



International Atomic Energy Agency

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THE TEXTS OF THE INSTRUMENTS CONNECTED WITH THE AGENCY'S  
ASSISTANCE TO YUGOSLAVIA IN ESTABLISHING  
A RESEARCH REACTOR PROJECT

The texts of the Supply Agreement between the Agency, the Government of Yugoslavia and the Government of the United States of America, and of the Project Agreement between the Agency and the Government of Yugoslavia, in connection with the Agency's assistance to the Government of Yugoslavia in establishing a research reactor project, are reproduced in this document for the information of all Members of the Agency. These Agreements entered into force on 4 October 1961.

## I. SUPPLY AGREEMENT

### CONTRACT FOR THE TRANSFER OF ENRICHED URANIUM FOR A RESEARCH REACTOR

WHEREAS the Government of the Federal People's Republic of Yugoslavia (hereinafter called "Yugoslavia"), desiring to set up a project consisting of a training and research reactor for peaceful purposes, has requested the assistance of the International Atomic Energy Agency (hereinafter called the "Agency") in securing, among other things, the special fissionable material necessary for this purpose; and

WHEREAS the Board of Governors of the Agency has approved the project on 7 April 1961; and

WHEREAS the Agency and the Government of the United States of America (hereinafter called the "United States") on 11 May 1959 concluded an Agreement for Co-operation (hereinafter called the "Co-operation Agreement"), under which the United States undertook to make available to the Agency pursuant to the Statute of the Agency certain quantities of special fissionable material; and

WHEREAS the Agency and Yugoslavia are this day concluding an agreement for the provision by the Agency of the assistance requested by Yugoslavia; and

WHEREAS Yugoslavia has made arrangements with a manufacturer in the United States of America (hereinafter called the "Manufacturer") for the fabrication of enriched uranium into fuel elements for the reactor and for the provision therefor of fission counters containing enriched uranium;

NOW THEREFORE the Agency, the United States Atomic Energy Commission (hereinafter called the "Commission"), acting on behalf of the United States, and Yugoslavia hereby agree as follows:

## ARTICLE I

### Transfer of Enriched Uranium

Section 1. The Commission, subject to the provisions of the Co-operation Agreement, shall transfer to the Agency and the Agency shall accept from the Commission:

- (i) Approximately 13 000 grams of uranium enriched to approximately 20% by weight in the isotope  $U^{235}$  (hereinafter called the "fuel material"), the exact quantities to be determined pursuant to sub-section 3(b), contained in fuel elements and in the conversion plate for a 100-kilowatt Triga Mark II research reactor (hereinafter called the "reactor");
- (ii) Approximately 5 grams of uranium enriched to greater than 90% by weight in the isotope  $U^{235}$  (hereinafter called the "indicator material"), the exact quantities to be determined pursuant to sub-section 3(d), contained in three fission counters for the reactor.

Section 2. The Agency shall transfer to Yugoslavia and Yugoslavia shall accept from the Agency the fuel material and the indicator material that the Agency received pursuant to section 1.

Section 3. The conditions of the transfer of the fuel material and the indicator material shall be as follows:

- (a) The Commission shall make available to the Manufacturer, at a facility of the Commission designated by it, enriched uranium, in the form of uranium hexafluoride, for the fuel material, subject to such terms, charges, conditions and licenses as the Commission may require.

