

A PROPOSED AGREEMENT BETWEEN THE GOVERN-  
MENT OF THE UNITED STATES AND THE GOVERN-  
MENT OF ROMANIA

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MESSAGE

FROM

**THE PRESIDENT OF THE UNITED STATES**

TRANSMITTING

THE TEXT OF A PROPOSED AGREEMENT FOR COOPERATION BE-  
TWEEN THE GOVERNMENT OF THE UNITED STATES OF AMER-  
ICA AND THE GOVERNMENT OF ROMANIA CONCERNING PEACE-  
FUL USES OF NUCLEAR ENERGY, WITH ACCOMPANYING ANNEX  
AND AGREED MINUTE, PURSUANT TO 42 U.S.C. 2153(b)



FEBRUARY 9, 1999.—Message and accompanying papers referred to the  
Committee on International Relations and ordered to be printed

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U.S. GOVERNMENT PRINTING OFFICE

*To the Congress of the United States:*

I am pleased to transmit to the Congress, pursuant to sections 123 b. and 123 d. of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2153(b) and (d)), the text of a proposed Agreement for Cooperation Between the Government of the United States of America and the Government of Romania Concerning Peaceful Uses of Nuclear Energy, with accompanying annex and agreed minute. I am also pleased to transmit my written approval, authorization, and determination concerning the agreement, and the memorandum of the Director of the United States Arms Control and Disarmament Agency with the Nuclear Proliferation Assessment Statement concerning the agreement. The joint memorandum submitted to me by the Secretary of State and the Secretary of Energy, which includes a summary of the provisions of the agreement and various other attachments, including agency views, is also enclosed.

The proposed agreement with Romania has been negotiated in accordance with the Atomic Energy Act of 1954, as amended by the Nuclear Non-Proliferation Act of 1978 and as otherwise amended. In my judgment, the proposed agreement meets all statutory requirements and will advance the nonproliferation and other foreign policy interests of the United States. The agreement provides a comprehensive framework for peaceful nuclear cooperation between the United States and Romania under appropriate conditions and controls reflecting our common commitment to nuclear non-proliferation goals. Cooperation until now has taken place under a series of supply agreements dating back to 1966 pursuant to the agreement for peaceful nuclear cooperation between the United States and the International Atomic Energy Agency (IAEA).

The Government of Romania supports international efforts to prevent the spread of nuclear weapons to additional countries. Romania is a party to the Treaty on the Nonproliferation of Nuclear Weapons (NPT) and has an agreement with the IAEA for the application of full-scope safeguards to its nuclear program. Romania also subscribes to the Nuclear Suppliers Group guidelines, which set forth standards for the responsible export of nuclear commodities for peaceful use, and to the guidelines of the NPT Exporters Committee (Zangger Committee), which oblige members to require the application of IAEA safeguards on nuclear exports to nonnuclear weapon states. In addition, Romania is a party to the Convention on the Physical Protection of Nuclear Material, whereby it agrees to apply international standards of physical protection to the storage and transport of nuclear material under its jurisdiction or control. Finally, Romania was one of the first countries to sign the Comprehensive Test Ban Treaty.

I believe that peaceful nuclear cooperation with Romania under the proposed new agreement will be fully consistent with, and sup-

portive of, our policy of responding positively and constructively to the process of democratization and economic reform in Central Europe. Cooperation under the agreement also will provide opportunities for U.S. business on terms that fully protect vital U.S. national security interests.

I have considered the views and recommendations of the interested agencies in reviewing the proposed agreement and have determined that its performance will promote, and will not constitute an unreasonable risk to, the common defense and security. Accordingly, I have approved the agreement and authorized its execution and urge that the Congress give it favorable consideration.

Because this agreement meets all applicable requirements of the Atomic Energy Act, as amended, for agreements for peaceful nuclear cooperation, I am transmitting it to the Congress without exempting it from any requirement contained in section 123 a. of that Act. This transmission shall constitute a submittal for purposes of both sections 123 b. and 123 d. of the Atomic Energy Act. My Administration is prepared to begin immediately the consultations with the Senate Foreign Relations and House International Relations Committees as provided in section 123 b. Upon completion of the 30-day continuous session period provided for in section 123 b., the 60-day continuous session period provided for in section 123 d. shall commence.

WILLIAM J. CLINTON.

