

No. 20961

**INTERNATIONAL ATOMIC ENERGY AGENCY
and
ARGENTINA**

**Agreement for the application of safeguards in relation
to the heavy water production plant at Arroyito (with
annex). Signed at Vienna on 14 October 1981**

Authentic text: Spanish.

Registered by the International Atomic Energy Agency on 24 March 1982.

**AGENCE INTERNATIONALE DE L'ÉNERGIE
ATOMIQUE
et
ARGENTINE**

**Accord concernant l'application de garanties à l'usine d'eau
lourde d'Arroyito (avec annexe). Signé à Vienne le
14 octobre 1981**

Texte authentique : espagnol.

Enregistré par l'Agence internationale de l'énergie atomique le 24 mars 1982.

[TRANSLATION¹—TRADUCTION²]

AGREEMENT³ BETWEEN THE GOVERNMENT OF THE ARGENTINE REPUBLIC AND THE INTERNATIONAL ATOMIC ENERGY AGENCY FOR THE APPLICATION OF SAFEGUARDS IN RELATION TO THE HEAVY WATER PRODUCTION PLANT AT ARROYITO

WHEREAS the Government of the Argentine Republic and the Government of Switzerland have concluded an agreement on 24 August 1979 to enable implementation of contracts between the Comisión Nacional de Energía Atómica Argentina and Sulzer Brothers Ltd. for the supply of a plant for the production of heavy water, to be constructed at Arroyito;

WHEREAS the Government of the Argentine Republic has requested the International Atomic Energy Agency to apply its safeguards system in connection with the heavy water production plant at Arroyito;

WHEREAS the International Atomic Energy Agency is authorized by its Statute⁴ to apply safeguards, at the request of a State, to any of that State's activities in the field of atomic energy;

WHEREAS the Board of Governors of the International Atomic Energy Agency has acceded to the request of the Government of the Argentine Republic on 17 September 1981;

Now therefore, the Government of the Argentine Republic and the International Atomic Energy Agency have agreed as follows:

Part I

DEFINITIONS

Section 1. For the purpose of this Agreement:

- (a) "Government" means the Government of the Argentine Republic;
- (b) "Agency" means the International Atomic Energy Agency;
- (c) "Board" means the Board of Governors of the Agency;
- (d) "Statute" means the Statute of the Agency;
- (e) "Safeguards Document" means Agency document INFCIRC/66/Rev.2;
- (f) "Inspectors Document" means the Annex to Agency document GC(V)/INF/39;
- (g) "Inventory" means the list of items to be prepared by the Agency in accordance with Section 8;
- (h) "Heavy Water" means water in which the ratio of deuterium atoms to hydrogen atoms exceeds 1 to 5,000. The term shall include hydrogen and hydrogen compounds in which the ratio of deuterium atoms to hydrogen atoms exceeds 1 to 5,000;

¹ Translation supplied by the International Atomic Energy Agency.

² Traduction fournie par l'Agence internationale de l'énergie atomique.

³ Came into force on 14 October 1981 by signature, in accordance with section 35.

⁴ United Nations, *Treaty Series*, vol. 276, p. 3.

(i) “Arroyito Heavy Water Production Plant” means the heavy water production plant at Arroyito, Province of Neuquén, designed for an annual production of 250 tons of heavy water by means of a monothermal exchange process involving ammonia;

(j) “Nuclear material” means any source material or special fissionable material as defined in Article XX of the Statute;

(k) “Nuclear facility” means:

- (i) A principal nuclear facility as defined in paragraph 78 of the Safeguards Document as well as a critical facility; or
- (ii) Any location where nuclear material in amounts greater than one effective kilogram is customarily used or stored;

(l) “List” means the list containing identification of information to be maintained by the Agency in accordance with Section 9;

