

# COMMISSION OF THE EUROPEAN COMMUNITIES

COM(76) 593 final

Brussels, 11 November 1976

EURATOM/CANADA AGREEMENT ON SECURITY CONTROLS

(Communication from the Commission to the Council)

COM(76) 593 final



COMMUNICATION FROM THE COMMISSION TO THE COUNCIL

On 29 June 1976, the Council adopted a decision containing interim directives for the Commission to negotiate one or more exchanges of letters supplementing or interpreting the current provisions of the Euratom/Canada Agreement on safeguards of 6 October 1959.

In accordance with these directives, the Commission has negotiated the two exchanges of letters annexed to this communication.

The first of these (Annex I) is in the form of an amendment to the Euratom/Canada Agreement and broadens the safeguards clauses to take into account the new Canadian policy on safeguards based on the Treaty on the Non-Proliferation of Nuclear Weapons and the guiding principles embodied in a "gentleman's agreement" within the framework of the London Club.

The second exchange of letters (Annex II) relating to Article III, 1 (c) of the Euratom/Canada Agreement also specifies, in conformity with the new Canadian safeguards policy, the terms and conditions applicable to the exchanges of information referred to in this subsection.

Furthermore, the Canadians have suggested that certain commitments that cannot be included in the Community agreement should form the subject of a letter (Annex III) to be sent to the Canadian Government by the Member States. These commitments relate to physical protection and transfers of information.

The Commission proposes that the Council approves the texts of the exchanges of letters in Annexes I and II. Furthermore it invites the Member States to accede to the Canadian delegation's request that they should forward the text contained in Annex III (attached) to the Canadian authorities in the most appropriate form.

At the commencement of the negotiations, which have proved difficult, the Commission requested and obtained from the Canadians the assurance that nuclear co-operation between Canada and the Community would continue uninterrupted on the basis of the modus vivendi agreed last January pursuant to Articles IX (3) and XII (1) of the Euratom/Canada Agreement of 6 October 1959. The Council was informed of this arrangement(\*) in DOC. COM(76)133 final of 31 March 1976.

---

(\*) Formation of a Joint Technical Working Group responsible for following up the implementation of the safeguards clauses in the Euratom/Canada Agreement of 1959.

This extension of the present situation, however, will terminate by the end of this year at the latest.

It is therefore necessary to effect the exchanges of letters forming the subject of this communication by 31 December 1976.

ANNEX I

DRAFT EXCHANGE OF LETTERS BETWEEN THE GOVERNMENT  
OF CANADA AND THE COMMISSION

---

(I) From Canada to the Commission.

Mr. Commissioner,

As the Commission has been informed, the Canadian Government has decided to require more stringent safeguards in respect of the sales abroad of Canadian nuclear material, material, equipment and information.

This decision implies an updating of the existing Agreement between the Government of Canada and the European Atomic Energy Community (Euratom) for Co-operation in the Peaceful Uses of Atomic Energy of October 6, 1959, (hereinafter referred to as the Canada/Euratom Agreement of 1959) particularly insofar as it relates to safeguards.

The Canadian Government and the Community consider it necessary to come to an agreement through the present exchange of letters, to provide for the requirements of the new Canadian safeguards policy by amending the relevant provisions of the Canada/Euratom Agreement of 1959.

Accordingly I propose that the Canada/Euratom Agreement of 1959 be amended to include the following provisions relating to safeguards.:

- (a) For the purposes of the Canada/Euratom Agreement of 1959 :
- (i) The term "derived" includes the derivation of all subsequent generations of material.
  - (ii) The term "equipment" as defined in paragraph (e) of Article XIV of the Canada/Euratom Agreement of 1959 shall be deemed to include inter alia all items listed in Appendix A to this letter, as well as any major components thereof.
  - (iii) The term "information" shall mean technical data in all forms in which such information can be transferred including but not limited to technical drawings, photographic negatives and prints, recordings, design data and technical, operating and maintenance manuals that can be used in design, production, operation or testing

of equipment, facilities, or nuclear material except data legally available to the public (that is to say published in books or periodicals).