THE WHITE HOUSE, *February 9, 1999.*

AGREEMENT FOR COOPERATION BETWEEN  
THE GOVERNMENT OF THE UNITED STATES OF AMERICA  
AND THE GOVERNMENT OF ROMANIA  
CONCERNING PEACEFUL USES  
OF NUCLEAR ENERGY

The Government of the United States of America and the  
Government of Romania;

Mindful of their respective obligations under the Treaty on  
the Non-Proliferation of Nuclear Weapons ("NPT") to which  
both the United States of America and Romania are parties;

Reaffirming their commitment to ensuring that the  
international development and use of nuclear energy for  
peaceful purposes are carried out under arrangements which  
will to the maximum possible extent further the objectives  
of the NPT;

Affirming their support of the objectives of the  
International Atomic Energy Agency ("IAEA") and their  
desire to promote universal adherence to the NPT;

Desiring to cooperate in the development, use and control  
of peaceful uses of nuclear energy; and

Mindful that peaceful nuclear activities must be undertaken  
with a view to protecting the international environment  
from radioactive, chemical and thermal contamination;

Have agreed as follows:

## ARTICLE 1 - DEFINITIONS

For the purposes of this agreement:

(A) "Byproduct material" means any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material;

(B) "Component" means a component part of equipment or other item, so designated by agreement of the parties;

(C) "Conversion" means any of the normal operations in the nuclear fuel cycle, preceding fuel fabrication and excluding enrichment, by which uranium is transformed from one chemical form to another -- for example, from UF<sub>6</sub> to UO<sub>2</sub> or from uranium oxide to metal.

(D) "Equipment" means any reactor, other than one designed or used primarily for the formation of plutonium or uranium 233, or any other item so designated by agreement of the parties;

(E) "High enriched uranium" means uranium enriched to twenty percent or greater in the isotope 235;

(F) "Low enriched uranium" means uranium enriched to less than twenty percent in the isotope 235;

(G) "Major critical component" means any part or group of parts essential to the operation of a sensitive nuclear facility;

(H) "Material" means source material, special nuclear material, byproduct material, radioisotopes other than byproduct material, moderator material, or any other such substance so designated by agreement of the parties;

(I) "Moderator material" means heavy water or graphite or beryllium of a purity suitable for use in a reactor to slow down high velocity neutrons and increase the likelihood of further fission, or any other such material so designated by agreement of the parties;

(J) "Parties" means the Government of the United States of America and the Government of Romania;

(K) "Peaceful purposes" include the use of information, material, equipment and components in such fields as research, power generation, medicine, agriculture and industry but do not include use in, research on or development of any nuclear explosive device, or any military purpose;

(L) "Person" means any individual or any entity subject to the jurisdiction of either party but does not include the parties to this agreement;

(M) "Reactor" means any apparatus, other than a nuclear weapon or other nuclear explosive device, in which a self-sustaining fission chain reaction is maintained by utilizing uranium, plutonium or thorium or any combination thereof;

(N) "Restricted data" means all data concerning (1) design, manufacture or utilization of nuclear weapons, (2) the production of special nuclear material, or (3) the use of special nuclear material in the production of energy, but shall not include data of a party which it has declassified or removed from the category of restricted data;

(O) "Sensitive nuclear facility" means any facility designed or used primarily for uranium enrichment, reprocessing of nuclear fuel, heavy water production, or fabrication of nuclear fuel containing plutonium;

(P) "Sensitive nuclear technology" means any information (including information incorporated in equipment or an important component) which is not in the public domain and which is important to the design, construction, fabrication, operation or maintenance of any sensitive nuclear facility, or other such information which may be so designated by agreement of the parties;

(Q) "Source material" means (1) uranium, thorium, or any other material so designated by agreement of the parties, or (2) ores containing one or more of the foregoing materials in such concentration as the parties may agree from time to time;

(R) "Special nuclear material" means (1) plutonium, uranium 233, or uranium enriched in the isotope 235, or (2) any other material so designated by agreement of the parties.

#### ARTICLE 2 - SCOPE OF COOPERATION

1. The parties shall cooperate in the use of nuclear energy for peaceful purposes in accordance with the provisions of this agreement and their applicable treaties, national laws, regulations and license requirements.
2. Transfer of information, material, equipment and components under this agreement may be undertaken directly between the parties or through authorized persons. Such transfers shall be subject to this agreement and to such additional terms and conditions as may be agreed by the parties.



## ARTICLE 3 - TRANSFER OF INFORMATION

1. Information concerning the use of nuclear energy for peaceful purposes may be transferred. Transfers of information may be accomplished through various means, including reports, data banks, computer programs, conferences, visits, and assignments of staff to facilities. Fields which may be covered include, but shall not be limited to, the following:

(A) Development, design, construction, operation, maintenance and use of reactors, reactor experiments, and decommissioning;

(B) The use of material in physical and biological research, medicine, agriculture and industry;

(C) Fuel cycle studies of ways to meet future world-wide civil nuclear needs, including multilateral approaches to guaranteeing nuclear fuel supply and appropriate techniques for management of nuclear wastes;

(D) Safeguards and physical protection of materials, equipment, and components;

(E) Health, safety and environmental considerations related to the foregoing; and

(F) Assessing the role nuclear power may play in national energy plans.

2. This agreement does not require the transfer of any information which the parties are not permitted under their respective treaties, national laws, and regulations to transfer.

3. Restricted data shall not be transferred under this agreement.

4. Sensitive nuclear technology shall not be transferred under this agreement unless provided for by an amendment to this agreement.