- (b) The precise quantity and enrichment of fuel material in the fuel elements shall be determined by the Manufacturer, and Yugoslavia shall cause the Manufacturer to submit to the Agency and to the Commission a written certification of the Manufacturer's determination of the enrichment by weight in the isotope  $U^{235}$  and of the quantity of enriched uranium contained in the fabricated fuel elements. This determination may be checked by the Agency, by Yugoslavia and by the Commission by means of any review or analysis that any of them may deem appropriate, and shall be approved or revised by unanimous agreement of the parties. The quantity and enrichment shown in the agreed determination shall be considered to be the quantity and enrichment of the fuel material actually transferred under sections 1 and 2 and shall be used for the calculation of the payments required to be made pursuant to Article II.
- (c) The Commission shall make available to the Manufacturer or to a properly licensed supplier of the Manufacturer, at a facility of the Commission designated by it, enriched uranium, in the form of uranium hexafluoride, for the indicator material, subject to such terms, charges, conditions and licenses as the Commission may require.
- (d) The precise quantity of indicator material in the fission counters shall be determined by the Manufacturer or his supplier, and Yugoslavia shall cause the Manufacturer to submit to the Agency and to the Commission a written certification of the Manufacturer's or his supplier's determination of the enrichment by weight in the isotope  $U^{235}$  and of the quantity of enriched uranium contained in the fission counters, and this determination shall be accepted as conclusive for all purposes by the parties.
- (e) Upon completion of the fabrication and the preparation for shipment of the fuel material and of the indicator material, and agreement by the parties with respect to the determination concerning the fuel material and receipt by the parties of the determination concerning the indicator material, Yugoslavia, at the request and on behalf of the Agency, shall arrange for a transporter who, after thirty days' written notice to the Commission and subject to such terms, charges, conditions and licenses as the Commission may require, shall transport and deliver the fuel material and the indicator material to the port of export at San Francisco, California. The Commission, at the request of the Agency, shall thereupon transfer possession to the Agency or, at the Agency's request and on its behalf, to Yugoslavia at such port of export and authorize the export of such material. The Agency or, at the Agency's request and on its behalf, Yugoslavia shall make arrangements, including the payment of all costs, for domestic and overseas transportation and delivery (including cost of containers and packaging) and for storing such material, as well as for physically handling such material in connection with such delivery and transfer; such arrangements and costs shall not be the responsibility of, nor be borne by the Commission. The Agency or, at the Agency's request and on its behalf, Yugoslavia shall accept possession of such material at such port of export and shall sign an appropriate written receipt therefor.
- (f) Title to the fuel material and to the indicator material shall vest in the Agency at the time they leave the jurisdiction of the United States of America and shall thereafter immediately and automatically vest in Yugoslavia.
- (g) It is understood that if desired by the parties, the transactions relating to the fuel material, as detailed in Articles I and II of this Contract, may be carried out separately from and independently of those relating to the indicator material.

## ARTICLE II

### Payment

Section 4. Within sixty days from the date of the Agency's invoice (to be despatched at, or subsequent to, the time that the parties have reached agreement with respect to the determination concerning the fuel material and have received the determination concerning the indicator material), Yugoslavia shall pay to the Agency in United States currency a sum equal to that which the Agency will be obliged to pay to the Commission pursuant to section 5. Yugoslavia shall pay to the Agency interest at the rate of six per cent per annum on all amounts due and not paid within sixty days from the date of the Agency's invoice.

Section 5. Within sixty days from the date of the Commission's invoice (to be despatched at, or subsequent to, the time of the Commission's transfer of possession to the Agency or, at the Agency's request and on its behalf, to Yugoslavia of the fuel material and the indicator material), the Agency shall pay the Commission for the fuel material and the indicator material at the rates set forth in the Annex to this Contract. In the event that the degree of the U<sup>235</sup> isotopic enrichment of the enriched uranium transferred lies between two successive degrees of enrichment for which charges are set forth in the Annex, the charges for the enriched uranium transferred shall be computed by linear interpolation. Payment shall be made to the Commission or its designated agent or contractor, in United States currency. The Agency shall pay to the Commission interest at the rate of six per cent per annum on all amounts due and not paid within sixty days from the date of the Commission's invoice.

Section 6. The Commission, to assist and encourage research on peaceful uses or for medical therapy, has offered to distribute to the Agency in each calendar year, free of charge, special fissionable material of a value of up to US \$50 000 at the time of transfer, to be supplied from the amounts specified in Article II, A of the Co-operation Agreement. If the project to which this Contract relates is found eligible by the Commission, it shall decide by the end of the calendar year in which this Contract is concluded on the extent, if any, to which the project shall benefit by the gift offer, and the Agency and Yugoslavia shall promptly be notified of that decision. The payments provided in sections 4 and 5 for the fuel material and the indicator material shall be reduced by the value of any free material made available to the project by the Commission.