- (b) Material which is subject to the terms of the Canada/Euratom Agreement of 1959 as amended by the proposals in this letter shall not be used for the manufacture of any nuclear weapon or to further any military purpose or for the manufacture of any other nuclear explosive device. The foregoing undertaking shall be verified within Canada by the IAEA pursuant to an agreement between Canada and the IAEA and within the Community by the IAEA pursuant to agreements between the Community, its Member States and the IAEA or if at any time such verification procedures are not in effect, there shall be agreement for the application of a safeguards system which conforms with IAEA safeguards principles and procedures.
- (c) Material referred to in paragraph (b) which is within Canada or the Community shall be enriched, reprocessed and subsequently stored only in accordance with guidelines agreed upon between Canada and the Community. In no event shall a Party use the provisions of the present Agreement for the purpose of securing commercial advantages nor for the purpose of interfering with the commercial relations of the other Party.
- (d) The Community shall inform Member States of the levels of physical security set out in Appendix B to this letter which should be applied as minima to the material referred to in paragraph (b) above. Canada will apply such measures of physical security as minima to material referred to in paragraph (b).
- (e) Any dispute arising out of the interpretation or application of the present Agreement which is not settled by negotiation or as may otherwise be agreed by the Parties concerned 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, who shall be the Chairman. If within thirty (30) days of the request for arbitration either Party has not designated an arbitrator, either Party to the dispute may request the President of the International Court of Justice to appoint an arbitrator. The same procedure shall apply if, within thirty (30) days of the designation or appointment of the second arbitrator, the third arbitrator has not been elected. 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, including all rulings concerning its constitution, procedure, jurisdiction and the division of the expenses of arbitration between the Parties shall be binding on both Parties and shall be implemented by them, in accordance with their respective constitutional procedures. The remuneration of the arbitrators shall be determined on the same basis as that for ad hoc judges of the International Court of Justice.

- (f) The provisions of paragraphs (a) to (e) above, inclusive, as well as Articles III, IX and XIV of the Canada/Euratom Agreement of 1959 (as those Articles are amended by the proposals in this letter) shall in all circumstances remain in force so long as any equipment or material referred to in this letter or in the Canada/Euratom Agreement of 1959 remains in existence or it is otherwise agreed.

If the foregoing is acceptable to the European Atomic Energy Community I have the honour to propose that this letter which is authentic in both English and French, together with Your Excellency's reply to that effect, shall constitute an amendment to the Canada/Euratom Agreement of 1959 which shall enter into force on the date of Your Excellency's reply and which shall continue in force so long as any equipment, material or facilities referred to in this letter or in the Canada/Euratom Agreement of 1959 remain in existence or it is otherwise agreed.

## APPENDIX A

1. Nuclear Reactors capable of operation so as to maintain a controlled self--sustaining fission chain reaction, excluding zero energy reactors, the latter being defined as reactors with a designed maximum rate of production of plutonium not exceeding 100 grams per year.

A "nuclear reactor" basically includes the items within or attached directly to the reactor vessel, the equipment which controls the level of power in the core, and the components which normally contain or come in direct contact with or control the primary coolant of the reactor core.

It is not intended to exclude reactors which could reasonably be capable of modification to produce significantly more than 100 grams of plutonium per year. Reactors designed for sustained operation at significant power levels, regardless of their capacity for plutonium production, are not considered as "zero energy reactors".

2. Reactor pressure vessels. Metal vessels, as complete units or as major shop-fabricated parts therefore, which are especially designed or prepared to contain the core of a nuclear reactor as defined in paragraph 1 above and are capable of withstanding the operating pressure of the primary coolant.

A top plate for a reactor pressure vessel is a major shop-fabricated part of a pressure vessel.

3. Reactor internals (e.g. support columns and plates for the core and other vessel internals, control rod guide tubes, thermal shields, baffles, core grid plates, diffuser plates, etc.).

4. Reactor fuel charging and discharging machines. Manipulative equipment especially designed or prepared for inserting or removing fuel in a nuclear reactor as defined in paragraph 1 above capable of on-load operation or employing technically sophisticated positioning or alignment features to allow complex off-load fuelling operations such as those in which direct viewing of or access to the fuel is not normally available.

5. Reactor control rods. Rods especially designed or prepared for the control of the reaction rate in a nuclear reactor as defined in paragraph 1 above.

This item includes, in addition to the neutron absorbing part, the support or suspension structures therefore if supplied separately

6. Reactor pressure tubes. Tubes which are especially designed or prepared to contain fuel elements and the primary coolant in a reactor as defined in paragraph 1 above at an operating pressure in excess of 50 atmospheres.

./...



Appendix A

7. Zirconium tubes. Zirconium metal and alloys in the form of tubes or assemblies or tubes, and in quantities exceeding 500 kg, especially designed or prepared for use in a reactor as defined in paragraph 1 above, and in which the relationship of hafnium to zirconium is less than 1:500 parts by weight.

8. Primary coolant pumps. Pumps especially designed or prepared for circulating the primary coolant for nuclear reactors as defined in paragraph 1 above.

