



International Atomic Energy Agency

## INFORMATION CIRCULAR

---

INF

INFCIRC/211  
6 November 1974

GENERAL Distr.  
Original: ENGLISH and  
FRENCH

### THE TEXT OF A SAFEGUARDS AGREEMENT BETWEEN THE AGENCY, CANADA AND INDIA

1. The text of the agreement between the Agency, the Government of Canada and the Government of India providing for the Agency to apply safeguards in connection with the Agreement of 16 December 1963 between those Governments relating to the Rajasthan Atomic Power Station and the Douglas Point Nuclear Generating Station is reproduced in Part I below for the information of all Members. The texts of the latter Agreement and of a supplementary agreement amending it are reproduced in Parts II and III respectively.
2. The text of a letter about the Agreement written by the Secretary, Department of Atomic Energy, Government of India to the High Commissioner of Canada in India on 16 December 1966 is reproduced in Part I', and the text of a further letter dated 26 July 1968 in Part V.[1]
3. The safeguards agreement reproduced in Part I entered into force on 30 September 1971 pursuant to Section 26, and the application of safeguards in Canada under it has been suspended since 21 February 1972 pursuant to Article 23 of Canada's agreement with the Agency in connection with the Treaty on the Non-Proliferation of Nuclear Weapons[2].

---

[1] The footnotes to the texts have been added in the present information circular.

[2] INFCIRC/164.

## PART I

AGREEMENT BETWEEN THE  
INTERNATIONAL ATOMIC ENERGY AGENCY,  
THE GOVERNMENT OF CANADA AND THE  
GOVERNMENT OF INDIA RELATING TO SAFEGUARDS PROVISIONS

WHEREAS the Government of Canada and the Government of India have been co-operating closely in the development of nuclear energy for peaceful purposes and have concluded the Agreement between the Government of Canada and the Government of India relating to the Rajasthan Atomic Power Station and the Douglas Point Nuclear Generating Station of 16 December 1963[3], as amended by the Supplementary Agreement of 16 December 1966[4] (together hereinafter referred to as the Co-operation Agreement) and supplemented by Exchanges of Letters of 16 December 1966[5], and of 26 July 1968[6], which require that the two Governments will use the fissionable material produced in the Rajasthan Atomic Power Station and the Douglas Point Nuclear Generating Station only for peaceful purposes;

WHEREAS the Co-operation Agreement reflects the mutual recognition by the two Governments of the desirability of making use of the facilities and services of the International Atomic Energy Agency;

WHEREAS the Agency is authorized, pursuant to its Statute, to apply safeguards at the request of the Parties to any bilateral or multilateral arrangements;

WHEREAS Articles X to XIV of the Co-operation Agreement contain provisions for safeguards and the Exchanges of Letters of 16 December 1966 and of 26 July 1968 set out the procedures by which these provisions are to be implemented;

WHEREAS the two Governments have requested the Agency to enter into a trilateral agreement providing for Agency administration of these safeguards provisions;

WHEREAS the Board of Governors of the Agency approved that request on 9 June 1971;

NOW, THEREFORE, the Agency and the two Governments agree as follows:

Undertakings by the Governments and the Agency

Section 1. The Government of Canada agrees that the nuclear material used or produced in the Douglas Point Nuclear Generating Station will be used only for peaceful purposes.

Section 2. The Government of India agrees that the nuclear material used or produced in the Rajasthan Atomic Power Station will be used only for peaceful purposes.

---

[3] Reproduced in Part II below.  
[4] Reproduced in Part III below.  
[5] See Part IV below.  
[6] See Part V below.

Section 3. The Agency agrees to implement in accordance with this Agreement the provisions of Articles X to XIV inclusive of the Co-operation Agreement. For the purpose of implementing the aforementioned provisions, the detailed procedures set forth in paragraphs 1 to 8 inclusive of the Exchange of Letters of 16 December 1966 and in paragraphs 1 to 5 inclusive of the Exchange of Letters of 26 July 1968, shall apply. Additionally, subsidiary arrangements between the Agency and each of the two Governments shall, to the extent necessary, specify further how such provisions and procedures are to be applied. In concluding such arrangements each Government shall seek the concurrence of the other Government with a view to ensuring that the said arrangements are mutually compatible.

Section 4. The rights of the Government of Canada and the Government of India under Articles X to XIV inclusive of the Co-operation Agreement and in paragraphs 1 to 8 inclusive of the Exchange of Letters of 16 December 1966 and in paragraphs 1 to 5 inclusive of the Exchange of Letters of 26 July 1968 in respect of nuclear material used or produced in the Rajasthan Atomic Power Station and the Douglas Point Nuclear Generating Station respectively will be suspended while such nuclear material is subject to this Agreement and such rights shall thereupon be assumed by the Agency. It is understood that other rights and obligations of the Government of Canada and the Government of India under the Co-operation Agreement will not be affected by this Agreement.

Section 5. The Governments of Canada and India shall promptly notify the Agency of any amendment to the Co-operation Agreement.

#### Safeguards Procedures

Section 6. This Agreement shall apply to all nuclear material listed in the Annex to this Agreement and to nuclear material which is subsequently transferred under the Co-operation Agreement or used or produced in the Douglas Point Nuclear Generating Station or the Rajasthan Atomic Power Station.