(m) “Information” (except in Sections 6 (d), 13 and 15) means relevant technological information transferred from Switzerland to the Argentine Republic contained in design drawings, technical specifications, technical manuals for the operation and maintenance of the Arroyito Heavy Water Production Plant or as may be derived from major components transferred from Switzerland which is necessary for the design, construction or operation of another heavy water production plant or major component. The term shall not include information which, at the time of transfer, is in use in the Argentine Republic or freely available to the public;

(n) “Major components” means the following components of the Arroyito Heavy Water Production Plant or of a future heavy water production plant of the type of the Arroyito Heavy Water Production Plant: water-ammonia transfer columns, isotopic exchange towers, deuterium burners, condensers for heavy water and such other items as may be added by agreement between the Government and the Agency;

(o) “Produced, processed or used” means any utilization or any alteration of the physical or chemical form or composition including any change of the isotopic composition, of the nuclear material involved;

(p) “Agreement on the Privileges and Immunities of the Agency” means the agreement which was approved by the Board on 1 July 1959¹ the text of which was published in Agency document INFCIRC/9/Rev.2.

Part II

UNDERTAKINGS BY THE GOVERNMENT AND THE AGENCY

Section 2. The Government undertakes that none of the following items shall be used for the manufacture of any nuclear weapon or to further any other military purpose or for the manufacture of any other nuclear explosive device:

- (a) The Arroyito Heavy Water Production Plant;
- (b) Major components transferred from Switzerland to the Argentine Republic for the Arroyito Heavy Water Production Plant;
- (c) Any heavy water production plant or major component which is designed, constructed or operated in the Argentine Republic on the basis of or by use of information relating to the monothermal exchange process involving ammonia and provided by Switzerland;
- (d) Any heavy water produced in the Arroyito Heavy Water Production Plant or in any other heavy water production plant referred to in this Section;

¹ United Nations, *Treaty Series*, vol. 374, p. 147.

- (e) Any nuclear material including subsequent generations of special fissionable material, which has been produced, processed or used in any of the nuclear facilities listed in the Inventory from the time when it is produced, processed or used;
- (f) Any other items while required to be listed in the Inventory.

Section 3. The Agency undertakes to apply its safeguards system in accordance with the terms of this Agreement to all items referred to in Section 2 so as to ensure that no such item is used for the manufacture of any nuclear weapon or to further any other military purpose or for the manufacture of any other nuclear explosive device.

Section 4. The Government undertakes to accept Agency safeguards, to facilitate their application and to co-operate with the Agency to that end. The Government and the Agency shall consult at any time at the request of either Party to ensure the effective implementation of this Agreement.

Part III

GENERAL SAFEGUARDS PRINCIPLES

Section 5. In applying safeguards, the Agency shall observe the general principles set forth in paragraphs 9 to 14 of the Safeguards Document.

Part IV

SAFEGUARDS PROCEDURES AND SUBSIDIARY ARRANGEMENTS

Section 6. (a) The procedures to be followed by the Agency in applying safeguards to heavy water production plants, major components and heavy water listed in the Inventory shall be those set forth in the Annex to this Agreement.

(b) The procedures to be followed by the Agency in applying safeguards to the other items listed in the Inventory shall be those specified in the Safeguards Document.

(c) To that end the Government and the Agency shall make Subsidiary Arrangements concerning the implementation of such procedures, which shall specify in detail, to the extent necessary for the Agency to be able to fulfil its obligations in an effective and efficient manner, the way in which the procedures set forth in this Agreement are to be applied. The Subsidiary Arrangements shall further include such measures as are necessary for the application of safeguards to the items listed in the Inventory as well as any containment and surveillance measures that may be required for the effective application of safeguards. There may also be included other additional procedures resulting from technological developments of proven reliability. The Government and the Agency shall do everything they can to ensure that the Subsidiary Arrangements enter into force as soon as possible and in time to enable the Agency to fulfil the obligations devolving upon it under this Agreement.