## ARTICLE III

### Responsibility

Section 7. Neither the Agency nor any person acting on its behalf shall at any time bear any responsibility towards Yugoslavia or any person claiming through Yugoslavia for the safe handling and the use of the fuel material and the indicator material.

Section 8. After acceptance of possession by the Agency or, at the Agency's request and on its behalf, by Yugoslavia of the fuel material and the indicator material, as provided in sub-section 3(e), the Agency shall assume full responsibility to the Commission for the enriched uranium contained therein and Yugoslavia shall be equally responsible to the Agency; neither the United States, the Commission, nor any person acting on behalf of the Commission shall bear any responsibility for the safe handling and the use of such materials.

#### ARTICLE IV

##### Officials not to benefit

Section 9. No Member of or Delegate to the Congress of the United States of America, or Resident Commissioner of the United States of America shall be admitted to or share any part of this Contract or any benefit that may arise therefrom.

#### ARTICLE V

##### Settlement of Disputes

Section 10. If the parties should be unable to reach agreement with respect to the determination provided for in sub-section 3(b) within thirty days of the submission of such determination to them by the Manufacturer, any party may request that such a determination be made by a laboratory agreed upon by all the parties as umpire for such determination. The umpire may perform any tests or analyses that it may deem necessary, and all parties hereby agree to facilitate in every way the work of such umpire. The results of such determination by the umpire shall be considered as final and binding on all the parties. The costs of such determination by the umpire shall be borne equally by the parties, provided that if the determination insisted on by any party or parties is confirmed by the umpire such party or parties shall not be obliged to bear any share of such costs.

Section 11. Any other dispute arising out of the interpretation or application of this Contract which is not settled by negotiation or as may otherwise be agreed by the parties concerned, shall on the request of any party be submitted to an arbitral tribunal composed as follows:

- (a) If the dispute involves only two of the parties to this Contract, all three parties agreeing that the third is not concerned, the two parties involved shall each designate one arbitrator, and the two arbitrators so designated shall appoint a third, who shall be the Chairman. If within thirty 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 days of the designation or appointment of two arbitrators the third arbitrator has not been appointed.
- (b) If the dispute involves all three parties to this Contract, each party shall designate one arbitrator, and the three arbitrators so designated shall by unanimous decision appoint a fourth arbitrator, who shall be the Chairman, and a fifth arbitrator. If within thirty days of the request for arbitration any party has not designated an arbitrator, any party may request the President of the International Court of Justice to appoint the necessary number of arbitrators. The same procedure shall apply if within thirty days of the designation or appointment of all three arbitrators the Chairman or the fifth arbitrator has not been appointed.

A majority of the members of the arbitral tribunal shall constitute a quorum, and all decisions shall be made by majority vote. The procedure of the arbitration shall be fixed by the tribunal. The decisions of the tribunal, including all rulings concerning procedure, jurisdiction and the division of the expenses of arbitration between the parties, shall be binding on all 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 under Article 32, paragraph 4, of the Statute of the Court.

ARTICLE VI

Entry into Force

Section 12. This Contract shall enter into force upon signature by the Director General of the Agency and the duly authorized representatives of the Commission and Yugoslavia.