#### Section 7.

- (a) The Governments of Canada and India shall notify the Agency of transfers between Canada and India of nuclear material pursuant to the Co-operation Agreement;
- (b) The Government concerned shall notify the Agency of production and use of nuclear material in the Douglas Point Nuclear Generating Station or in the Rajasthan Atomic Power Station pursuant to Article XIV of the Co-operation Agreement and in accordance with paragraph 6 of the Exchange of Letters of 16 December 1966 and paragraphs 3 to 5 inclusive of the Exchange of Letters of 26 July 1968; and
- (c) Notifications required under Section 7(a) shall be submitted in accordance with procedures to be agreed upon by the Parties; the establishment of such procedures shall not delay the implementation of this Agreement. All notifications under Sections 7(a) and (b) shall include to the extent relevant, the nuclear and chemical composition, the physical form and the quantities involved, the date of shipment, the date of receipt, the identity of the consignor and consignee and any other relevant information. The two Governments also undertake to give the Agency as much advance notice as possible of the transfer of large quantities of nuclear material.

Section 8. The Agency shall within thirty days of receipt of a notification pursuant to Section 7(a) advise both Governments that, in accordance with this Agreement, it is able to implement the provisions of Articles X to XIV inclusive of the Co-operation Agreement in respect of the nuclear material covered by such notification or that it is unable to do so, in which case, however, it may indicate at what future time or under which conditions and to what extent it would be able to do so. Produced nuclear material for which notification is to be made under Section 7(b) shall be subject to this Agreement from the time it is produced.

Section 9.

- (a) The Government of Canada or the Government of India shall convey to the Agency such information as may be required by the Agency to the extent it is relevant to the implementation of this Agreement, regarding the Douglas Point Nuclear Generating Station or the Rajasthan Atomic Power Station; and
- (b) If either Government intends to transfer nuclear material subject to this Agreement to any facility or place within its jurisdiction which the Agency has not previously accepted for applying safeguards, for the purpose of storing, containing, using, fabricating, processing or reprocessing such nuclear material, the Government concerned shall notify the Agency in advance and such information as may be required by the Agency to the extent it is relevant to the implementation of this Agreement shall be conveyed to the Agency before such transfer is effected. Details of the system of records and reports shall be mutually agreed between the Government concerned and the Agency before such records need to be kept or reports made, bearing in mind that these provisions shall be implemented in a manner designed to avoid delaying the intended transfer.

Section 10. In amplification of sub-paragraph 2(c) of the Exchange of Letters of 16 December 1966, transfers of nuclear material subject to this Agreement to a recipient which is not under the jurisdiction of either of the two Governments may be made and the nuclear material involved shall thereupon cease to be subject to this Agreement, provided that such nuclear material will become subject to:

- (a) Agency safeguards in the recipient country; or
- (b) Safeguards other than those applied by the Agency under this Agreement but generally consistent with such safeguards and accepted as such by the Agency.

The Government concerned shall notify the Agency in advance of any such intended transfer of nuclear material in order that the Agency shall assure itself that such safeguards can be applied.

Section 11.

- (a) Heavy water supplied by Canada for the Rajasthan Atomic Power Station during the first six months following the entry into force of this Agreement shall not be transferred from the Station except as agreed by the Governments of Canada and India. The Agency shall verify the quantity and disposition of such heavy water in the Station in accordance with the relevant provisions of this Agreement. The Governments shall notify the Agency of any transfer between them of such heavy water. A system of records and reports with respect to such heavy water shall be established in accordance with arrangements to be agreed between the Government of India and the Agency. The Agency shall provide each Government with an annual statement of the quantity of such heavy water in the Station as of the end of the calendar year concerned.
- (b) In any event, upon conclusion of the first five-year period of this Agreement, such heavy water shall be removed from the scope of this Agreement by re-transfer from India to Canada or by substitution in accordance with procedures agreed to by Canada and India.
- (c) It is further agreed that:
  - (i) Nuclear material produced by the use during the aforesaid five-year period of such heavy water, and all subsequent generations of nuclear material produced in or by the use of such nuclear material, shall be subject to the implementation by the Agency of the safeguards provisions of this Agreement; and

- (ii) All nuclear material produced in the Station during the aforesaid five-year period shall for this period:
  - (aa) be retained in the Station, or
  - (bb) may be transferred to other facilities or places in accordance with Section 9(b), in which event any nuclear material which might be produced in or by the use of such transferred nuclear material shall be retained in the facility where it is produced or returned to the Station, or an equivalent quantity of nuclear material shall be substituted for such produced nuclear material, in accordance with Section 13, for retention in that facility or in the Station, and such produced nuclear material or nuclear material substituted therefor shall be subject to the implementation by the Agency of the safeguards provisions of this Agreement, or
  - (cc) may be transferred in accordance with the provisions of Section 10 of this Agreement.

Section 12. The notifications provided for in Sections 9(b) and 10 shall be sent to the Agency at least two weeks before each such transfer. The contents of these notifications shall conform, so far as appropriate, to the requirements of Section 7.

Section 13. Notwithstanding anything contained in this Agreement each Government shall have the right upon prior notice to the Agency to remove from the scope of this Agreement quantities of nuclear material, provided it has, pursuant to mutually acceptable measurement arrangements, placed under the scope of this Agreement agreed equivalent quantities thereof.