(d) The Agency shall have the right in regard to nuclear facilities to request the information referred to in paragraph 41 of the Safeguards Document and to make the inspections referred to in paragraph 51 thereof. The Subsidiary Arrangements shall specify the scope of the information and the number of such inspections, as well as the scope of information and the number of initial inspections relating to heavy water production plants.

Part V

INVENTORY AND LIST

Section 7. The Agency shall establish and maintain an Inventory in accordance with Section 8 and a List in accordance with Section 9 of this Agreement.

Section 8. The following items shall be listed in the Parts of the Inventory specified below:

- (a) In the Main Part:
- (i) The Arroyito Heavy Water Production Plant;
 - (ii) Major components transferred from Switzerland to the Argentine Republic for the Arroyito Heavy Water Production Plant;
 - (iii) Any heavy water production plant or major component which is designed, constructed or operated in the Argentine Republic on the basis of or by the use of information;
 - (iv) Any heavy water production plant into which any major component referred to in the Main Part of the Inventory has been introduced;
 - (v) Any heavy water produced in any of the heavy water production plants while listed in the Inventory;
 - (vi) Any nuclear material, including subsequent generations of special fissionable material, which has been produced, processed or used in any of the nuclear facilities listed in the Inventory, from the time when it is produced, processed or used;
 - (vii) Any nuclear material that has been substituted, in accordance with paragraph 25 or paragraph 26 (d) of the Safeguards Document, for any nuclear material referred to in (vi) above;
 - (viii) Any heavy water that has been substituted in accordance with Sections 22 or 24(c) (i) of this Agreement, for any heavy water referred to in (v) above;
- (b) In the Subsidiary Part: Any nuclear facility (including any heavy water upgrading facility which is part of it) or heavy water production plant which is not listed in the Main Part of the Inventory while containing nuclear material or heavy water listed in the Main Part of the Inventory;
- (c) In the Inactive Part: Any heavy water on which safeguards have been suspended or which has been exempted from safeguards in accordance with the relevant procedures agreed in the Subsidiary Arrangements and any nuclear material which should normally be listed in the Main Part of the Inventory but which is not so listed because:

- (i) It is exempt from safeguards pursuant to paragraph 21, 22 or 23 of the Safeguards Document; or
- (ii) Safeguards thereon are suspended pursuant to paragraph 24 or 25 of the Safeguards Document.

Section 9. The Agency shall maintain a List containing an identification of such information as has been notified to it under Section 11, use being made of means suited for the purpose, such as code numbers or titles. The Government shall keep a record of the items of information identified in the List. Upon determination by the Government and the Agency that any information is no longer significant for any nuclear activity relevant from the point of view of safeguards or when any information becomes freely available to the public, appropriate deletions shall be made from the List.

Section 10. The Agency shall send a copy of the Inventory and the List to the Government every 12 months, and also at other times specified by the Government in a request communicated to the Agency at least two weeks in advance.

NOTIFICATIONS AND REPORTS

Section 11. The Government shall notify the Agency of:

- (a) Any transfers into its jurisdiction of any major component for use in the Arroyito Heavy Water Production Plant;

- (b) Receipt of any item of information;
- (c) Any heavy water production plant or major component required to be listed in the Inventory in accordance with Section 8(a) (iii) or (iv); and
- (d) Any nuclear facility or heavy water production plant required to be listed in the Inventory in accordance with Section 8(b).

Section 12. The Government shall notify the Agency:

- (a) By means of reports in accordance with the Annex and the Subsidiary Arrangements of heavy water produced and which is required to be listed in the Inventory in accordance with Section 8(a) (v); and
- (b) By means of reports in accordance with the Safeguards Document and the Subsidiary Arrangements of any nuclear material produced, processed or used during the period covered by the report and referred to in Section 8(a) (vi).

Upon receipt by the Agency of the notification, such heavy water or nuclear material shall be so listed in the Main Part of the Inventory. The Agency may verify the calculations of the amounts of such heavy water or such nuclear material. Appropriate adjustments in the amounts appearing in the Inventory shall be made by agreement between the Government and the Agency.