DONE in triplicate in the English language:

For the INTERNATIONAL ATOMIC ENERGY AGENCY:

(signed) Sterling Cole

Vienna, Austria

October 4, 1961

For the UNITED STATES ATOMIC ENERGY COMMISSION on behalf of the  
GOVERNMENT OF THE UNITED STATES OF AMERICA:

(signed) A.A. Wells

Vienna, Austria

October 4, 1961

For the GOVERNMENT OF THE FEDERAL PEOPLE'S REPUBLIC OF YUGOSLAVIA:

(signed) Slobodan Nakićenović

Vienna, Austria

October 4, 1961

A N N E X

United States Atomic Energy Commission Charges  
for Enriched Uranium

The rates of charges for enriched uranium, as provided for in section 5 of this Contract, are as follows:

<u>Percentage Enrichment by</u> <u>Weight in the Isotope U<sup>235</sup></u> <u>of the Enriched Uranium</u>	<u>Price</u> <u>US \$/g of Enriched Uranium</u>
15	1.868
20	2.547
25	3.230
90	12.285
95	13.015

## II. PROJECT AGREEMENT

### AGREEMENT BETWEEN THE INTERNATIONAL ATOMIC ENERGY AGENCY AND THE GOVERNMENT OF THE FEDERAL PEOPLE'S REPUBLIC OF YUGOSLAVIA FOR ASSISTANCE BY THE AGENCY TO YUGOSLAVIA IN ESTABLISHING A RESEARCH REACTOR PROJECT

WHEREAS the Government of the Federal People's Republic of Yugoslavia (hereinafter called "Yugoslavia"), desiring to set up a project for research on, and development and practical application of, atomic energy for peaceful purposes, has requested the assistance of the International Atomic Energy Agency (hereinafter called the "Agency") in securing a training and research reactor which Yugoslavia desires to purchase from a particular manufacturer in the United States of America (hereinafter called the "Manufacturer"), and in securing the special fissionable material necessary for that reactor; and

WHEREAS the Board of Governors of the Agency has approved the project on 7 April 1961; and

WHEREAS the Agency and the Government of the United States of America (hereinafter called the "United States") on 11 May 1959 concluded an Agreement for Co-operation (hereinafter called the "Co-operation Agreement"), under which the United States undertook to make available to the Agency pursuant to the Statute of the Agency certain quantities of special fissionable material, and also undertook, subject to various applicable provisions and license requirements, to permit, upon request of the Agency, persons under the jurisdiction of the United States to make arrangements to transfer and export material, equipment or facilities for a Member of the Agency in connection with an Agency project; and

WHEREAS the Agency, Yugoslavia and the United States Atomic Energy Commission acting on behalf of the United States are this day concluding a contract for the transfer of enriched uranium for the research reactor (hereinafter called the "Supply Agreement");

NOW THEREFORE the Agency and Yugoslavia hereby agree as follows:

#### ARTICLE I

##### Definition of the Project

Section 1. The project to which this Project Agreement relates is a 100-kilowatt Triga Mark II training and research reactor, and its associated facilities, to be operated by the Nuclear Institute "Jožef Stefan" at Ljubljana, Yugoslavia.

#### ARTICLE II

##### Supply of a Reactor and Special Fissionable Material

Section 2. The Agency undertakes that, pursuant to Article IV of the Co-operation Agreement, it will request the United States to permit the transfer and export to Yugoslavia of a 100-kilowatt Triga Mark II reactor together with components and spare parts (hereinafter called the "reactor") manufactured in accordance with a contract between Yugoslavia and the Manufacturer.

Section 3. The Agency hereby allocates to the project described in Article I, and provides to Yugoslavia enriched uranium (hereinafter called the "supplied material") pursuant to the terms of the Supply Agreement, which constitutes an integral part of this Agreement to the extent that it creates rights and obligations between the Agency and Yugoslavia.



### ARTICLE III

#### Shipment of the Supplied Material

Section 4. Any shipment of the supplied material arranged for by Yugoslavia while the supplied material is in its possession shall be in the custody of a licensed public carrier selected for that purpose by Yugoslavia or shall be accompanied by a responsible person designated by Yugoslavia.

Section 5. In arranging for shipment of the supplied material, Yugoslavia shall ensure, as far as possible, the observance of the Agency's Regulations for the Safe Transport of Radioactive Materials.

### ARTICLE IV

#### Agency Safeguards against Diversion

Section 6. Yugoslavia agrees that the reactor and the supplied material, and any special fissionable material produced by their use, shall not be used in such a way as to further any military purpose.