Section 14. In the event that a special report is required to be submitted as contemplated in paragraph 6(c) of the Exchange of Letters of 16 December 1966 and paragraph 5 of the Exchange of Letters of 26 July 1968, such additional amplifications and clarifications as the Government concerned and the Agency consider relevant shall be provided by that Government to the Agency.

Section 15. The provisions of this Agreement shall be terminated with respect to:

- (a) Nuclear material transferred from Canada or India pursuant to Section 10;
- (b) Nuclear material removed from the scope of this Agreement pursuant to Section 13; and
- (c) Nuclear material with respect to which the Agency has determined that it has been consumed, or has been diluted in such a way that it is no longer usable for any nuclear activity relevant from the point of safeguards, or has become practically unrecoverable.

Section 16. The conditions for exemption, suspension or termination of the provisions of this Agreement with respect to nuclear material not covered by Section 15, or by paragraphs 3 and 4 of the Exchange of Letters of 16 December 1966, shall be decided by mutual agreement among the Parties.

Section 17. The Agency shall not publish or communicate to any State, organization or person any information obtained by it under this Agreement except with the consent of the Government of the State to which the information relates; provided, however, that specific information relating to implementation of its responsibilities in a State may be given to the Board and to such Agency staff members as require such knowledge by reason of their official duties in connection with this Agreement, but only to the extent necessary for the Agency to fulfil its responsibilities.

Section 18. If the Board determines that there has been any non-compliance with this Agreement, the Board shall call upon the Government concerned to remedy such non-compliance forthwith, and shall make such reports as it deems appropriate. If such Government fails to take fully corrective action within a reasonable time:

- (a) The Agency shall be relieved of its undertaking under Section 3 for such time as the Board determines; and
- (b) The Board may take any measures provided for in Article XII. C of the Statute.

The Agency shall promptly notify both Governments in the event of any determination by the Board pursuant to this Section.

Section 19. Personnel designated by the Agency in accordance with paragraphs 1 to 3 of the Inspectors Document to perform functions under this Agreement shall be governed by paragraph 8 of the Exchange of Letters of 16 December 1966.

Section 20. The relevant provisions of the Agreement on the Privileges and Immunities of the Agency<sup>[7]</sup> shall apply to the Agency, its inspectors, and its property used by them in performing their functions pursuant to this Agreement.

Section 21. Agency inspectors, in locations where this is necessary, shall be provided, on request and for reasonable compensation if agreed on, with appropriate equipment for carrying out inspections and with suitable accommodation and transport.

Section 22. Each Party shall bear any expense incurred in the implementation of its responsibilities under this Agreement. The Agency shall reimburse each Government for any special expenses incurred by the Government or persons under its jurisdiction at the written request of the Agency, if the Government notified the Agency before the expense was incurred that reimbursement would be required. These provisions shall not prejudice the allocation of expenses attributable to a failure by a Party to comply with this Agreement.

Section 23. Canada and India shall ensure that any protection against third-party liability, including any insurance or other financial security, in respect of a nuclear incident occurring in a nuclear installation under their respective jurisdictions shall apply to the Agency and its inspectors when carrying out their functions under this Agreement as that protection applies to nationals of Canada and India respectively.

Section 24. Decisions of the Board concerning the implementation of this Agreement, except such as relate only to Sections 21, 22 and 23 shall, if they so provide, be given effect immediately by the Parties, pending the final settlement of any dispute.

Section 25. The Parties shall, four years after the coming into force of this Agreement, and every five years thereafter, consult to review its provisions and implementation with a view to determining whether it should be amended. The Parties shall, at the request of any one of them, consult about amending this Agreement and take such action as may be mutually agreed. If the Board modifies the Safeguards System as contained in Agency document INFCIRC/66/Rev. 2, or the Inspectors Document, or modifies the general nature of its safeguards agreements, this Agreement shall be amended, if the Parties so request, to take account of any or all such modifications.

Section 26. This Agreement shall enter into force upon signature by or for the Director General of the Agency and by the authorized representative of each Government.

---

[7] INFCIRC/9/Rev. 2.

Section 27. This Agreement shall be concluded for the duration of the Co-operation Agreement.. It shall remain in force for an initial period of five years and shall stand extended automatically thereafter unless terminated by any Party, either at the end of the first five-year period or at any time thereafter, upon six months' prior notice to the other Parties, or as may otherwise be agreed; provided, however, that the provisions of Section 11(c)(i) of this Agreement shall continue to apply.

Definitions

Section 28. For the purposes of this Agreement:

- (a) "Agency" means the International Atomic Energy Agency;
- (b) "Board" means the Board of Governors of the Agency;
- (c) "Statute" means the Statute of the International Atomic Energy Agency; and
- (d) "Inspectors Document" means the Annex to Agency document GC(V), INF/39, which was placed in effect by the Board on 29 June 1961.

DONE in Vienna, this 30th day of September 1971, in triplicate in English and French, the texts in both languages being equally authentic.

