



EUROPEAN COMMISSION

Brussels, 26.7.2011
SEC(2011) 969 final

RECOMMENDATION FROM THE COMMISSION TO THE COUNCIL

**on the approval of an Agreement for cooperation in the peaceful uses of nuclear energy
between the European Atomic Energy Community (Euratom) and the Government of
Canada**

RECOMMENDATION FROM THE COMMISSION TO THE COUNCIL

on the approval of an Agreement for cooperation in the peaceful uses of nuclear energy between the European Atomic Energy Community (Euratom) and the Government of Canada

1. INTRODUCTION

The Agreement between Euratom Atomic Energy Community and the Government of Canada for cooperation in the peaceful uses of atomic energy covers most fields of mutual interest.

The Agreement has been amended five times since it was signed fifty years ago and these successive modifications make it difficult to implement. The negotiating mandate was adopted by the Council on 27 July 2009. The aim of the negotiations was to simplify the Agreement, provided that additional provisions (in particular, on technology transfer) are incorporated.

The Agreement provides for a broad cooperation in the area of peaceful uses of nuclear energy setting up the overall framework for political, technical and industrial cooperation. It will create a legal framework both for the governments and the industrial operators of the Parties which will facilitate the cooperation in this field between the Parties.

2. IMPORTANCE OF THE AGREEMENT

The importance of concluding this Agreement is mainly based on commercial needs.

Canada has been the world's second largest uranium producer for many years, accounting for about 22% of world output. Production is expected to increase significantly from 2013 as new mines will come into operation. With known uranium resources of 572,000 tonnes of U₃O₈ (485,000 tU), and continued exploration, Canada will have a significant role in meeting future world demand.

For many years, Canada has been a leader in nuclear research and technology, exporting full reactor systems. The country also plans to expand its nuclear capacity over the next 10 years by building nine new reactors.

For Euratom, the interest in signing this Agreement stems from the fact that Canada is one of its main suppliers of natural uranium. Facilitating trade in the nuclear domain contributes to the Community's policy of security of energy supply and diversification of energy sources.

Furthermore, the conclusion of the present Agreement reaffirms the non-proliferation commitment of Canada, the Community and the Governments of the Member States of the European Union, the strengthening and strict application of safeguards and export control as well as physical protection arrangements.

3. GENERAL SCHEME OF THE AGREEMENT

The Agreement has as its objective cooperation in the peaceful uses of nuclear energy between Euratom and Canada. The scope of cooperation (Article III) mainly comprises nuclear safety, the supply of nuclear material, technology transfer, transfer of equipment and the transfer of tritium and tritium-related equipment.

The Agreement further defines the Items subject to this Agreement (Article IV) – different forms of nuclear and non-nuclear material, equipment, tritium and tritium-related equipment – and describes in detail modalities concerning the issue of enrichment (Article VI). The Agreement contains a series of provisions determining criteria for the transfer of nuclear material as well as the way of resolving conflicting situations. It is underlined that nuclear material shall be used for peaceful purposes and in compliance with the safeguards agreements (for the Community: the Euratom safeguards pursuant to the Euratom Treaty and to the IAEA safeguards and its Additional Protocols¹).

International transfers and trade in nuclear materials are explicated in Article VII. The Agreement restates the principles of free movement of nuclear materials within the Community and tackles the issue of Reprocessing in Article VIII. Intellectual property issues (Article IX) are dealt with in detail, as well as the modalities of Exchange of Information between the Parties (Article X).

In order to guarantee the smooth implementation of the Agreement, a specific article on Consultation and Arbitration (Article XII) is inserted to address questions on the correct application of the Agreement. The duration of the Agreement is set with an initial period of 10 years, thereafter automatically renewed for additional periods of five years (Article XIV).

4. CONCLUSION

The Commission considers that the Agreement for cooperation in the peaceful uses of nuclear energy between the European Atomic Energy Community and the Government of Canada, the adoption of which is proposed:

- is in conformity with the negotiating directives issued by the Council on 27 July 2009;
- fulfils the goals of simplifying, updating and extending the current Agreement;
- confirms the clear commitment of the two Parties in favour of non-proliferation and a high level of nuclear safety in order to guarantee the peaceful and safe use of nuclear energy;
- is in line with the Community's policy on energy security of supply;
- will further strengthen the very good relations between the EU and the Canada in the field of energy policy cooperation.

The Commission therefore recommends to the Council to approve, pursuant to the second paragraph of Article 101 of the Treaty establishing the European Atomic Energy Community,

¹ INFCIRC/540.

the Agreement for cooperation in the peaceful uses of nuclear energy between the European Atomic Energy Community and the Government of Canada, in Annex.