9. Facilities for the reprocessing of irradiated fuel elements, and equipment especially designed or prepared therefore.

A "Facility for the reprocessing of irradiated fuel elements" includes the equipment and components which normally come in direct contact with and directly control the irradiated fuel and the major nuclear material and fission product processing streams. In the present state of technology only two items of equipment are considered to fall within the meaning of the phrase "and equipment especially designed or prepared therefore". These items are :

- (a) Irradiated fuel element chopping machines : remotely operated equipment especially designed or prepared for use in a reprocessing plant as identified above and intended to cut, chop or shear irradiated nuclear fuel assemblies, bundles or rods; and
- (b) Critically safe tanks (e.g. small diameter, annular or slab tanks) especially designed or prepared for use in a reprocessing plant as identified above, intended for dissolution of irradiated nuclear fuel and which are capable of withstanding hot, highly corrosive liquid, and which can be remotely loaded and maintained.

10. Facilities for the fabrication of fuel elements.

A "facility for the fabrication of fuel elements" includes the equipment :

- (a) Which normally comes in direct contact with or directly processes, or controls, the production flow of nuclear material, or
- (b) Which seals the nuclear material within the cladding.

The whole set of items for the foregoing operations, as well as individual items intended for any of the foregoing operations, and for other fuel fabrication operations, such as checking the integrity of the cladding or the seal, and the finish treatment to the solid fuel.

11. Equipment, other than analytical instruments, especially designed or prepared for the separation of isotopes of uranium.

"Equipment, other than analytical instruments, especially designed or prepared for the separation of isotopes of uranium" includes each of the major items of equipment especially designed or prepared for the separation process.

12. Facilities for the production of heavy water.

A "facility for the production of heavy water" includes the plant and equipment specially designed for the enrichment of deuterium or its compounds.

13. Major components of Items 1 to 12 above, as well as any significant fraction of the items essential to the operation of a facility for the reprocessing or enrichment of nuclear material or the production of heavy water.

## APPENDIX B

### Levels of Physical Protection

The levels of physical protection to be ensured by the appropriate governmental authorities in the use, storage and transportation of the materials of the attached table shall as a minimum include protection characteristics as follows :

#### CATEGORY III

Use and Storage within an area to which access is controlled.

Transportation under special precautions including prior arrangement between sender, recipient and carrier, and prior agreement between states in case of international transport specifying time, place and procedures for transferring transport responsibility.

#### CATEGORY II

Use and Storage within a protected area to which access is controlled, i.e., an area under constant surveillance by guards or electronic devices, surrounded by a physical barrier with a limited number of points of entry under appropriate control, or any area with an equivalent level of physical protection.

Transportation under special precautions including prior arrangement between sender, recipient and carrier, and prior agreement between states in case of international transport specifying time, place and procedures for transferring transport responsibility.

#### CATEGORY I

Materials in this Category shall be protected with highly reliable systems against unauthorized use as follows :

Use and Storage within a highly protected area, i.e., a protected area as defined for Category II above, to which, in addition, access is restricted to persons whose trustworthiness has been determined and under surveillance by guards who are in close communication with appropriate response forces. Specific measures taken in this context should have as their objective the detection and prevention of any assault, unauthorized access or unauthorized removal of material.

Transportation under special precautions as identified above for transportation of Category II and III materials and, in addition, under constant surveillance of escorts and under conditions which assure close communication with appropriate response forces.

TABLE : CATEGORIZATION OF NUCLEAR MATERIAL

Material	f o r m	Category		
		I	II	III
1. Plutonium <sup>a</sup>	Unirradiated <sup>b</sup>	2 kg or more	Less than 2 kg but more than 500 g	500 g or less <sup>c</sup>
2. Uranium-235	Unirradiated <sup>b</sup>	5 kg or more	Less than 5 kg but more than 1 kg	1 kg or less
	- uranium enriched to 20% <sup>235</sup> U or more	-	10 kg or more	Less than 10 kg <sup>c</sup>
	- uranium enriched to 10% <sup>235</sup> U but less than 20%	-		10 kg or more
	- uranium enriched above natural, but less than 10% <sup>235</sup> U <sup>d</sup>			
3. Uranium-233	Unirradiated <sup>b</sup>	2 kg or more	Less than 2 kg but more than 500 g	500 g or less
4. Irradiated fuel			Depleted or natural uranium, thorium or low enriched fuel (less than 10 % fissile content) e,f	

a. As identified in the Statute of the IAEA.

b. Material not irradiated in a reactor or material irradiated in a reactor but with a radiation level equal to or less than 100 rads/hour at one meter unshielded.

c. Less than a radiologically significant quantity should be exempted.

d. Natural uranium, depleted uranium and thorium and quantities of uranium enriched to less than 10 % not falling in Category III should be protected in accordance with prudent management practice.

e. Although this level of protection is recommended, it would be open to states upon evaluation of the specific circumstances, to assign a different degree of physical protection.

f. Other fuel which by virtue of its original fissile material content is classified as Category I or II before irradiation may be reduced one category level while the radiation level from the fuel exceeds 100 rads/hour at one meter unshielded.

