



United States Department of State

Washington, D.C. 20520

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U.S. NRC

BUREAU OF OCEANS AND INTERNATIONAL
ENVIRONMENTAL AND SCIENTIFIC AFFAIRS

1983 MAR 16 AM 9 57

March 15, 1983

EXPORT
APL 09083

*XSNM01977
Yugoslavia*

Mr. James R. Shea
Director of International Programs
United States Nuclear Regulatory Commission
Bethesda, Maryland

Dear Mr. Shea:

This letter is in response to the letter from your office dated August 17, 1982, requesting Executive Branch views as to whether issuance of an export license in accordance with the application hereinafter described meets the applicable criteria of the Atomic Energy Act of 1954, as amended by the Nuclear Non-Proliferation Act of 1978:

NRC No. XSNM01977 — Application by General Atomic Company to authorize export to Yugoslavia of an additional 1,000 grams of U-235 in 5,030 grams of uranium enriched to 19.9 percent in the form of TRIGA fuel elements for reload of the TRIGA Mark II Research Reactor at the Josef Stefan Institute.

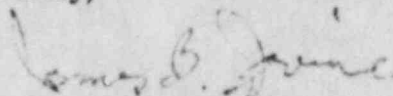
The Executive Branch has reviewed this export application and concluded that the requirements of the Atomic Energy Act, as amended, have been met and that the proposed export will not be inimical to the common defense and security of the United States.

A detailed Executive Branch analysis for the supply of fuel to the Josef Stefan TRIGA reactor in Yugoslavia was submitted to the NRC on November 5, 1980 for license application XSNM01230. There has been no material change in circumstances since that submission except as described below.

The Fourth Supply Agreement between the IAEA, Yugoslavia and the United States, which entered into force on January 16, 1980, has been amended to authorize the supply by the U.S. to Yugoslavia of approximately 5,098 grams of uranium enriched to approximately 19.9 percent. Signatures by authorized representatives of the IAEA, the U.S. and Yugoslavia confirm that the proposed export will be subject to the terms and conditions of the U.S.-IAEA Agreement for Cooperation, as amended, in accordance with the 1961 Project Agreement and the Fourth Supply Agreement of January 16, 1980, as amended.

On the basis of the foregoing, the Executive Branch recommends that the license be issued as requested.

Sincerely,



James B. Devine
Deputy Assistant Secretary

Enclosures:

1. Amendment to the U.S.-IAEA-
Yugoslavia Fourth Supply Agreement
2. U.S.-IAEA-Yugoslavia Fourth
Supply Agreement



INTERNATIONAL ATOMIC ENERGY AGENCY
AGENCE INTERNATIONALE DE L'ENERGIE ATOMIQUE
МЕЖДУНАРОДНОЕ АГЕНТСТВО ПО АТОМНОЙ ЭНЕРГИИ
ORGANISMO INTERNACIONAL DE ENERGIA ATOMICA

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D. V. ...
C. ...

WAGRAMERSTRASSE 5, P.O. BOX 100, A-1400 VIENNA, AUSTRIA, TELEX: 1-12645, CABLE: INATOM VIENNA, TELEPHONE: 2360

IN REPLY PLEASE REFER TO:
PRIERE DE RAPPeler LA REFERENCE: 250-C4.11-YUG-1

14 December 1982

Sir,

I have the honour to refer to the Fourth Supply Agreement between the International Atomic Energy Agency and the Governments of the United States of America and the Socialist Federal Republic of Yugoslavia for the Transfer of Enriched Uranium for a Research Reactor in Yugoslavia, signed on 16 January 1980, the text of which is set forth in document INFCIRC/32/Add.4, part I.