Section 13. (a) The Agency will provide the Government of Switzerland with information relating to the Inventory and the List.

(b) The notifications of transfers may be made in a single document by the Government jointly with the Government of Switzerland.

Section 14. The notifications provided for in Section 11 shall be made as follows in accordance with the details to be agreed in the Subsidiary Arrangements:

- (a) For Sections 11(a) and (b) within 30 days of receipt of the item or information in question;
- (b) For Section 11(c) not later than three months before commencement of operation; and
- (c) For Section 11(d) within two weeks after the arrival of the nuclear material or heavy water at the nuclear facility or heavy water production plant in question.

Section 15. Notifications or reports made pursuant to Sections 11, 12, 13, 17 or 18 shall specify, to the extent appropriate, the isotopic and chemical composition and the physical form of the nuclear material; the isotopic and chemical composition of heavy water; the type and capacity of the nuclear facility, heavy water production plant or major component; the quantity, date of receipt or dispatch and the location of the item in question; the identification of the consignor and consignee and any other information relevant to safeguards.

Section 16. The Agency shall, within 30 days of receiving a notification pursuant to Section 11, 12 or 13, inform the Government that the items covered by the notification are listed in the Inventory or List, respectively.

Part VI

TRANSFERS

Section 17. The Government shall notify the Agency of any intended transfer of any item listed in the Main Part of the Inventory to any nuclear facility or heavy water production plant within its jurisdiction, except a nuclear facility or a heavy water production plant at which Subsidiary Arrangements, under this or another Safeguards Agreement, applicable to that item are in force, and shall provide the Agency, three months before such transfer is effected, with sufficient information to enable it to determine

whether it can apply safeguards to the item and to the nuclear facility or heavy water production plant in question, after transfer to such a nuclear facility or heavy water production plant. The necessary basis for the application of safeguards shall be settled in the Subsidiary Arrangements before the transfer of the item in question.

Section 18. The Government shall notify the Agency of any intended transfer of any item in the Inventory to a recipient that is not under the jurisdiction of the Government. The transfer of nuclear material shall be made in accordance with paragraph 28 of the Safeguards Document. The same conditions shall apply, *mutatis mutandis* and to the extent relevant, to the transfer of other items on the Inventory. Upon notification of the Government by the Agency of compliance with the said conditions and on receipt of the notification of transfer from the Government, the item in question shall be deleted from the Inventory.

Section 19. Information may be transferred to a recipient which is not under the jurisdiction of the Government only after the Agency has confirmed that it has made arrangements to apply safeguards in connection with the use of such information.

Part VII

EXEMPTION FROM AND SUSPENSION OF SAFEGUARDS

Section 20. The Agency shall exempt from safeguards nuclear material listed in the Main Part of the Inventory under the conditions specified in paragraph 21, 22 or 23 of the Safeguards Document.

Section 21. The Agency shall suspend safeguards on nuclear material under the conditions specified in paragraph 24 or 25 of the Safeguards Document.

Section 22. The conditions for exemption from and for suspension of safeguards on heavy water shall be agreed in the Subsidiary Arrangements.

Section 23. Nuclear material or heavy water which is exempted from safeguards or on which safeguards have been suspended shall be deleted from the Main Part of the Inventory and shall be listed in the Inactive Part of the Inventory.

TERMINATION OF SAFEGUARDS

Section 24. The safeguards applied pursuant to this Agreement shall be terminated by the Agency under the following conditions:

- (a) On any item listed in the Inventory, upon transfer, in accordance with Section 18;
- (b) On nuclear material, under the conditions specified in paragraph 26 or 27 of the Safeguards Document;
- (c) On heavy water:
 - (i) When the Government places under safeguards as substitute the same amount of heavy water of the same or higher ratio of deuterium atoms to hydrogen atoms; or
 - (ii) As and when the Agency verifies that it has been consumed or has been degraded to a point where the ratio of deuterium atoms to hydrogen atoms is equal to or less than 1 to 5,000;
- (d) On nuclear facilities, heavy water production plants or major components listed in the Main Part of the Inventory as and when the Agency determines that they are no longer usable for any nuclear activity relevant from the point of view of safeguards.