ANNEX

AGREEMENT BETWEEN THE GOVERNMENT OF CANADA AND THE EUROPEAN ATOMIC ENERGY COMMUNITY (EURATOM) FOR CO-OPERATION IN THE PEACEFUL USES OF NUCLEAR ENERGY

PREAMBLE

The Government of Canada and the European Atomic Energy Community (Euratom), hereinafter referred to as "the Community",

CONSIDERING that the Government of Canada and the Community have expressed their mutual desire for the development of close co-operation in the peaceful and non-explosive uses of nuclear energy;

DESIRING to collaborate with each other in order to promote and enlarge the contribution which the development of the peaceful uses of nuclear energy can make to welfare and prosperity in Canada and within the Community;

RECOGNIZING that the Agreement between Canada and the European Atomic Energy Community for co-operation in the area of nuclear research signed in 1998 provides for co-operation in the fields of common interest of Parties in the peaceful, non-explosive, non-military uses of nuclear energy;

REAFFIRMING the strong commitment of the Government of Canada, the Community and the Governments of its Member States to nuclear non-proliferation including the strengthening and efficient application of the related safeguards and export control regimes under which co-operation in the peaceful uses of nuclear energy between Canada and the Community should be carried out;

REAFFIRMING the support of the Government of Canada, the Community and the Governments of its Member States for the objectives of the International Atomic Energy Agency (hereinafter referred to as "IAEA") and its safeguards system;

WHEREAS Canada and all Member States of the Community are Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, hereinafter referred to as "NPT";

NOTING that nuclear safeguards are applied in all Member States of the Community pursuant both the Treaty establishing the European Atomic Energy Community (hereinafter referred to as "the Euratom Treaty") and under safeguards agreements concluded between the Community, its Member States and the IAEA;

NOTING that account should be taken of the commitments made by the Government of Canada and the Government of each Member State of the Community in the framework of the Nuclear Suppliers Group;

RECOGNIZING the principle of the free movement of nuclear material, equipment, non-nuclear material, and technology within the Community;

AGREEING that the Agreement should be in compliance with international obligations of the European Union and the Government of Canada under the World Trade Organisation;

REITERATING commitments of the Government of Canada and the Governments of Member States of the Community to their bilateral agreements in the peaceful uses of nuclear energy;

CONSIDERING that an arrangement providing for co-operation in the peaceful uses of nuclear energy would reinforce an existing fruitful exchange of experience, provide opportunities for mutually beneficial action and reinforce solidarity within Europe and across the Atlantic;

HAVE AGREED AS FOLLOWS:

Article I

Definitions

For the purpose of this Agreement, except as otherwise specified therein,

1. "Parties" means the Government of Canada on the one hand and the Community on the other hand; the term "Party" means one of the above "Parties";

"the Community" means both:

- (a) the legal person created by the Euratom Treaty; and
- (b) the territories to which the Euratom Treaty applies;

2. "persons" means any natural person, undertaking or other entity governed by the applicable laws and regulations in the respective territorial jurisdiction of the Parties, but does not include the Parties;

3. "competent authority" means:

- (a) for the Government of Canada, the Canadian Nuclear Safety Commission;
- (b) for the Community, the European Commission

or such other authority as the Party concerned may at any time notify in writing to the other Party;

4. "equipment" means items of machinery or plant, as listed in Annex A.1 to this agreement, specially suitable for use in nuclear energy projects;

5. "non-nuclear material" means:

Deuterium and heavy water: deuterium, heavy water (deuterium oxide) and any other deuterium compound in which the ratio of deuterium to hydrogen exceeds 1:5000, for use in a nuclear reactor,

Nuclear grade graphite: graphite, for use in a nuclear reactor as moderator material, having a purity level better than 5 parts per million boron equivalent and with a density greater than 1.50 grams per cubic centimetre;

6. "nuclear material" means any source material or special fissionable material as those terms are defined in Article XX of the Statute of the IAEA. Any determination by the Board of Governors of the IAEA under Article XX of the IAEA's Statute that amends the list of material considered to be "source material" or "special fissionable material", shall only have effect under this Agreement when the Parties have informed each other in writing that they accept that determination;
7. "technology" has the meaning defined in Annex A of IAEA Information Circular INFCIRC/254/Rev.9/Part 1 (Guidelines for Nuclear Transfers);
8. "fusion programme" means the Euratom programme for research and training in the field of controlled thermonuclear fusion as adopted by Decision of the Council of the European Union, pursuant to Article 7 of the Euratom Treaty, as well as any further programme in that field adopted by Council Decision;
9. "tritium" refers to compounds and mixtures that contain tritium in which the ratio of tritium to hydrogen by atoms is greater than 1 part per 1000;
10. "tritium-related equipment and technology" means equipment especially designed or prepared for the production, recovery, extraction, concentration or handling of tritium and its compounds and mixtures in the framework of the specific needs of the fusion programme or the operation of Pressurized Heavy Water Reactors;
11. "by-product" means special fissionable material derived by one or more processes, whether successive or not, from nuclear material transferred pursuant to this Agreement.