For the INTERNATIONAL ATOMIC ENERGY AGENCY:

(signed)                      Sigvard Eklund

For the GOVERNMENT OF CANADA:

(signed)                      N. F. H. Berlis

For the GOVERNMENT OF INDIA:

(signed)                      V.C. Trivedi

## ANNEX

## RAJASTHAN ATOMIC POWER PROJECT

Initial inventory as of 29 September 1971

<u>Fuel type</u>	<u>Location</u>	<u>Bundle count</u>	<u>kg U</u>
1. Natural UO <sub>2</sub> (Indian)	Stores	1458	19398.504
2. Depleted UO <sub>2</sub> (Indian)	Stores	124	1660.705
3. Natural UO <sub>2</sub> (Canadian)	Stores	1836*	24644.434
TOTAL		3418	45703.643

Note: \* This includes two bundles which were sent from site to Bhabha Atomic Research Centre.

## DOUGLAS POINT GENERATING STATION

Initial inventory as of 29 September 1971

<u>Fuel type</u>	<u>Location</u>	<u>Bundle count</u>	<u>kg U</u>	<u>kg <sup>235</sup>U</u>
Natural UO <sub>2</sub>	New fuel store	1405	19017.0	-
	Reactor core	3666	49474.3	-
	Spent fuel bay	1262	16921.9	-
	TOTAL	6333	85413.2	
Depleted UO <sub>2</sub>	New fuel store	43	577.8	-
	Reactor	6	80.4	-
	Spent fuel bay	24	322.9	-
	TOTAL	73	981.1	
Enriched uranium booster fuel	Reactor	6	2.7972	2.6124
	Spent fuel bay	2	0.9324	0.8708
	TOTAL	8	3.7296	3.4832



PART II

AGREEMENT DATED THIS SIXTEENTH DAY OF DECEMBER 1963 BETWEEN  
THE GOVERNMENT OF CANADA AND THE GOVERNMENT OF INDIA  
RELATING TO THE RAJASTHAN ATOMIC POWER STATION  
AND THE DOUGLAS POINT NUCLEAR  
GENERATING STATION

The Government of Canada and the Government of India, having co-operated closely in the development of nuclear energy for peaceful purposes during the past several years, having jointly participated in the construction of the Canada-India Reactor in Trombay, having engaged in a subsequent exchange of extensive and mutually useful information, assistance and technology in the nuclear energy field, and being desirous of continuing and expanding this co-operation for the mutual benefit of both countries and for the further development and application of nuclear energy for peaceful purposes, and having agreed to exchange information on the development and operation of nuclear reactors that are moderated wholly or partly by heavy water, have agreed as follows:

Article I

The Government of Canada will co-operate with the Government of India in the construction of a heavy water moderated nuclear power station, hereafter referred to as the Rajasthan Atomic Power Station, in accordance with such financial and technical arrangements as may be agreed between the two Governments.

Article II

The Government of Canada will provide, through Atomic Energy of Canada Limited, the necessary information and the design with detailed drawings and specifications of the station up to and including the steam raising equipment.

Article III

The Government of India will be responsible for the erection of the station and will provide the design and detailed drawings of the part of the station beyond the steam raising equipment, including the layout of the station and the detailed drawings and specifications for the generating equipment, the cooling water system, all ancillary equipment, services and buildings.

Article IV

The selection of the principal firm of engineering consultants for the Rajasthan Atomic Power Station will be by agreement of the two Governments.

Article V

The Government of India will procure from Canada as much of the material and equipment for the station as is available on reasonable terms and which cannot be procured in India,

Article VI

The Government of Canada will provide credit facilities for the purchase of Canadian supplied material, equipment and fuel for the Rajasthan Atomic Power Station in accordance with the provisions of the Canadian Export Credits Insurance Act and arrangements agreed upon by the two Governments.

#### Article VII

The two Governments agree that half the fuel elements for the initial charge plus such numbers of additional fuel elements as may be required by the Government of India from time to time for the Rajasthan Atomic Power Station will be supplied from Canada by Atomic Energy of Canada Limited at a price, f.o.b. manufacturing plant, no higher than that at which similar fuel elements are available at the same time for the Douglas Point Nuclear Generating Station in Canada, It is also agreed that uranium for the continuing requirements of the Rajasthan Atomic Power Station to the extent it is not available from indigenous sources within India, will be procured from Canada provided it is available on financial terms no less favourable than those from other sources.

#### Article VIII

The Government of Canada and the Government of India agree to exchange information on a continuing basis with regard to the design, construction, operation and use of the Rajasthan Atomic Power Station and the Douglas Point Nuclear Generating Station, research and development related thereto and problems of health and safety connected therewith.

#### Article IX

The two Governments emphasize their common interest in ensuring, and hereby under-take, that the fissionable material produced in the Rajasthan Atomic Power Station in India and in the Douglas Point Nuclear Generating Station in Canada will be used only for peaceful purposes.

#### Article X

The Government of India guarantees that no nuclear material used or produced in the Rajasthan Atomic Power Station will be transferred to unauthorized persons or beyond the jurisdiction of the Government of India except as may be mutually agreed. The Government of Canada likewise guarantees that no nuclear material used or produced in the Douglas Point Nuclear Generating Station will be transferred to unauthorized persons or beyond the jurisdiction of the Government of Canada except as may be mutually agreed,

#### Article XI

The Government of India will notify the Government of Canada in advance regarding the disposition after removal from the Rajasthan Atomic Power Station of any nuclear fuel and fissionable material produced therein. The Government of Canada will likewise notify the Government of India in advance regarding the disposition after removal from the Douglas Point Station of any nuclear fuel and fissionable material produced therein.