Section 25. Upon termination of safeguards pursuant to Section 24 the item in question shall be deleted from the Inventory. The Agency shall, within 30 days of deleting

the listing of an item from the Inventory pursuant to Section 24, inform the Government accordingly.

Part VIII

AGENCY INSPECTORS

Section 26. The provisions of paragraphs 1 to 10 and 12 to 14 inclusive, of the Inspectors Document, shall apply to Agency inspectors performing functions pursuant to this Agreement, except that paragraph 4 of the Inspectors Document shall not apply to any nuclear facility or to nuclear material to which the Agency has access at all times. The actual procedures to implement paragraph 50 of the Safeguards Document shall be agreed in the Subsidiary Arrangements.

Section 27. The relevant provisions of the Agreement on the Privileges and Immunities of the Agency shall be applied by the Government to the Agency, its inspectors and to any property of the Agency used by them in performing their functions under this Agreement.

Part IX

PHYSICAL PROTECTION

Section 28. The Government shall take all the measures necessary for the physical protection of all items subject to this Agreement, taking into consideration the recommendations of the Agency with regard to such measures.

Part X

FINANCIAL PROVISIONS

Section 29. Expenses shall be borne as follows:

- (a) Subject to paragraph (b) of this Section, each Party shall bear any expenses incurred in the implementation of its responsibilities under this Agreement;
- (b) All special expenses incurred by the Government or by persons under its jurisdiction, at the written request of the Agency, its inspectors or other officials, shall be reimbursed by the Agency if the Government notifies the Agency before the expense is incurred that reimbursement will be required.

Nothing in this Section shall prejudice the allocation of expenses which are attributable to a failure by either Party to comply with this Agreement.

Section 30. The Government shall ensure that any protection against third party liability, including any insurance or other financial security in respect of risks of a nuclear accident at nuclear facilities under its jurisdiction, shall apply to the Agency and its inspectors when carrying out their functions under this Agreement as that protection applies to residents in the Argentine Republic.

Part XI

NON-COMPLIANCE

Section 31. (a) If the Board determines, in accordance with Article XII.C of the Statute, that there has been any non-compliance with this Agreement, the Board shall call upon the Government to remedy such non-compliance forthwith, and the Board shall make such reports as it deems appropriate. In the event of failure by the Government to take fully corrective action within a reasonable time, the Board may take any other measures provided for in Article XII.C of the Statute.

(b) The Agency shall immediately notify the Government of any determination of the Board pursuant to this Section.

Part XII

SETTLEMENT OF DISPUTES

Section 32. Any dispute arising out of the interpretation or application of this Agreement which is not settled by negotiation or another procedure agreed to by the Parties shall at the request of either Party be submitted to an arbitral tribunal composed as follows: Each Party shall designate one arbitrator and the two arbitrators so designated shall elect a third who shall be the Chairman. If within 30 days of the request for arbitration one of the Parties has not designated an arbitrator, either Party may request the President of the International Court of Justice to appoint an arbitrator. The same procedure shall apply if, within 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. 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. The remuneration of the arbitrators shall be determined on the same basis as that of *ad hoc* judges of the International Court of Justice.

Section 33. Decisions of the Board concerning the implementation of this Agreement, except such as relate to the matters dealt with in Sections 28, 29 and 30 shall, if they so provide, be given effect immediately by the Parties, pending the final settlement of any dispute.

Part XIII

AMENDMENTS, ENTRY INTO FORCE AND DURATION

Section 34. The Parties shall, at the request of either of them, consult about amending this Agreement. If the Board decides to make any changes in the Safeguards Document in the scope of the safeguards system or in the Inspectors Document, this Agreement shall be amended, if the Government so requests, to take account of such changes.