Article II

Objective

1. The objective of this Agreement is to provide a framework for co-operation between the Parties in the peaceful uses of nuclear energy on the basis of mutual benefit and reciprocity and without prejudice to the respective competences of each Party.
2. Nuclear material, equipment, non-nuclear material, tritium and tritium-related equipment transferred pursuant to this Agreement or nuclear material produced as a by-product shall not be used other than for peaceful purposes; nor shall they be used for any nuclear explosive device, for research or for development of any such device.

Article III

Scope of co-operation

The co-operation intended by this Agreement relates to the peaceful uses of nuclear energy and may include, inter alia:

- (a) the supply of information related to:
 - (i) health and safety,
 - (ii) equipment, facilities and devices (including the supply of designs, drawings, and specifications),
 - (iii) uses of nuclear material, non-nuclear material, equipment, facilities and devices (including manufacturing processes and specifications); and
 - (iv) external nuclear assistance programmes of the Parties;
- (b) the supply of nuclear material, non-nuclear material, and equipment;
- (c) technology transfer, including the supply of information as defined in point (a) of this article, provided that the individual Member States of the Community involved accept placing such transfers in the framework of this Agreement;
- (d) transfer of equipment which has been designated by the Parties as equipment designed, constructed or operated on the basis of or by the use of information obtained from the other Party and which is within the jurisdiction of one of the Parties at the time of designation;
- (e) the procurement of equipment and devices;
- (f) the use of intellectual property rights;
- (g) access to and use of equipment and facilities;
- (h) direct or indirect transfer of tritium for its use in the fusion programme and of tritium-related equipment and technology for its use in the fusion programme or the operation of Pressurized Heavy Water Reactors, or its return to the supplying Party;
- (i) cooperation in planning and execution of the Parties' external nuclear assistance programmes;
- (j) other areas relevant to the subject of this Agreement.

Article IV

Items subject to the Agreement

1. Nuclear material, non-nuclear material, equipment, tritium and tritium-related equipment transferred between the Parties or their respective persons, whether directly or through a third country, shall become subject to this Agreement upon their

entry into the territorial jurisdiction of the receiving Party, provided that the supplying Party has notified the receiving Party in writing of the intended transfer and that the receiving Party has confirmed in writing that such item will be held subject to this Agreement, and that the proposed recipient, if other than the receiving Party, will be an authorised person under the territorial jurisdiction of the receiving Party.

2. Nuclear material, non-nuclear material, equipment, tritium and tritium-related equipment referred to in paragraph 1 of this Article shall remain subject to the provisions of this Agreement until it has been determined, in accordance with the procedures set out in the Administrative Arrangement:
 - that such item has been re-transferred beyond the jurisdiction of the receiving Party;
 - that nuclear material is no longer usable for any nuclear activity relevant from the point of view of safeguards referred to in subparagraph a) of paragraph 6 of Article VII or has become practically irrecoverable;
 - that equipment and non-nuclear material are no longer usable for nuclear purposes;
 - that tritium and tritium-related equipment are no longer usable for the fusion programme or the operation of Pressurized Heavy Water Reactors;
 - or that the Parties agree that it should no longer be subject to this Agreement.
3. Technology transfer shall be subject to this Agreement for the Member States of the Community which agree to place such transfers in the framework of this Agreement. Technology transferred between the Parties or their respective persons, whether directly or through a third country, shall become subject to this Agreement upon its entry into the territorial jurisdiction of the receiving Party, provided that the supplying Party has notified the receiving Party in writing of the intended transfer and that the receiving Party has confirmed in writing that such item will be held subject to this Agreement, and that the proposed recipient, if other than the receiving Party, will be an authorized person under the territorial jurisdiction of the receiving Party.
4. Tritium and tritium-related equipment and technology will be used solely for the Fusion Programme and Pressurized Heavy Water reactors.
5. In addition to the items subject to this Agreement pursuant to paragraph 1 above, the following material, nuclear material and equipment will be subject to this Agreement:
 - i) Non-nuclear material or nuclear material that is produced or processed by the use of the installations subject to this Agreement listed in Annex A.2;
 - ii) Nuclear material that is produced or processed by the use of any nuclear material or non-nuclear material subject to this Agreement; and

- iii) Equipment which the recipient Party, or the supplying Party after consultation and agreement with the recipient Party, has designated as being designed, constructed, manufactured or operated on the basis of, or by the use of technology subject to this Agreement, transferred pursuant to paragraph 1 above.