#### Article XII

The two Governments agree that adequate systems of records shall be established to ensure accountability for all fuel and fissionable material that is on the premises of the Rajasthan Atomic Power Station and the Douglas Point Nuclear Generating Station.

#### Article XIII

The two Governments agree that, to further the exchange of technical information and operating experience between the two stations and to ensure that the provisions of this Agreement are being observed, designated technical representatives of the Canadian Government and designated technical representatives of the Indian Government shall maintain close contact and, whenever the designated technical representatives of either Government so request, they shall thereupon be accorded access to all parts of the Rajasthan Atomic Power Station or the Douglas Point Nuclear Generating Station, as the case may be; to all other

places where fuel or fissionable material used in or produced by the station, or an equivalent amount thereof, is being used, stored or located; to the relevant persons; and to the relevant data including nuclear fuel records. The designated technical representatives shall be entitled, in respect of such fuel and fissionable material, to make such observations and measurements as are relevant to the purposes mentioned herein. The two Governments agree that such observations and measurements shall be kept to the minimum consistent with the accomplishment of these purposes.

Article XIV

The two Governments agree to exchange quarterly reports, and special reports in the event of special circumstances at the request of either Government, regarding the operation of the Rajasthan Atomic Power Station and the Douglas Point Nuclear Generating Station. These reports shall contain such detailed information as may be reasonably requested by the recipient Government.

Article XV

Recognizing the desirability of making use of the facilities and services of the Inter-national Atomic Energy Agency, the two Governments will consult with each other from time to time to determine in what respect and to what extent they desire to avail themselves of the services of the International Atomic Energy Agency with regard to this agreement.

Article XVI

For the purpose of this Agreement, the following definitions will apply:

- (a) Rajasthan Atomic Power Station means the electrical generating power plant with a net output of approximately 200 MW(e) consisting of one heavy water moderated and heavy water cooled reactor of the CANDU type and associated equipment, facilities and premises, to be located at Rana Pratap Sagar, Rajasthan State, India,
- (b) Douglas Point Nuclear Generating Station means the electrical generating power plant, with a net output of approximately 200 MW(e), consisting of one heavy water moderated and heavy water cooled reactor of the CANDU type and associated equipment, facilities and premises located at Douglas Point, Ontario, Canada.

Article XVII

This Agreement reflects the special relations and long standing co-operation existing between Canada and India in the peaceful uses of atomic energy commencing with their joint participation in the construction of the Canada-India Reactor at Trombay and the reciprocal nature of the arrangements with regard to the Rajasthan Atomic Power Station and the Douglas Point Nuclear Generating Station.

Article XVIII

This Agreement shall come into force on the date of signature.

IN WITNESS WHEREOF the undersigned, being duly authorized by their respective Governments, have hereunto placed their signatures.

DONE at New Delhi this 16th day of December 1963 in two original copies.

For the Government of Canada:

Chester A. RONNING

For the Government of India:

H. J. BHABHA

## PART III

SUPPLEMENTARY AGREEMENT AMENDING THE AGREEMENT BETWEEN THE  
GOVERNMENT OF CANADA AND THE GOVERNMENT OF INDIA RELATING TO  
THE RAJASTHAN ATOMIC POWER STATION AND THE DOUGLAS POINT  
NUCLEAR GENERATING STATION SIGNED AT NEW DELHI  
ON DECEMBER 16, 1963

The Government of Canada and the Government of India, having co-operated closely in the development of nuclear energy for peaceful purposes during the past several years, having concluded the Agreement relating to the Rajasthan Atomic Power Station and the Douglas Point Nuclear Generating Station, signed on December 16, 1963[8], and being desirous of expanding co-operation for the further application of nuclear energy for peaceful purposes, agree as follows:

Article I

Article VII of the Agreement signed on December 16, 1963 is amended to read as follows:

"The two Governments agree that half the fuel elements for the initial charge of the first reactor of the Rajasthan Atomic Power Station to be constructed plus such numbers of additional fuel elements as may be required by the Government of India from time to time for the Rajasthan Atomic Power Station will be supplied from Canada by AECL at a price, f.o.b. manufacturing plant, no higher than that at which similar fuel elements are available at the same time for the Douglas Point Nuclear Generating Station in Canada. It is also agreed that uranium for the continuing requirements of the Rajasthan Atomic Power Station, to the extent it is not available from indigenous sources within India, will be procured from Canada provided it is available on financial terms no less favourable than those from other sources".

Article II

Article XVI of the Agreement signed on December 16, 1963 is amended by substituting for paragraph (a) of the Article the following new paragraph (a), to read as follows:

"The Rajasthan Atomic Power Station means the electric generating power plant with a total net output of approximately 400 MW(e) consisting of two heavy water moderated and heavy water cooled reactors of the CANDU type and associated equipment, facilities and premises to be located at Rana Pratap Sagar, Rajasthan State, India".

This Supplementary Agreement shall enter into force upon signature and shall thereafter remain in force indefinitely as though it were an integral part of the Agreement of December 16, 1963.

IN WITNESS WHEREOF the undersigned have signed this Supplementary Agreement.

DONE, in two copies, in the English, French and Hindi languages, each version being equally authentic, at New Delhi the sixteenth of December 1966.