Pursuant to the authorization given by the Board of Governors on 9 June 1982 for the further transfer by the Government of the United States of America to the Government of the Socialist Federal Republic of Yugoslavia, through the Agency, of approximately 5098 grams of uranium with an enrichment of under 20 per cent in the isotope uranium-235, contained in fuel elements for use in the TRIGA Mark II research reactor at the Jožef Stefan Institute in Ljubljana, Yugoslavia, I am pleased to propose that Article I, paragraph 1, of the Fourth Supply Agreement be amended to read as follows:

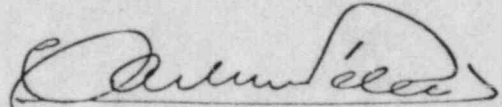
- "1. The Agency, pursuant to Article IV of the Co-operation Agreement, shall request the United States to permit the transfer and export to Yugoslavia of the following materials (hereinafter collectively called the "supplied material"):
 - (a) Approximately 1372 grams of uranium enriched to approximately 70 per cent by weight in the isotope uranium-235; and
 - (b) Approximately 5098 grams of uranium enriched to approximately 19.9 per cent by weight in the isotope uranium-235."

- The Resident Representative of the United States of America to the IAEA
Vienna
- The Resident Representative of the Socialist Federal Republic of Yugoslavia to the IAEA
Vienna

If the proposal set out above is agreeable to your Government, I would further propose that this letter in triplicate be countersigned on behalf of your Government as is indicated below. This letter, as fully signed by all the Parties to the Fourth Supply Agreement, will thereupon constitute an amendment to that Agreement.

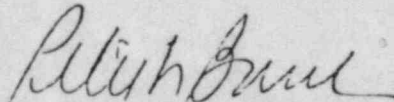
Accept, Sir, the assurances of my highest consideration.

For the INTERNATIONAL ATOMIC
ENERGY AGENCY:



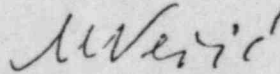
Carlos Vélez Ocoń
Deputy Director General
Department of Technical Co-operation

For the GOVERNMENT OF THE
UNITED STATES OF AMERICA:

By: 
Peter N. Brush
Charge d'Affaires a.i.

Date: December 20, 1982

For the GOVERNMENT OF THE
SOCIALIST FEDERAL
REPUBLIC OF YUGOSLAVIA:

By: 
Milorad Pěšić

Date: 15. XII. 1982

FOURTH SUPPLY AGREEMENT
BETWEEN THE INTERNATIONAL ATOMIC ENERGY AGENCY AND THE
GOVERNMENTS OF THE UNITED STATES OF AMERICA AND THE
SOCIALIST FEDERAL REPUBLIC OF YUGOSLAVIA FOR THE
TRANSFER OF ENRICHED URANIUM FOR A RESEARCH REACTOR IN
YUGOSLAVIA

WHEREAS the International Atomic Energy Agency (hereinafter called the "Agency") and the Government of the Socialist Federal Republic of Yugoslavia (hereinafter called "Yugoslavia") on 4 October 1961 signed an agreement (hereinafter called the "Project Agreement") for assistance by the Agency to Yugoslavia in establishing a training and research project for peaceful purposes relating to a TRIGA Mark II reactor operated by the Jozef Stefan Institute at Ljubljana (hereinafter called the "reactor") in the Socialist Federal Republic of Yugoslavia;

WHEREAS the Agency, the United States Atomic Energy Commission, acting on behalf of the Government of the United States of America (hereinafter called the "United States"), and Yugoslavia on 4 October 1961, on 20 February 1968, and on 30 December 1970 concluded contracts, as amended, for the transfer of enriched uranium for the reactor, pursuant to which supplies of enriched uranium were delivered to Yugoslavia;

WHEREAS Yugoslavia, in connection with the Project Agreement, has requested the assistance of the Agency in securing from the United States an additional supply of enriched uranium for the reactor;

WHEREAS the Board of Governors of the Agency (hereinafter called the "Board") approved the additional assistance for the project on 29 June 1979;

WHEREAS the United States and Yugoslavia affirm support of the objectives of the Treaty on the Non-Proliferation of Nuclear Weapons and the Statute of the Agency and, in this regard, they have demonstrated their commitment to ensuring that the international development and use of nuclear energy for peaceful purposes are carried out under arrangements which, to the maximum extent, will prevent the proliferation of nuclear explosive devices;