Article V

Implementation arrangements

1. The provisions of this Agreement shall be implemented in good faith in such a manner as to avoid hampering, delay or undue interference in the nuclear activities in Canada and in the Community and so as to be consistent with the prudent management practices required for the economic and safe conduct of nuclear activities.
2. The provisions of this Agreement shall not be used for the purpose of seeking commercial or industrial advantages, nor of interfering with the commercial or industrial interests, whether domestic or international, of either Party or authorised persons, nor of interfering with the nuclear policy of either Party or of the Governments of the Member States of the Community, nor of hindering the promotion of the peaceful and non-explosive uses of nuclear energy, nor of hindering the movement of items subject to or notified to be made subject to this Agreement either within the respective territorial jurisdiction of the Parties or between the Government of Canada and the Community.
3. In implementing the provisions of this Agreement, Canada, the Community and its Member States shall act in conformity with the provisions of the Convention on Nuclear Safety (IAEA Information Circular INFCIRC/449), the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (IAEA Information Circular INFCIRC/546), the Convention on Assistance in the case of a Nuclear Accident or Radiological Emergency (IAEA Information Circular INFCIRC/336), and the Convention on Early Notification of a Nuclear Accident (IAEA Information Circular INFCIRC/335).
4. The competent authorities of both Parties shall establish an administrative arrangement to ensure the effective implementation of the provisions of this Agreement and shall consult regularly or at any other time at the request of either competent authority.
5. Consistent with the laws, regulations and policies of the Parties, the administrative arrangement may include procedures to, inter alia:
 - (a) obtain written consent of the other Party prior to the transfer of any nuclear material, non-nuclear material, equipment or technology subject to the Agreement as specified in Article VII, paragraph (6)(d);
 - (b) manage generic retransfers of nuclear material, non-nuclear material, equipment or technology;

- (c) report on and account for holdings of nuclear material subject to this Agreement according to the principles of equivalence, fungibility, and proportionality.
 - (d) determine that an item is no longer subject to the Agreement in accordance with the provisions of Article IV, paragraph 2.
6. An administrative arrangement established pursuant to paragraph 4 of this Article may be amended by written agreement between the competent authorities of the Parties.

Article VI

Enrichment

Prior to the enrichment of any nuclear material subject to this Agreement to twenty (20) percent or more in the isotope U 235, the written consent of both Parties shall be obtained and the IAEA shall be notified. Such consent shall describe the conditions under which the uranium enriched to twenty (20) percent or more may be used. An agreement to facilitate the implementation of this provision may be established by the Parties.

Article VII

International transfers and trade in nuclear materials

1. Any nuclear transfer carried out pursuant to the co-operation activities shall be made in accordance with the relevant international commitments of the Community, the Member States of the Community, and the Government of Canada in relation to peaceful uses of nuclear energy as listed in paragraph 6 of this Article.
2. The Parties shall, to such extent as is practicable, assist each other in the procurement, by either Party or by persons within the Community or under the jurisdiction of the Government of Canada, of nuclear material, non-nuclear material, equipment and other requisites for nuclear energy research, development and production within the Community or in Canada.
3. The continuation of the co-operation envisaged in the present Agreement shall be contingent upon the mutually satisfactory application of the system for safeguards and control established by the Community in accordance with the Euratom Treaty and of the measures for accounting for the use of nuclear material, non-nuclear material or equipment established by the Government of Canada.
4. The provisions of this Agreement shall not be used to impede the free movement of nuclear material, non-nuclear material, equipment, tritium, tritium-related equipment and technology within the territory of the Community.
5. Transfers of nuclear material and appropriate services shall be carried out under fair commercial conditions. The implementation of this paragraph shall be without prejudice to the Euratom Treaty and its derived legislation.
6. a) Transfer of nuclear material shall be subject to the following conditions:

- i) In the Community, to the Euratom safeguards pursuant to the Euratom Treaty and to the IAEA safeguards pursuant to the following safeguards agreements, as relevant, and as they may be revised and replaced, so long as coverage as required by the Non-Proliferation Treaty is provided for:
 - The Agreement between the Community's non-nuclear weapon Member States, European Atomic Energy Community and the International Atomic Energy Agency, which entered into force on 21 February 1977 (published as INFCIRC/193);
 - The Agreement between France, Euratom Atomic Energy Community and the International Atomic Energy Agency, which entered into force on 12 September 1981 (published as INFCIRC/290) and constitutes France's voluntary offer agreement with the Agency. The Agreement between the United Kingdom, European Atomic Energy Community and the International Atomic Energy Agency, which entered into force on 14 August 1978 (published as INFCIRC/263) and constitutes United Kingdom's voluntary offer agreement with the Agency.
 - The Additional Protocols concluded on 22 September 1998 which entered into force on 30 April 2004 on the basis of the document published as INFCIRC/540 (Strengthened Safeguards System, Part II);
 - ii) In Canada, to the IAEA safeguards pursuant to the Agreement between Canada and the International Atomic Energy Agency for the Application of Safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons, which entered into force on 21 February 1972 (published as INFCIRC/164); supplemented by an Additional Protocol concluded on 24 September 1998 on the basis of the document published as INFCIRC/164/Add.1 (Strengthened Safeguards System, Part II) which entered into force on 8 September 2000.
- b) In the event of the application of any of the Agreements with the IAEA referred to in paragraph 6 a) of this article being suspended or terminated for any reason within the Community or Canada, the relevant Party shall enter into an agreement with the IAEA which provides for effectiveness and coverage equivalent to that provided by the safeguards agreements referred to in provisions i) or ii) of paragraph 6 a) of this article, or, if that is not possible,
- the Community, as far as it is concerned, shall apply safeguards based on the Euratom safeguards system, which provides for effectiveness and coverage equivalent to that provided by the safeguards agreements referred to in provision i) of paragraph 6 a) of this article or, if that is not possible,
 - the Parties shall enter arrangements for the application of safeguards, which provide for effectiveness and coverage equivalent to that provided by the safeguards agreements referred to in provisions i) or ii) of paragraph 6 a).
- c) Application of physical protection measures shall be at all times at levels which satisfy as a minimum the criteria set out in Annex C to IAEA Information Circular INFCIRC/254/Rev.9/Part 1 (Guidelines for Nuclear Transfers);

supplementary to this document, the Member States of the Community, the European Commission, as appropriate, and Canada will refer when applying physical protection measures to the recommendations in IAEA Information Circular INFCIRC/225/Rev.5 (Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities). International transport shall be subject to the provisions of the International Convention on the Physical Protection of Nuclear Material (IAEA Information Circular INFCIRC/274/Rev.1) and to the IAEA Regulations for the Safe Transport of Radioactive Materials (IAEA Safety Standards Series No. TS-R-1).

- d) Nuclear material, non-nuclear material, equipment and technology subject to this Agreement shall not be transferred beyond the territorial jurisdiction of the receiving Party without the prior written consent of the supplier Party, except in accordance with sub-paragraph (e).
- e) Upon entry into force of this agreement, the competent authorities of both Parties shall exchange lists of third countries to which retransfers of natural uranium, depleted uranium, other source materials, uranium enriched to less than 20% in the isotope U235, and non-nuclear materials are authorised by the other Party. The competent authorities of each Party shall notify the other of changes to its list of third countries. Procedures acceptable to the Parties related to such retransfers shall be established.
- f) Retransfers of any items subject to this Agreement outside the jurisdiction of the Parties shall only be made under the framework of the commitments undertaken by the group of nuclear supplier countries known as the Nuclear Suppliers Group, as set out in IAEA Information Circular INFCIRC/254/Rev. 9/Part 1.
- g) Retransfers of tritium and tritium-related equipment outside the territories of the Parties are subject to the prior written consent of the relevant Party.

Article VIII

Reprocessing

The Parties grant their consent to the reprocessing of nuclear fuel containing nuclear material subject to this agreement provided that such reprocessing takes place in accordance with the conditions set out in Annex B.

Article IX

Intellectual Property

The Parties shall ensure the adequate and effective protection of intellectual property created and technology transferred pursuant to the co-operation under this Agreement in accordance with the relevant international agreements and the laws and regulations in force in Canada and in the European Union and Community or their Member States.

Article X

Exchange of information

1.
 - (a) The Parties may make available to each other and to persons within the Community or under the jurisdiction of the Government of Canada, information at their disposal on matters within the scope of this Agreement.
 - (b) The supply of information received from any third party under terms preventing such supply shall be excluded from the scope of Agreement.
 - (c) Information regarded by the supplying Party as being of commercial value shall be supplied only under the terms and conditions specified by the Parties.
2.
 - (a) The Parties shall encourage and facilitate the exchange of information between persons under the jurisdiction of the Government of Canada on the one hand and persons within the Community on the other hand on matters within the scope of this Agreement.
 - (b) Information owned by such persons shall be supplied only with the consent of and under the terms and conditions to be specified by those persons.
3. The Parties shall to such extent as is practicable provide technical advice to each other or to persons within the Community or under the jurisdiction of the Government of Canada by the secondment of experts or in such other ways as may be agreed.
4. Each Party shall, wherever possible, provide in its own schools or facilities, and assist in obtaining elsewhere in Canada or within the Community, training in subjects relevant to the peaceful uses of nuclear energy for students and trainees recommended by the other.

