country without the written consent of the originating country. It is further agreed that neither party to this Agreement will 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 written consent of such other party.

Article XI

GUARANTIES PRESCRIBED BY THE UNITED STATES ATOMIC ENERGY ACT OF 1954

The Government of Canada guarantees that :

A. The security safeguards and standards prescribed by the security arrangements between the Commission and the Atomic Energy Control Board of Canada in effect on June 15, 1955 will be maintained with respect to all classified information and materials, including equipment and devices, exchanged under this Agreement.

B. No material, including equipment and devices, transferred to the Government of Canada or authorized persons under its jurisdiction by purchase or otherwise pursuant to this Agreement will be used for atomic weapons, or for research on or development of atomic weapons, or for any other military purpose.

C. No material, including equipment and devices, or any Restricted Data transferred to the Government of Canada or authorized persons under its jurisdiction pursuant to this Agreement will be transferred to unauthorized persons or beyond the jurisdiction of the Government of Canada, except as the Commission may agree to such a transfer to another nation, and then only if the transfer of the material or Restricted Data is within the scope of an Agreement for Cooperation between the United States and the other nation.

Article XII

GUARANTIES BY THE GOVERNMENT OF THE UNITED STATES OF AMERICA

The Government of the United States of America guarantees that :

A. The security safeguards and standards prescribed by the security arrangements between the Commission and the Atomic Energy Control Board of Canada in effect on June 15, 1955 will be maintained with respect to all classified information and materials, including equipment and devices, exchanged under this Agreement.

B. No material, including equipment and devices, or any Restricted Data transferred to the Government of the United States or authorized persons under its jurisdiction pursuant to this Agreement, will be transferred to unauthorized persons or beyond the jurisdiction of the Government of the United States of America, except as the Government of Canada may agree to such a transfer to another nation.

*Article XIII*STATEMENT CONCERNING CONSTRUCTION OF ARTICLE II A AND B (2) AND
ARTICLE XI B

Article II A and B (2) and Article XI B shall not be construed to prevent the Government of Canada from selling materials produced in its reactors to the Government of the United States for defense use or from making available, to the extent the Government of Canada may agree to do so, its reactor testing facilities for use by the Government of the United States in connection with the defense aspects of atomic energy.

Article XIV

DEFINITIONS

For purposes of this Agreement :

A. "Classified" means a security designation of "Confidential" or higher applied under the laws and regulations of either Canada or the United States to any data, information, materials, services or any other matter, and includes "Restricted Data".

B. "Equipment and devices" means any instrument, apparatus or facility, and includes production facilities and utilization facilities and component parts thereof.

C. "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 of this Agreement.

D. "Pilot Plant" means a device operated to acquire specific data for the design of a full-scale plant and which utilizes the process, or a portion thereof, and the type of equipment which would be used in a full-scale production plant.

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. The terms "production facilities," "utilization facilities," "source materials," "special nuclear materials," "by-product material," "Restricted Data," and "atomic weapon" are used in this Agreement as defined in the United States Atomic Energy Act of 1954.

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

DONE at Washington in duplicate this 15th day of June, 1955.

For the Government of the United States of America :

Robert MURPHY

Lewis L. STRAUSS

For the Government of Canada :

A. D. P. HEENEY

W. J. BENNETT