(signed) D.R. Michener  
For the Government of Canada

(signed) Vikram A. Sarabhai  
For the Government of India

-----  
[8] Reproduced in Part II above.

PART IV

TEXT OF A LETTER DATED 16 DECEMBER 1966 FROM THE SECRETARY  
DEPARTMENT OF ATOMIC ENERGY, GOVERNMENT OF INDIA TO THE  
HIGH COMMISSIONER OF CANADA IN INDIA

New Delhi,  
16 December 1966

Excellency,

I have the honour to acknowledge receipt of your letter dated the 16th December 1966 which reads as follows:

"I should like to refer to discussions which have taken place between representatives of our two Governments concerning the implementation of the Agreement dated December 16, 1963 relating to the Rajasthan Atomic Power Station and the Douglas Point Nuclear Generating Station[9], as amended by the Agreement of December 16, 1966[10], which provided for the expansion of the Rajasthan Atomic Power Station. (The Agreement of 1963, as so amended, is hereinafter referred to as 'the Agreement'.)

Upon instructions from my Government I have the honour to propose that, in order to fulfil the undertakings of Article IX of the Agreement, the relevant provisions of Articles X to XIV inclusive of the Agreement be implemented in accordance with the procedures set forth below:

1. For the purposes of this letter

(a) 'Designated agencies of the two Governments' means:

- (i) in the case of Canada, the Atomic Energy Control Board;
- (ii) in the case of India, the Department of Atomic Energy.

Either Government may change its designated agency by means of notice in writing to the other Government;

(b) 'effective kilograms' means:

- (i) in the case of plutonium, its weight in kilograms;
- (ii) in the case of uranium with an enrichment of 0.01 (1%) and above, its weight in kilograms multiplied by the square of its enrichment;
- (iii) in the case of uranium with an enrichment below 0.01 (1%) and above 0.005 (0.5%), its weight in kilograms multiplied by 0.0001;

---

[9] Reproduced in Part II above.

[10] Reproduced in Part III above

- (iv) in the case of in the case of depleted uranium with an enrichment of 0.005 (0.5%) or below, and in the case of thorium, its weight in kilograms multiplied by 0.00005;
  - (c) 'enrichment' means the ratio of the combined weight of the isotopes uranium-233 and uranium-235 to that of the total uranium in question;
  - (d) 'improved' means, with respect to nuclear material, that either:
    - (i) the concentration of fissionable isotopes in it has been increased; or
    - (ii) the amount of chemically separable fissionable isotopes in it has been increased; or
    - (iii) its chemical or physical form has been changed so as to facilitate further use or processing;
  - (e) 'nuclear material' means:
    - (i) any source material: that is, uranium containing the mixture of isotopes occurring in nature; uranium depleted in the isotope 235; thorium; any of the foregoing in the form of metal, alloy, chemical compound, or concentrate;
    - (ii) special fissionable material: that is, plutonium-239; uranium-233; uranium enriched in the isotopes 235 or 233; any 'special fissionable material' containing one or more of the foregoing: the term does not, however, include source material;
  - (f) 'reactor' means any device in which a controlled, self-sustaining fission chain-reaction can be maintained.
2. Transfers of nuclear material contemplated in Article X of the Agreement may be made, unless otherwise mutually agreed, only if:
- (a) the material is transferred under the provisions of paragraph 3 below; or
  - (b) the material is transferred under the provisions of paragraph 4 below; or
  - (c) the material is transferred to a third country under safeguards which, in the agreed judgement of the designated agencies, are satisfactory.
3. The provisions of Articles X to XIV inclusive of the Agreement will be suspended at the request of either of the designated agencies of the two Governments with respect to:
- (a) nuclear material transferred for the purpose of processing, reprocessing, testing, research or development when the quantities at any time do not exceed:
    - (i) in the case of special fissionable material, one effective kilogram;

- (ii) in the case of natural uranium and depleted uranium with an enrichment above 0.005 (0.5%), ten metric tons;
    - (iii) in the case of depleted uranium with an enrichment of 0.005 (0.5%) or below, 20 metric tons;
    - (iv) in the case of thorium, 20 metric tons;
  - (b) nuclear material in irradiated fuel transferred for the purpose of reprocessing when, pursuant to mutually acceptable measurement arrangements, an agreed equivalent quantity of nuclear material, not otherwise subject to the provisions of the said Articles or to some other safeguards regime, is substituted therefor.
4. The provisions of Articles X to XIV inclusive of the Agreement shall cease to apply to nuclear material which in the agreed judgement of the two designated agencies:
- (a) has been returned to the country of original supply without having been improved; or
  - (b) was subject to such provisions only by reason of its use in any one of the reactors of the two Stations and has been removed from such Station, and from which any special fissionable material that was produced in it has been separated out or such produced material has become no longer subject to the provisions of the said Article; or
  - (c) has been consumed; or
  - (d) is no longer significant in relation to the provisions of the said Articles through having been diluted or otherwise having become practically unrecoverable; or
  - (e) has been substituted by an equivalent quantity of nuclear material in accordance with procedures agreed upon by the designated agencies of the two Governments; or
  - (f) has been transferred pursuant to sub-paragraph 2(c) above provided that, if it is returned to the country from which it was transferred, it shall again become subject to the provisions of the said Articles.
5. The designated agencies of the two Governments shall agree on the system of records to be established pursuant to Article XII of the Agreement, as well as the operating records of the two Stations and the electrical generating components of the two Stations, to the extent necessary to determine the production and consumption of nuclear materials in the said reactors.
6. The designated agencies of the two Governments shall agree on the system to be established for reporting on the production and use of nuclear materials pursuant to Article XIV of the Agreement. The reports required shall be based upon the following:
- (a) the reports required need only include such information as is relevant to the implementation of the provisions of Article XIV;