Article XI

Applicable law

1. The co-operation provided for in this Agreement shall be in accordance with the laws, regulations in force in Canada and within the European Union and Community as well as with the international agreements entered into by the Parties. For the Community, the applicable law includes the Euratom Treaty and its derived legislation.
2. Each Party shall be responsible toward the other for ensuring that the provisions of this Agreement are accepted and complied with as to Canada by all of its governmental enterprises and by all persons under its jurisdiction, and as to the Community by all persons within the Community to whom authorisation has been granted pursuant to this Agreement.
3. The revised versions of the IAEA documents and Information Circulars mentioned in this Agreement will be taken into account and made applicable when agreed by the Parties.

Article XII

Consultation and arbitration

1. At the request of either Party, representatives of the Parties shall meet when necessary to consult with each other on matters arising out of the application of the present Agreement, to supervise its operation and to discuss arrangements for co-operation additional to those provided in the present Agreement. Such consultations may take also the form of an exchange of correspondence.
2. Any dispute arising out of the interpretation or application of this Agreement which is not settled by negotiation or as may otherwise be agreed between the Parties shall, on the request of either Party, be submitted to an arbitral tribunal which shall be composed of three arbitrators. Each Party shall designate one arbitrator and the two arbitrators so designated shall elect a third, not a national of either Party, who shall be the Chairman. If within thirty days of the request for arbitration either Party has not designated an arbitrator, the other Party to the dispute may request the President of the International Court of Justice to appoint an arbitrator to the Party which has not designated an arbitrator. If within thirty days of the designation or appointment of arbitrators for both the Parties the third arbitrator has not been elected, either Party may request the President of the International Court of Justice to appoint the third arbitrator. A majority of the members of the arbitral tribunal shall constitute a quorum, and all decisions shall be made by majority vote of all the members of the arbitral tribunal. The arbitral procedure shall be fixed by the tribunal. The decisions of the tribunal shall be binding on both Parties and implemented by them. The remuneration of the arbitrators shall be determined on the same basis as that for ad hoc judges of the International Court of Justice.

Article XIII

Status of Annexes

The Annexes to this Agreement form an integral part of this Agreement. They may be modified by mutual consent in writing of the Government of Canada and the European Commission without amendment of this Agreement.

Article XIV

Entry into force and duration

1. This Agreement shall enter into force on the date of the latter written notification that internal procedures necessary for its entry into force have been completed by the Parties.
2. This Agreement shall remain in force for a period of ten years. Thereafter this Agreement shall be automatically renewed for additional periods of five years, unless, at least six months before the expiration of any such additional period, a Party notifies the other Party of its intention to terminate the Agreement.
3. If either Party or any Member State of the Community violates any of the material provisions of the Agreement, the other Party may, on giving written notice to that effect, suspend or terminate in whole or in part co-operation under this Agreement. Before either Party takes action to that effect, the Parties shall consult with a view to reaching agreement on the corrective measures to be taken and on the time-scale within which such measures shall be taken. Such action shall be taken only if there

has been failure to take agreed measures within the agreed time or, in the event of failure to reach agreement after the lapse of a period of time defined by the Parties.

4. The present Agreement replaces the Agreement signed by the Parties on the 6th day of October, 1959² and amended on 1959, 1978, 1981, 1985 and 1991.

This Agreement shall be drawn up in duplicate, in the Bulgarian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Italian, Latvian, Lithuanian, Maltese, Polish, Portuguese, Romanian, Slovak, Slovenian, Spanish and Swedish languages, all twenty-two texts being equally authentic.

IN WITNESS WHEREOF, the undersigned, being duly authorized thereto have signed the present Agreement.

For the European Atomic Energy Community

For the Government of Canada

² OJ 1165/59

ANNEX A.1 - Equipment

1. Nuclear reactors and especially designed or prepared equipment and components therefor
 - 1.1. Complete nuclear reactors
 - 1.2. Nuclear reactor vessels
 - 1.3. Nuclear reactor fuel charging and discharging machines
 - 1.4. Nuclear reactor control rods and equipment
 - 1.5. Nuclear reactor pressure tubes
 - 1.6. Zirconium tubes
 - 1.7. Primary coolant pumps
 - 1.8. Nuclear reactor internals
 - 1.9. Heat exchangers
 - 1.10. Neutron detection and measuring instruments
2. Plants for the reprocessing of irradiated fuel elements, and equipment especially designed or prepared therefor
 - 2.1. Irradiated fuel element chopping machines
 - 2.2. Dissolvers
 - 2.3. Solvent extractors and solvent extraction equipment
 - 2.4. Chemical holding or storage vessels
3. Plants for the fabrication of nuclear reactor fuel elements, and equipment especially designed or prepared therefor
4. Plants for the separation of isotopes of natural uranium, depleted uranium or special fissionable material and equipment, other than analytical instruments, especially designed or prepared therefor
 - 4.1. Gas centrifuges and assemblies and components especially designed or prepared for use in gas centrifuges
 - 4.1.1. Rotating components
 - 4.1.2. Static components
 - 4.2. Especially designed or prepared auxiliary systems, equipment and components for gas centrifuge enrichment plants

4.2.1. Feed systems/product and tails withdrawal systems

4.2.2. Machine header piping systems

Especially designed or prepared piping systems and header systems for handling UF₆ within the centrifuge cascades.