Section 7. It is hereby agreed and specified that the rights and responsibilities provided for in Article XII.A of the Statute of the Agency are relevant to the project, provided that paragraphs 1-6 of that Article shall be implemented in accordance with Annex A to this Agreement. If Yugoslavia desires to use or store the supplied material outside of the reactor and its associated facilities, or if it desires to use other fuel elements in the reactor, or if it desires to process the supplied material or any other special fissionable material to which safeguards are attached pursuant to Annex A or to send any of it out of Yugoslavia, it shall inform the Agency a sufficient time in advance to permit the preparation of any appropriate additional provisions. Subject to Article XII.A of the Statute and to any relevant principles that have been or may be established thereunder, such additional provisions shall be determined by the Board of Governors of the Agency after consultation by the Director General of the Agency with Yugoslavia, and Yugoslavia hereby agrees to comply with any additional provisions thus established and to co-operate with the Agency in their application.

### ARTICLE V

#### Health and Safety Measures

Section 8. The health and safety measures specified in Annex B to this Agreement will be applied to the reactor and the supplied material.

### ARTICLE VI

#### Information and Rights to Inventions and Discoveries

Section 9. In pursuance of Article VIII.B of the Statute of the Agency, Yugoslavia shall make available to the Agency without charge all scientific information developed as a result of the assistance extended by the Agency under this Agreement.

Section 10. The Agency, in view of the degree of its participation in the present project, does not claim any right or interest in any inventions or discoveries, or any patents therein, arising from the project. The Agency may, however, be granted licenses under any such patents upon terms and conditions to be agreed.

## ARTICLE VII

### Settlement of Disputes

Section 11. Any dispute concerning the interpretation or application of this Agreement which is not settled by negotiation or as may otherwise be agreed, shall be settled in accordance with Article V of the Supply Agreement.

Section 12. In case of any dispute involving the application of Article IV or V, decisions of the Board of Governors of the Agency shall, if they so provide, immediately be given effect by Yugoslavia, pending the conclusion of any consultation, negotiation or arbitration that may be or may have been invoked with regard to the dispute.

## ARTICLE VIII

### Entry into Force

Section 13. This Agreement shall enter into force upon signature by the Director General of the Agency and the duly authorized representative of Yugoslavia.

DONE in duplicate in the English language:

For the INTERNATIONAL ATOMIC ENERGY AGENCY:

(signed) Sterling Cole

Vienna, Austria

October 4, 1961

For the GOVERNMENT OF THE FEDERAL PEOPLE'S REPUBLIC OF YUGOSLAVIA:

(signed) Slobodan Nakićenović

Vienna, Austria

October 4, 1961

A N N E X A

Agency Safeguards Against Diversion

A. General

1. The project will be subject to Agency safeguards in accordance with Article XII of the Statute of the Agency, with the appropriate provisions of Agency document INFCIRC/26 (hereinafter referred to as "the safeguards document") and with Article IV of the Project Agreement. These safeguards will be applied in a nominal manner, in accordance with paragraph 60 of the safeguards document, as specified in section C below.
2. The reactor facility consists of a reactor and of storing and cooling facilities for the supplied and produced material and of ancillary laboratory facilities in which such material is used.
3. The definitions used in this Annex correspond to those in part II of the safeguards document.

B. Attachment and termination of Agency safeguards

4. Agency safeguards will be attached to:
  - (a) That portion of the supplied material which is in excess of the lower limit stated in paragraph 32(b) of the safeguards document.
  - (b) The reactor facility, provided that it may be exempted from such attachment after the inspection at initial criticality pursuant to paragraph 36 of the safeguards document.
  - (c) The special fissionable material produced (in this Annex called the "produced material") in that portion of the supplied material to which Agency safeguards are attached or under the conditions of paragraph 35 of the safeguards document.
5. The attachment of Agency safeguards shall be terminated or suspended in accordance with paragraphs 38 and 39 of the safeguards document.