- (b) the necessary routine reports need only be submitted quarterly on the basis of the records called for in paragraph 5 above; they must include:
    - (i) the receipts, transfers out and inventory of all nuclear materials introduced into, located in or leaving the two Stations, with particulars of the location and of the nuclear and chemical composition and physical form of such material;
    - (ii) the operating reports of the reactors and electrical generating components of the two Stations;
    - (iii) statements regarding production or consumption of nuclear materials in the two Stations;
    - (iv) statements regarding any known losses and any nuclear materials not accounted for;
  - (c) That a report must be submitted without delay:
    - (i) if any unusual incident occurs involving loss of or damage to nuclear material or damage to a reactor;
    - (ii) if there is good reason to believe nuclear material is lost or unaccounted for in a quantity exceeding losses regarded as acceptable for the size and type of reactors in the two Stations;
    - (iii) if there is any significant change in a fuelling programme;
  - (d) reports on source material in sealed storage facilities need only be submitted twice in each year, provided that the designated agencies of the two Governments agree on the design and method of sealing such storage facilities.
7. The designated agencies of the two Governments shall maintain records, and render notifications pursuant to Article XI of the Agreement, which shall take into account the criteria, as relevant, described in sub-paragraphs (b)(i), (iii), (iv), (c)(i), (ii) and (d) of paragraph 6 above to enable the designated technical representatives to perform the functions provided for in Article XIII of the Agreement with respect to the nuclear materials subject to Articles X to XIV inclusive of the Agreement located outside the two Stations.
8. For the purpose of implementing the provisions of Article XIII of the Agreement the designated technical representatives of the two Governments shall be accorded access upon request to any nuclear material subject to the provisions of Articles X to XIV inclusive of the Agreement, wherever located, to the relevant persons and to the relevant records described in paragraphs 5 and 7 above. In determining the actual frequency of such access the amount of nuclear material produced or used in the reactors in the two Stations will be taken into account. In carrying out their responsibilities the designated technical representatives:



- (a) shall not cause any interference in the operation of any Station, reactor or facility and shall use observation of normal operations as far as possible;
- (b) shall neither operate any Station, reactor, or facility or any item of equipment themselves nor direct the staff of any Station, reactor or facility to carry out any particular operation;
- (c) may conduct audits of the records and reports referred to in paragraphs 5, 6 and 7;
- (d) may verify amounts of nuclear material by physical inspection, measurement and sampling;
- (e) may, from the date any reactor in the two Stations first achieves criticality, examine it to check its measuring instruments and operating characteristics;
- (f) may confirm the nature of the operations carried out in the two Stations and in other locations where there is nuclear material that is subject to the provisions of the said Articles;
- (g) with respect to the first reactor in each of the two Stations to achieve criticality, and before this event occurs, may verify that its construction is in accordance with its stated design and that the functioning of its instrumentation will permit the technical representatives to carry out their responsibilities, provided that the technical representatives shall do nothing to hamper or delay the construction, commissioning or normal operation of the two Stations;
- (h) may examine any significant amount of nuclear material subject to the provisions of the said Articles that is to be transferred to a third country in accordance with paragraph 2 above;
- (i) may make one annual examination of each sealed storage facility;
- (j) may, in the case of nuclear material stored elsewhere than in a sealed storage facility or in the two Stations:
  - (i) if the amount does not exceed five effective kilograms, make one examination annually;
  - (ii) if the amount exceeds five effective kilograms, make examinations in accordance with the frequencies set forth in the table in Annex A.

I further have the honour to propose, pursuant to Article XV of the Agreement, which provides for consultation between our two Governments to determine in what respect and to what extent they desire to avail themselves of the services of the International Atomic Energy Agency, that our two Governments shall together request the Agency to perform the services required for the implementation of the provisions of Articles X to XIV inclusive of the Agreement in accordance with the procedures set forth in the paragraphs numbered 1 to 8 above, it being understood that such services are to be confined to the scope of the Agreement and to the provisions of this letter. For the purposes of such services, the designated agencies of the two Governments shall convey to the Agency such information regarding the two Stations

as may be mutually agreed. The request to the Agency shall be made at such a time that the Agency, following its agreement to perform the said services, may have sufficient time to commence the said services either when a reactor in each of the two Stations has operated at full power for one year, or 15 months after a reactor in each of the two Stations has first achieved criticality, whichever is earlier.

I shall be grateful if you would confirm that the proposals contained in this letter (the English and French versions of which are equally authentic) are acceptable to the Government of India and that it agrees to them.