4.2.3. Special shut-off and control valves

4.2.4. UF₆ mass spectrometers/ion sources

4.2.5. Frequency changers

4.3. Especially designed or prepared assemblies and components for use in gaseous diffusion enrichment

4.3.1. Gaseous diffusion barriers

4.3.2. Diffuser housings

4.3.3. Compressors and gas blowers

4.3.4. Rotary shaft seals

4.3.5. Heat exchangers for cooling UF₆

4.4. Especially designed or prepared auxiliary systems, equipment and components for use in gaseous diffusion enrichment

4.4.1. Feed systems/product and tails withdrawal systems

Especially designed or prepared process systems, capable of operating at pressures of 300kPa (45psi) or less.

4.4.2. Header piping systems

4.4.3. Vacuum systems

4.4.4. Special shut-off and control valves

4.4.5. UF₆ mass spectrometers/ion sources

4.5. Especially designed or prepared systems, equipment and components for use in aerodynamic enrichment plants

4.5.1. Separation nozzles

4.5.2. Vortex tubes

4.5.3. Compressors and gas blowers

4.5.4. Rotary shaft seals

- 4.5.5. Heat exchangers for gas cooling
- 4.5.6. Separation element housings
- 4.5.7. Feed systems/product and tails withdrawal systems
- 4.5.8. Header piping systems
- 4.5.9. Vacuum systems and pumps
- 4.5.10. Special shut-off and control valves
- 4.5.11. UF₆ mass spectrometers/Ion sources
- 4.5.12. UF₆/carrier gas separation systems
- 4.6. Especially designed or prepared systems, equipment and components for use in chemical exchange or ion exchange enrichment plants
 - 4.6.1. Liquid-liquid exchange columns (Chemical exchange)
 - 4.6.2. Liquid-liquid centrifugal contactors (Chemical exchange)
 - 4.6.3. Uranium reduction systems and equipment (Chemical exchange)
 - 4.6.4. Feed preparation systems (Chemical exchange)
 - 4.6.5. Uranium oxidation systems (Chemical exchange)
 - 4.6.6. Fast-reacting ion exchange resins/adsorbents (Ion exchange)
 - 4.6.7. Ion exchange columns (Ion exchange)
 - 4.6.8. Ion exchange reflux systems (Ion exchange)
- 4.7. Especially designed or prepared systems, equipment and components for use in laser-based enrichment plants
 - 4.7.1. Uranium vaporization systems (AVLIS)
 - 4.7.2. Liquid uranium metal handling systems (AVLIS)
 - 4.7.3. Uranium metal 'product' and 'tails' collector assemblies (AVLIS)
 - 4.7.4. Separator module housings (AVLIS)
 - 4.7.5. Supersonic expansion nozzles (MLIS)
 - 4.7.6. Uranium pentafluoride product collectors (MLIS)
 - 4.7.7. UF₆/carrier gas compressors (MLIS)
 - 4.7.8. Rotary shaft seals (MLIS)

4.7.9. Fluorination systems (MLIS)

4.7.10. UF₆ mass spectrometers/ion sources (MLIS)

4.7.11. Feed systems/product and tails withdrawal systems (MLIS)

4.7.12. UF₆/carrier gas separation systems (MLIS)

4.7.13. Laser systems (AVLIS, MLIS and CRISLA)

4.8. Especially designed or prepared systems, equipment and components for use in plasma separation enrichment plants

4.8.1. Microwave power sources and antennae

Especially designed or prepared microwave power sources and antennae for producing or accelerating ions.

4.8.2. Ion excitation coils

4.8.3. Uranium plasma generation systems

4.8.4. Liquid uranium metal handling systems

4.8.5. Uranium metal 'product' and 'tails' collector assemblies

4.8.6. Separator module housings

4.9. Especially designed or prepared systems, equipment and components for use in electromagnetic enrichment plants

4.9.1. Electromagnetic isotope separators

4.9.2. High voltage power supplies

4.9.3. Magnet power supplies.

5. Plants for the production or concentration of heavy water, deuterium and deuterium compounds and equipment especially designed or prepared therefor