Section 35. This Agreement shall enter into force upon signature by or for the Director General of the Agency and by the authorized representative of the Government. It shall remain in force until safeguards have been terminated, in accordance with its provisions, on all items listed in the Main Part of the Inventory, including subsequent generations of produced special fissionable material, and until the List referred to in Section 9 no longer contains any identification of information, or until such other time as may be agreed between the Government and the Agency.

DONE in Vienna on the fourteenth day of October 1981 in duplicate in the Spanish language.

For the Government of the Argentine Republic:
FRANCISCO PULIT

For the International Atomic Energy Agency:
SIGVARD EKLUND

A N N E X

SAFEGUARDS PROCEDURES FOR HEAVY WATER PRODUCTION PLANTS, MAJOR COMPONENTS AND HEAVY WATER LISTED IN THE INVENTORY

DESIGN REVIEW

1. The Agency shall review the design of a heavy water production plant for the sole purpose of satisfying itself that the plant will permit the effective application of safeguards.

2. The design review shall take place at as early a stage as possible. In particular, such review shall be carried out before the Agency assumes safeguards responsibilities with respect to a heavy water production plant and in case of a significant modification of a heavy water production plant whose design has previously been reviewed, before such modification is undertaken.

3. To enable the Agency to perform the required design review, the Government shall submit to it relevant design information sufficient for this purpose, including information on such basic characteristics of the heavy water production plant as may bear on the Agency's safeguards procedures. The Agency shall require only the minimum amount of information and data consistent with carrying out its responsibility under this section. It shall complete the review promptly after the submission of this information by the Government and shall notify the latter of its conclusions without delay.

RECORDS

4. The Government shall arrange for the keeping of records with respect to heavy water production plants, major components and also with respect to heavy water outside such plants. For this purpose the Government and the Agency shall agree on a system of records with respect to such plants, major components and heavy water, on the basis of proposals to be submitted by the Government in sufficient time to allow the Agency to review them before the records need to be kept.

5. The Government shall make arrangements to facilitate the examination of the records by inspectors.

6. The records shall consist, as appropriate, of:

- (a) Accounting records of heavy water;
- (b) Operating records for heavy water production plants and for major components.

7. All records shall be retained for at least two years.

REPORTS

General Requirements

8. The Government shall submit to the Agency reports with respect to the production, processing and use of heavy water in or outside heavy water production plants. For this purpose the Government and the Agency shall agree on a system of reports with respect to heavy water production plants and also with respect to heavy water outside such plants, on the basis of proposals to be submitted by the Government in sufficient time to allow the Agency to review them before the reports need to be submitted. The reports need include such information as is relevant for the purpose of safeguards.

9. Reports shall be submitted in the Spanish language.

Routine Reports

10. Routine reports shall be based on the records compiled in accordance with paragraph 4 through 6 above, and shall consist, as appropriate, of:

- (a) Accounting reports showing the receipt, transfer out, inventory and use of heavy water. The inventory shall indicate the quantity, chemical composition and its location on the date of the report; and

(b) Operating reports showing the use that has been made of the heavy water plant since the last report and, as far as possible, the programme of future work in the period until the next routine report is expected to reach the Agency.

11. The first routine report shall be submitted as soon as a heavy water production plant is in a condition to operate.

12. The frequency of submission of routine reports shall be monthly for heavy water production plants. In case of locations other than heavy water production plants, this frequency shall be agreed between the Government and the Agency, taking into account the frequency established for routine inspections.

Progress in Construction

13. The Agency may request information as to when particular stages in the construction of a heavy water production plant have been or are to be reached.

Special Reports

14. The Government shall report to the Agency without delay:

(a) If any unusual incident occurs involving actual or potential loss of any heavy water or damage to, or destruction of a heavy water production plant or major component; or

(b) If there is good reason to believe that heavy water is lost or unaccounted for in quantities that exceed the normal operating and handling losses as agreed in the Subsidiary Arrangements as characteristic of the plant.