## ANNEX A

Routine Inspections Provided for in Paragraph 8(j)(ii)

Effective kilograms of nuclear material	Maximum No. of Routine inspections annually
Up to 1	0
More than 1 and up to 5	1
" " 5 " " " 10	2
" " 10 " " " 15	3
" " 15 " " " 20	4
" " 20 " " " 25	5
" " 25 " " " 30	6
" " 30 " " " 35	7
" " 35 " " " 40	8
" " 40 " " " 45	9
" " 45 " " " 50	10
" " 50 " " " 55	11
" " 55 " " " 60	12
" " 60	Access at all times

I have the honour to confirm that the proposals contained in this letter are acceptable to the Government of India and that it agrees to them.

Yours sincerely,

(signed) Vikram A. Sarabhai  
Secretary  
Department of Atomic Energy  
Government of India

His Excellency Mr. D. Roland Michener,  
High Commissioner for Canada in India,  
NEW DELHI

PART V

TEXT OF A LETTER DATED 26 JULY 1968 FROM THE SECRETARY,  
DEPARTMENT OF ATOMIC ENERGY, GOVERNMENT OF INDIA  
TO THE HIGH COMMISSIONER OF CANADA IN INDIA

New Delhi,  
July 26, 1968

Excellency,

I have the honour to acknowledge receipt of your letter dated the 26 July, 1968 which reads as follows:

"I should like to refer to discussions which have taken place between representatives of our two Governments regarding the implementation of the safeguards provisions of the Agreement dated December 16, 1963[9] and the Exchange of Notes dated December 16, 1966[11] between the Government of Canada and the Government of India relating to the Rajasthan Atomic Power Station and the Douglas Point Nuclear Generating Station and I have the honour to propose that the following record and reporting procedures be adopted.

1. ACCOUNTABILITY RECORDS

- 1.1. A master ledger shall be maintained to record the receipt, disposition and transfer of all nuclear materials. The actual recording of data will be in accordance with the requirements of a 'double entry' system of accounting.

NOTE: The Fuel Accounting and Scheduling Program printouts or equivalent computer program listings and the station fuel accounting card record system will fulfil the function of the ledgers which would otherwise be required and the fuel change orders and computer listings for each accountability area within the stations will provide the equivalent of a 'double entry' system in so far as nuclear materials are concerned.

- 1.2. The following data shall be recorded in accountability records:

- 1.2.1. Receipts and shipments of nuclear materials including a description of these materials adequate to establish their identity.
- 1.2.2. Current inventory of nuclear materials.
- 1.2.3. Nuclear materials transferred to reactor systems.
- 1.2.4. Nuclear material irradiation data and reactor physics data relating irradiation, in terms of exposure or burn-up, to the isotopic composition of nuclear materials (e.g. tables or graphs of the concentration

---

[11] See Part IV above.

of individual plutonium isotopes as a function of exposure in neutrons per kilobarn of  $^{239}\text{Pu}$ ,  $^{240}\text{Pu}$ ,  $^{241}\text{Pu}$  and  $^{242}\text{Pu}$ ).

- 1.2.5. Nuclear materials transferred from reactor systems.
- 1.2.6. Nuclear material losses.
- 1.2.7. Nuclear material disposals.

## 2. OPERATIONAL RECORDS

### 2.1. The following data shall be recorded in operational records:

- 2.1.1. Station thermal and electrical power outputs.
- 2.1.2. Channel power distribution.
- 2.1.3. Temperature, pressure and flow rate of primary and secondary coolants.
- 2.1.4. Use of reactivity control devices (booster and absorber rods, chemical poisons). These data will permit the computation of a reactivity balance.
- 2.1.5. Details of fuel loading.
- 2.1.6. Daily operating history (station log).
- 2.1.7. Experimental or production loading of materials.
- 2.1.8. Operating personnel.
- 2.1.9. Major maintenance operations.
- 2.1.10. Details of incidents or unusual occurrences.

## 3. ROUTINE ACCOUNTABILITY REPORTS

### 3.1. The following data shall be included in quarterly accountability reports:

- 3.1.1. Starting inventory for each accountability area (i.e. New Fuel Storage, Reactor Core, Spent Fuel Storage).
- 3.1.2. Increases in individual inventories.
- 3.1.3. Decreases in individual inventories.
- 3.1.4. Adjustments.
- 3.1.5. Final inventory for each accountability area (N.B. inventories will include irradiation data).

## 4. ROUTINE OPERATIONAL REPORTS

### 4.1. The following data shall be included in quarterly operational reports:

- 4.1.1. Summary of operating log.

- 4.1.2. Thermal power output.
- 4.1.3. Electrical power output.
- 4.1.4. Nuclear material transfer data:
  - (1) type of nuclear material
  - (2) starting inventories
  - (3) transfers of unirradiated nuclear material
  - (4) transfers of irradiated nuclear material
  - (5) ending inventories.

5. SPECIAL OPERATING REPORTS

5.1. Special operating reports shall be prepared without delay in the event of:

- (1) Any unusual occurrence involving an actual or potential loss of nuclear material.
- (2) Any loss of nuclear material in quantities exceeding normal operating losses.
- (3) Any significant change in the normal fuelling programme.

I should be grateful if you would confirm that the proposals contained in this letter are acceptable to the Government of India and that it agrees to them."

I have the honour to confirm that the proposals contained in this letter are acceptable to the Government of India and that it agrees to them.

Yours sincerely,

(signed) Vikram A. Sarabhai  
Secretary to the Government of India  
Department of Atomic Energy

His Excellency Mr. James George,  
High Commissioner for Canada in India,  
NEW DELHI