C. Application of Agency safeguards

6. Agency safeguards will be applied to:
  - (a) Nuclear material to which Agency safeguards are attached.
  - (b) Nuclear material while it is intermixed with nuclear material to which Agency safeguards are attached.
  - (c) The reactor facility, if Agency safeguards are attached to it or while it contains nuclear material to which Agency safeguards are attached.
  - (d) Any facility which uses, stores or processes material to which Agency safeguards are attached.
7. Yugoslavia shall arrange for the submission to the Agency of the design and other information on the reactor facility necessary in order to enable the Agency to perform its task in accordance with paragraph 42 of the safeguards document, to the extent that this information is not yet available to the Agency.
8. Yugoslavia shall arrange for the keeping of records in accordance with paragraphs 45 and 46 of the safeguards document and with a system established in accordance with paragraph 44 of the safeguards document.

9. Yugoslavia shall arrange for the submission of routine and special reports in accordance with paragraphs 48-53 of the safeguards document and with a system established in accordance with paragraph 47 of the safeguards document. The routine operating and accounting reports shall be submitted annually; the first report shall be submitted at the time any of the supplied material is first received at the reactor facility.

10. No routine inspections shall be carried out, but special inspections may be made as necessary in accordance with paragraphs 58 and 59 of the safeguards document. The provisions concerning Agency inspectors will be those set out in Agency document GC(V)/INF/39, Annex. Yugoslavia shall apply the relevant provisions of the Agreement on the Privileges and Immunities of the International Atomic Energy Agency to the Agency inspectors and to any property of the Agency used by them in performing their functions.

A N N E X B

Health and Safety Measures

1. The health and safety measures applicable to the project shall be those approved by the Board of Governors on 31 March 1960 as set forth in Agency document INFCIRC/18 (hereinafter called the "health and safety document"), as specified in the paragraphs below.
2. Yugoslavia shall apply the health and safety standards and measures provided for in its Law on Protection from Ionizing Radiations, which was submitted by Yugoslavia for consideration by the Agency in approving the project, it being understood that the regulations to be adopted pursuant to that Law will be in conformity with the current recommendations of the International Commission on Radiological Protection, and that pending the adoption of such regulations these recommendations will be followed. In addition Yugoslavia shall comply with the Agency's specialized Regulations for the Safe Transport of Radioactive Materials to the extent relevant, and shall endeavor to ensure safety conditions as recommended in the relevant parts of the Agency's codes of practice.
3. Yugoslavia shall arrange for the submission to the Agency of the information specified in paragraph 29 of the health and safety document, with particular reference to the following types of operations, to the extent such information is relevant and is not yet available to the Agency, in sufficient time to enable the Agency to perform its task in accordance with paragraph 30 of the health and safety document:
  - (a) Receipt and handling of the fuel.
  - (b) Loading of fuel into the reactor.
  - (c) Start-up of the reactor.
  - (d) Experimental procedures involving the reactor.
  - (e) Discharge of fuel from the reactor.
  - (f) Handling and storage of discharged core.
  - (g) Reprocessing of fuel, if to be performed in Yugoslavia.
4. Yugoslavia shall arrange for the submission of the reports specified in paragraph 25 of the health and safety document, the first report to be submitted no later than twelve months after the coming into force of this Agreement. In addition, the reports specified in paragraphs 26 and 27 of the health and safety document shall be submitted.
5. The Agency may inspect the reactor at the time of initial start-up, once during the first year of operation, and thereafter not more than once a year, except that special inspections may be carried out under the circumstances specified in paragraph 32 of the health and safety document. The provisions concerning Agency inspectors will be those set out in Agency document GC(V)/INF/39, Annex. Yugoslavia shall apply the relevant provisions of the Agreement on the Privileges and Immunities of the International Atomic Energy Agency to the Agency inspectors and to any property of the Agency used by them in performing their functions.
6. Any changes in the safety standards and measures specified in this Annex shall be made in accordance with the provisions of paragraphs 38 and 39 of the health and safety document.