15. The Government shall report to the Agency, as soon as possible, and in any case within two weeks, any transfer not requiring advance notification according to Sections 17 or 18 of this Agreement that will result in a significant change (to be defined by the Agency in agreement with the Government) in the quantity of heavy water in a nuclear facility or in a complex of nuclear facilities considered as a unit for this purpose by agreement with the Agency or in a heavy water production plant or other location. Such report shall indicate the quantity and chemical composition of the heavy water and its intended use.

Amplification of Reports

16. At the Agency's request the Government shall submit amplifications or clarifications of any report, in so far as relevant for the purpose of safeguards.

INSPECTIONS

General Procedures

17. The Agency may inspect heavy water, heavy water production plants and major components.

18. The purpose of safeguards inspections shall be to verify compliance with this Agreement and to assist the Government in complying with this Agreement and in resolving any questions arising out of the implementations of safeguards.

19. The number, duration and intensity of inspections actually carried out shall be kept to the minimum consistent with the effective implementation of safeguards, and if the Agency considers that the authorized inspections are not all required, fewer shall be carried out.

20. Inspectors shall neither operate a heavy water production plant themselves nor direct the staff of a plant to carry out any particular operation.

Routine Inspections

21. A heavy water production plant having an annual production capacity not exceeding 20 metric tons of D_2O (or an equivalent amount of deuterium or deuterium compounds) and the heavy

water in it may be routinely inspected twice a year. A heavy water production plant having an annual production capacity exceeding this limit may be inspected at all times. Heavy water in a storage facility containing at least 10 metric tons, but less than 20 metric tons of D_2O (or an equivalent amount of deuterium or deuterium compounds) may be routinely inspected once a year; heavy water in a storage facility containing 20 or more metric tons of D_2O or its equivalent in deuterium or deuterium compounds may be routinely inspected at all times; and heavy water in a storage facility containing less than 10 metric tons of D_2O or its equivalent in deuterium or deuterium compounds shall not be subject to routine inspections. The arrangements for inspections set forth in paragraph 50 of the Safeguards Document shall apply to all inspections to be made under this paragraph, the actual procedures to be agreed in the Subsidiary Arrangements.

22. Routine inspections may include, as appropriate:

- (a) Audit of records and reports;
- (b) Verification of the amount of heavy water by physical inspection, measurement and sampling;
- (c) Examination of heavy water production plants and major components including a check of measuring instruments and operating characteristics; and
- (d) Check of the operations carried out at heavy water production plants.

Initial Inspections and Design Verification

23. To verify that the construction of a heavy water production plant is in accordance with the design reviewed by the Agency, an initial inspection or inspections of such a plant may be carried out before the plant starts to operate.

24. The Agency shall have the right to request photographic documentation of the installation of major components at heavy water production plants for re-verification of the design. On request by the Government such documentation may be kept under Agency's seals on premises designated by the Government. The documentation shall be made available to inspectors upon re-verification of the plant design.

25. The measuring instruments and operating characteristics of a heavy water production plant and of major components shall be reviewed to the extent necessary for the purpose of implementing safeguards. Instruments that will be used to obtain data on the heavy water in the plant may be tested to determine their satisfactory functioning. Such testing may include the observation by inspectors of commissioning or routine tests by the staff of the plant, but shall not hamper or delay the construction, commissioning or normal operation of the plant.

Special Inspections

26. The Agency may carry out special inspections if:

- (a) The study of a report indicates that such inspection is desirable; or
- (b) Any unforeseen circumstance requires immediate action.

The Board shall subsequently be informed of the reasons for and the results of each such inspection.

27. The Agency may also carry out special inspections of substantial amounts of heavy water which is to be transferred outside the jurisdiction of the Government for which purpose the Government shall give the Agency sufficient advance notice of any such proposed transfer.