WHEREAS Yugoslavia had made arrangements with a manufacturer (hereinafter called the "manufacturer") for the fabrication of enriched uranium into fuel elements for the reactor;

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

WHEREAS pursuant to the Co-operation Agreement, the Agency and the United States on 14 June 1974 concluded a Master Agreement Governing Sales of Source, By-Product and Special Nuclear Materials for Research Purposes (hereinafter called the "Master Agreement");

NOW THEREFORE the Agency, the United States and Yugoslavia (hereinafter called the "Parties") hereby agree as follows:

ARTICLE I

Supply of Enriched Uranium

1. The Agency, pursuant to Article IV of the Co-operation Agreement, shall request the United States to permit the transfer and export to Yugoslavia of 959 grams of uranium-235 contained in 1372 grams of uranium enriched to approximately 70 per cent (hereinafter called the "supplied material").
2. The United States, subject to the provisions of the Co-operation Agreement and the Master Agreement and to the issuance of any required licences or permits, shall transfer to the Agency and the Agency shall transfer to Yugoslavia the supplied material.
3. The particular terms and conditions for the transfer of the supplied material, including all charges for or connected with such material, a schedule of deliveries and shipping instructions, shall be specified in a supplemental contract to the Master Agreement to be concluded between the Agency, the United States and Yugoslavia (hereinafter called the "Supplemental Contract").

ARTICLE II

Shipment of the Supplied Material

All arrangements for the export from the United States of America of the supplied material shall be the responsibility of the Jozef Stefan Institute and the manufacturer. Prior to the export of such material, the Jozef Stefan Institute through Yugoslavia shall notify the Agency of the amount thereof and the date, place and method of shipment.

ARTICLE III

Payment

1. Payment of all charges for or in connection with the supplied material, except for the fabrication of the supplied material into fuel elements, shall be made in accordance with the provisions of the Supplemental Contract. Fabrication of the supplied material into fuel elements shall be arranged in accordance with the provisions of an agreement between the Jozef Stefan Institute and the manufacturer.
2. In extending their assistance for the project, neither the Agency nor the United States assumes any financial responsibility in connection with the transfer of the supplied material by the United States to Yugoslavia.
3. In order to assist and encourage research on peaceful uses or for medical therapy, the United States has in each calendar year offered to distribute to the Agency, 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 United States finds the project to which this Agreement relates eligible, it shall decide by the end of the calendar year in which this Agreement is concluded on the extent, if any, to which the project shall benefit by the gift offer, and shall promptly notify the Agency and Yugoslavia of that decision. The payment provided for in this Article for the supplied material shall be reduced by the value of any gift material thus made available.

ARTICLE IV

Transport, Handling and Use

The United States and Yugoslavia shall take all appropriate measures to ensure the safe transport, handling and use of the supplied material. Neither the United States nor the Agency warrants the suitability or fitness of the supplied material for any particular use or application or shall at any time bear any responsibility towards Yugoslavia or any person for any claims arising out of the transport, handling or use of the supplied material.

ARTICLE V

Safeguards

1. Yugoslavia undertakes that none of the following materials shall be used for the manufacture of any nuclear weapon or any nuclear explosive device or for research on or the development of any nuclear weapon or any nuclear explosive device, or for any other military purpose:

- (a) The supplied material;
- (b) Any special fissionable material produced through the use of the supplied material, including subsequent generations of produced special fissionable material.

2. The Agency shall apply safeguards to the nuclear material referred to in paragraph 1 above in accordance with the provisions of the Project Agreement.

3. Yugoslavia shall permit the Agency and the Agency undertakes to inform the United States of the status of all inventories of any materials required to be safeguarded under this Agreement, should the United States so request.

ARTICLE VI

Safety Standards and Measures

The safety standards and measures specified in the Project Agreement shall, to the extent relevant, apply to the nuclear material subject to this Agreement.