(II) Draft reply from Commission to Canada

Your Excellency,

I have the honour to acknowledge receipt of your letter dated \_\_\_\_\_ stating the following :

Text of letter.

I have the honour to confirm that these proposals are acceptable to the European Atomic Energy Community.

ANNEX II

DRAFT

(III) From Canada to the Commission.

Mr. Commissioner,

I have the honour to refer to the Agreement between the Government of Canada and the European Atomic Energy Community (Euratom) for Cooperation in the Peaceful Uses of Atomic Energy, of October 6, 1959, as amended by our exchange of letters dated \_\_\_\_\_ (hereinafter together referred to as the Cooperation Agreement) and in particular to subparagraph 1 (c) of Article III of the Cooperation Agreement which provides that "Information regarded by the supplying Contracting Party as being of commercial value shall be supplied only under terms and conditions specified by the said Contracting Party".

I have the honour to inform you that information as defined in the Cooperation Agreement which the Government of Canada has notified the Community shall be subject to the Cooperation Agreement shall be supplied subject to the condition that it not be transferred to unauthorized persons or beyond the jurisdiction of the Community without the prior written consent of the Government of Canada, and that the Government of Canada will, before authorizing a transfer, provide the Community with a brief description of the information to be transferred.

In addition, it shall be a condition of supply of information from Canada that equipment which is designed, constructed or operated on the basis of or with the use of information supplied by Canada or information derived from equipment supplied by Canada shall be deemed to be equipment obtained from Canada. Without restricting the generality of the foregoing, in the case of significant transfers of information or equipment related to the enrichment or reprocessing of material or the production of heavy water, it shall upon notification of such significant transfers by the supplying Party, be a condition of supply that for a period of 20 years from the first operation of such equipment or of equipment or facilities using such information that equipment in any facility whose design construction or operating processes are of the same or similar type as the facility designed, constructed, fabricated or operated on the basis of or by use of such information or equipment shall be deemed to be equipment supplied by Canada to Euratom.

Equipment and facilities for enrichment, reprocessing or the production of heavy water shall also be deemed to be supplied by Canada to Euratom if they have been identified by Euratom or by the Government of Canada after consultations with Euratom, as using transferred technology, and if the other party has been informed in writing of such identification.

It is the understanding of Canada that the terms and conditions laid down in the present letter will apply mutatis mutandis to information as defined in the Cooperation Agreement which the Community has notified to the Government of Canada shall be subject to the Cooperation Agreement and to equipment designed, constructed or operated on the basis of or with the use of information referred to above or information derived from equipment supplied by the Community.

./...

I should be grateful to receive confirmation that the foregoing terms and conditions specified by Canada pursuant to sub-paragraph 1 (c) of Article III of the Cooperation Agreement are acceptable to the Community and that it agrees to take steps to communicate them to Member States of the Community, and that it will inform the appropriate administrative agencies of the Member States of the technology which is transferred from Canada to the Community.

(IV) Draft reply from Commission to Canada.

Excellency,

I have the honour to acknowledge your letter dated ..... which dealt with the conditions applicable to information transferred between Canada and the European Atomic Energy Community as follows :

(text of letter)

I have the honour to confirm that the terms and conditions specified by Canada are acceptable to the European Atomic Energy Community, that it will inform Member States of them, and that it will keep the appropriate administrative agencies of the Member States informed of the technology which is transferred from Canada to the European Atomic Energy Community.



ANNEX III

DRAFT NOTE

From Euratom Member State foreign Ministers to Canadian Ambassadors.

Excellency,

I have the honour to refer to the Agreement between the Government of Canada and the European Atomic Energy Community (Euratom) for Cooperation in the Peaceful Uses of Atomic Energy of October 6, 1959 as amended (hereinafter referred to as the Agreement).

In addition to the obligations to Canada entered into under the Agreement, I have the honour to inform you that my Government agrees that technology subject to the Agreement and within the territory or subject to the jurisdiction or control of my Government shall be transferred beyond the Community only with the concurrence of the Government of Canada and confirms that items referred to in the Agreement which are within the territory, jurisdiction or control of my Government shall be subject to the measures for physical protection described in the Agreement.