5.1. Water - Hydrogen Sulphide Exchange Towers

5.2. Blowers and Compressors

5.3. Ammonia-Hydrogen Exchange Towers

5.4. Tower Internals and Stage Pumps

5.5. Ammonia Crackers

5.6. Infrared Absorption Analyzers

5.7. Catalytic Burners

5.8. Complete heavy water upgrade systems or columns therefor

6. Plants for the conversion of uranium and plutonium for use in the fabrication of fuel elements and the separation of uranium isotopes as defined in sections 4 and 5 respectively, and equipment especially designed or prepared therefor

6.1. Plants for the conversion of uranium and equipment especially designed or prepared therefor

6.1.1. Especially designed or prepared systems for the conversion of uranium ore concentrates to UO₃

6.1.2. Especially designed or prepared systems for the conversion of UO₃ to UF₆

6.1.3. Especially designed or prepared systems for the conversion of UO₃ to UO₂

6.1.4. Especially designed or prepared systems for the conversion of UO₂ to UF₄

6.1.5. Especially designed or prepared systems for the conversion of UF₄ to UF₆

6.1.6. Especially designed or prepared systems for the conversion of UF₄ to U metal

6.1.7. Especially designed or prepared systems for the conversion of UF₆ to UO₂

6.1.8. Especially designed or prepared systems for the conversion of UF₆ to UF₄

6.1.9. Especially designed or prepared systems for the conversion of UO₂ to UC₁₄

6.2. Plants for the conversion of plutonium and equipment especially designed or prepared therefor

6.2.1. Especially designed or prepared systems for the conversion of plutonium nitrate to oxide

6.2.2. Especially designed or prepared systems for plutonium metal production

ANNEX A.2 - Complete installations

1. Nuclear reactors;
2. Plants for the reprocessing of irradiated fuel elements;
3. Plants for the fabrication of nuclear reactor fuel elements;
4. Plants for the separation of isotopes of natural uranium, depleted uranium or special fissionable material;
5. Plants for the production or concentration of heavy water, deuterium and deuterium compounds;
6. Plants for the conversion of plutonium.

ANNEX B - Reprocessing

The guidelines set forth below should cover reprocessing and plutonium storage and use:

- (a) an effective commitment to non-proliferation should have been made and should continue to be maintained by the party envisaging reprocessing and plutonium storage and use;
- (b) all nuclear material subject to a peaceful uses commitment in facilities involved in reprocessing and the storage and use of plutonium should be subject to IAEA safeguards;
- (c) all nuclear material subject to a peaceful uses commitment in facilities involved in reprocessing and the subsequent storage and use activities, including related transport, should be subject to adequate physical protection measures;
- (d) mutually satisfactory notification and material reporting procedures should be in place between the parties ;
- (e) a description of the current and planned nuclear energy programme including in particular a detailed description of the policy, legal and regulatory elements relevant to reprocessing and plutonium storage and use should be provided by the party envisaging such activities.,
- (f) the parties should agree to periodic and timely consultations at which inter alia the information provided under guideline (e) should be updated and significant changes in the nuclear energy programme would receive the fullest possible consideration ;
- (g) the reprocessing and plutonium storage envisaged should only take place so long as the commitment of the party in question to non-proliferation does not change and so long as the commitment to periodic and timely consultations referred to in guideline (f) is honoured.

DRAFT AGREED MINUTES

In connection with the Agreement between the Government of Canada and the European Atomic Energy Community (EURATOM) for Co-operation in the Peaceful Uses of Nuclear Energy, signed at [...] (hereinafter referred to as "the Agreement"), the undersigned hereby record the following understandings:

- (1) With reference to the provisions of paragraph 3 of Article IV, it is confirmed that they are applicable only to technology transfers made between Canada and the Member States having expressed their willingness to place such transfers in the framework of the Agreement which are listed in the Annex to these Agreed Minutes.
- (2) With reference to the provisions of paragraph 5, sub-paragraph (i), of Article IV, it is understood that it is the Parties' intent to treat foreign-origin nuclear material and non-nuclear material produced or processed in a complete installation as per Annex A.2 supplied by the other Party as being subject to the obligations set out in the Agreement, notably the accountancy and reporting obligations of Article V, paragraph 5.c).
- (3) For the purpose of paragraph 5, sub-paragraph (ii), of Article IV, the Parties wish to emphasize that "non-nuclear material" refers to non-nuclear material supplied in significant quantities to the other Party for the purpose of being used as moderator.
- (4) With reference to the list set out in Annex A.2, it is confirmed that this list does not apply to the transfer of equipment listed in Annex A.1 and that the sole purpose of the list set out in Annex A.2 is in relation to the application of paragraph 5, sub-paragraphs i) and iii), of Article IV, which is limited to full installations.

SIGNED at Brussels, [...]

For the European Atomic Energy Community

For the Government of Canada

ANNEX

List of EU Member States that have expressed their willingness to place technology transfer in the framework of the Agreement.