ARTICLE VII

Physical Protection

1. Yugoslavia undertakes that adequate physical protection shall be maintained with respect to the supplied material and any special fissionable material used in or produced through the use of the reactor or the supplied material.

2. The Parties agree to the levels for the application of physical protection set forth in the Annex to this Agreement, which levels may be modified by mutual consent of the Parties without amendment of this Agreement. Yugoslavia shall maintain adequate physical security measures in accordance with such levels. These measures shall as a minimum provide protection comparable to that set forth in Agency document INFCIRC/225/Rev. 1, entitled "The Physical Protection of Nuclear Material", as it may be revised from time to time.

ARTICLE VIII

Settlement of Disputes

1. Any dispute arising out of the interpretation or implementation of this Agreement, which is not settled by negotiation or as may otherwise be agreed by the Parties concerned, shall on the request of any such Party be submitted to an arbitral tribunal composed as follows: each Party to the dispute shall designate one arbitrator and the arbitrators so designated shall by unanimous decision elect an additional arbitrator, who shall be the Chairman. If the number of arbitrators so selected is even, the Parties to the dispute shall by unanimous decision elect an additional arbitrator. If within thirty (30) days of the request for arbitration any Party to the dispute has not designated an arbitrator, any other Party to the dispute 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 (30) days of the designation or appointment of the arbitrators, the Chairman or any required additional 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 procedures shall be established by the tribunal, whose decisions, including all rulings concerning its constitution, procedure, jurisdiction and the division of the expenses of arbitration between the Parties to the dispute, shall be final and binding on all the Parties concerned. The remuneration of the arbitrators shall be determined on the same basis as that of ad hoc judges of the International Court of Justice.

2. Any decision of the Board concerning the implementation of Article V or VI shall, if the decision so provides, be given effect immediately by the Agency and Yugoslavia pending the final settlement of any dispute.

ARTICLE IX

Entry into Force and Duration

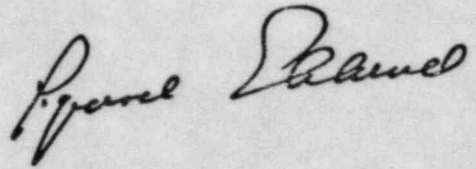
1. After signature by or for the Director General of the Agency and by the authorized representatives of the United States and Yugoslavia, this Agreement shall enter into force on the date upon which the Amendment to the Project Agreement enters into force. The Director General of the Agency shall promptly inform the United States of the date of entry into force of this Agreement.

2. This Agreement shall continue in effect so long as any nuclear material which was ever subject to this Agreement remains in the territory of Yugoslavia or under the jurisdiction of Yugoslavia or under its control anywhere, or until such time as the Parties agree that such material is no longer usable for any nuclear activity relevant from the point of view of safeguards.

DONE in Vienna, this **sixteenth** day of January 1980, in triplicate in the English language.

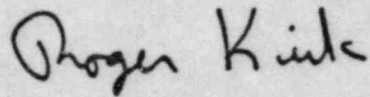
For the INTERNATIONAL ATOMIC ENERGY AGENCY:

(signed) SIGVARD EKLUND



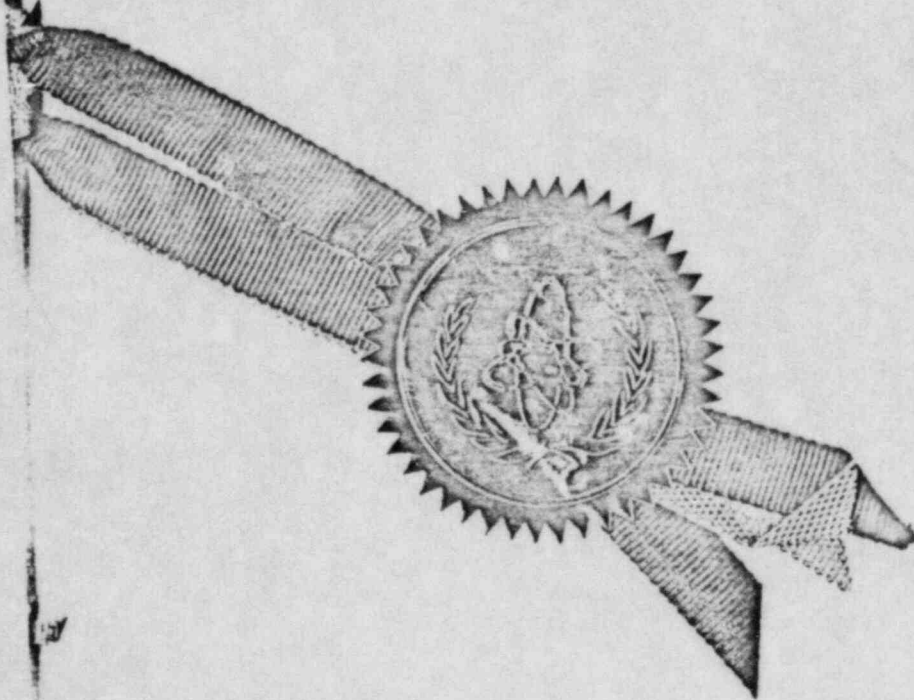
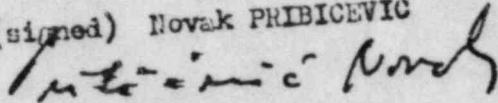
For the GOVERNMENT OF THE UNITED STATES OF AMERICA:

(signed) ROGER KIRK



For the GOVERNMENT OF THE SOCIALIST FEDERAL REPUBLIC OF YUGOSLAVIA:

(signed) NOVAK PRIBICEVIC



ANNEX

LEVELS OF PHYSICAL PROTECTION

Pursuant to Article VII, the agreed levels of physical protection to be ensured by the competent national authorities in the use, storage and transportation of nuclear material listed in the attached table shall as a minimum include protection characteristics as follows:

CATEGORY III

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

Transportation under special precautions including prior arrangements between sender, recipient and carrier, and prior agreement between entities subject to the jurisdiction and regulation of the supplier State and the recipient State, respectively, in case of international transport, specifying time, place and procedures for transferring transport responsibility.

CATEGORY II

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

Transportation under special precautions including prior arrangements between sender, recipient and carrier, and prior agreement between entities subject to the jurisdiction and regulation of the supplier State and the recipient State, respectively, in case of international transport, specifying time, place and procedures for transferring transport responsibility.

CATEGORY I

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

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

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

TABLE: CATEGORIZATION OF NUCLEAR MATERIAL^e

Material	Form	Category		
		I	II	III
1. Plutonium ^{a,f}	Unirradiated ^b	2 kg or more	Less than 2 kg but more than 500 g	500 g or less ^c
2. Uranium-235 ^d	Unirradiated ^b	5 kg or more — —	Less than 5 kg but more than 1 kg	1 kg or less ^c
	— uranium enriched to 20% ²³⁵ U or more		10 kg or more	Less than 10 kg ^c
	— uranium enriched to 10% ²³⁵ U but less than 20%		—	10 kg or more
	— uranium enriched above natural, but less than 10% ²³⁵ U			
3. Uranium-233	Unirradiated ^b	2 kg or more	Less than 2 kg but more than 500 g	500 g or less ^c

^a All plutonium except that with isotopic concentration exceeding 80% in plutonium-238.

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

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

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

^e Irradiated fuel should be protected as Category I, II or III nuclear material depending on the category of the fresh fuel. However, fuel which by virtue of its original fissile material content is included as Category I or II before irradiation should only be reduced one Category level, while the radiation level from the fuel exceeds 100 rads/h at one meter unshielded.

^f The State's competent authority should determine if there is a credible threat to disperse plutonium malevolently. The State should then apply physical protection requirements for category I, II or III of nuclear material, as it deems appropriate and without regard to the plutonium quantity specified under each category herein, to the plutonium isotopes in those quantities and forms determined by the State to fall within the scope of the credible dispersal threat.