#### ARTICLE 4 - TRANSFER OF MATERIAL, EQUIPMENT AND COMPONENTS

1. Material, equipment and components may be transferred for applications consistent with this agreement. Any special nuclear material transferred to Romania under this agreement shall be low enriched uranium, except as provided in paragraph 4. Sensitive nuclear facilities and major critical components thereof shall not be transferred under this agreement, unless provided for by an amendment to this agreement.

2. Low enriched uranium may be transferred for use as fuel in reactor experiments and in reactors, for conversion or

fabrication, or for such other purposes as may be agreed by the parties.

3. The quantity of special nuclear material transferred under this agreement shall not at any time be in excess of that quantity the parties agree is necessary for any of the following purposes: use in reactor experiments or the loading of reactors, the efficient and continuous conduct of such reactor experiments or operation of reactors, and the accomplishment of other purposes as may be agreed by the parties.

4. Small quantities of special nuclear material may be transferred for use as samples, standards, detectors, targets and for such other purposes as the parties may agree. Transfers pursuant to this paragraph shall not be subject to the quantity limitations in paragraph 3.

5. The United States of America shall endeavor to take such actions as are necessary and feasible to ensure a reliable supply of nuclear fuel to Romania, including the export of nuclear material on a timely basis and the availability of the capacity to carry out this undertaking during the period of this agreement.

ARTICLE 5 - STORAGE AND RETRANSFERS

1. Plutonium and uranium 233 (except as contained in irradiated fuel elements), and high enriched uranium, transferred pursuant to this agreement or used in or produced through the use of material or equipment so transferred shall only be stored in a facility to which the parties agree.

2. Material, equipment and components transferred pursuant to this agreement and any special nuclear material produced through the use of any such material or equipment shall not be transferred to unauthorized persons or, unless the parties agree, beyond the recipient party's territorial jurisdiction.

ARTICLE 6 - REPROCESSING AND ENRICHMENT

1. Material transferred pursuant to this agreement and material used in or produced through the use of material or equipment so transferred shall not be reprocessed unless the parties agree.

2. Plutonium, uranium 233, high enriched uranium and irradiated source or special nuclear material, transferred pursuant to this agreement or used in or produced through the use of material or equipment so transferred, shall not be altered in form or content, except by irradiation or further irradiation, unless the parties agree.

3. Uranium transferred pursuant to this agreement or used in any equipment so transferred shall not be enriched after transfer unless the parties agree.

#### ARTICLE 7 - PHYSICAL PROTECTION

1. Adequate physical protection shall be maintained with respect to source or special nuclear material and equipment transferred pursuant to this agreement and special nuclear material used in or produced through the use of material or equipment so transferred.

2. The parties agree to the levels for the application of physical protection set forth in the Annex to this agreement, which may be modified by mutual consent of the parties without amending this agreement. The parties shall maintain adequate physical protection measures in accordance with these levels. These measures shall as a minimum provide protection comparable to the recommendations set forth in IAEA Document INFCIRC/225/Revision 3 concerning the physical protection of nuclear material, or in any revision of that document agreed to by the parties.

3. The adequacy of physical protection measures maintained pursuant to this article shall be subject to review and consultations by the parties from time to time and whenever either party is of the view that revised measures may be required to maintain adequate physical protection.

4. The parties will keep each other informed through diplomatic channels of those agencies or authorities having responsibility for ensuring that levels of physical protection for nuclear material in their territory or under their jurisdiction or control are adequately met and having responsibility for coordinating response and recovery operations in the event of unauthorized use or handling of material subject to this article. The parties will inform each other through diplomatic channels, as well, of the designated points of contact within their national authorities to cooperate on matters of out-of-country transportation and other matters of mutual concern.

5. The provisions of this article shall be implemented in such a manner as to avoid undue interference in the parties' nuclear activities and so as to be consistent with prudent management practices required for the economic and safe conduct of their nuclear programs.

#### ARTICLE 8 - NO EXPLOSIVE OR MILITARY APPLICATION

Material, equipment and components transferred pursuant to this agreement and material used in or produced through the use of any material, equipment or components so transferred shall not be used for any nuclear explosive device, for research on or development of any nuclear explosive device, or for any military purpose.

## ARTICLE 9 - SAFEGUARDS

1. Cooperation under this agreement shall require the application of IAEA safeguards with respect to all nuclear activities within the territory of Romania, under its jurisdiction or carried out under its control anywhere. Implementation of a Safeguards Agreement pursuant to Article III (4) of the NPT shall be considered to fulfill this requirement.

2. Source or special nuclear material transferred to Romania pursuant to this agreement and any source or special nuclear material used in or produced through the use of material, equipment or components so transferred shall be subject to safeguards in accordance with the agreement between Romania and the IAEA for the application of safeguards in connection with the NPT, done at Vienna March 8, 1972, entered into force October 11, 1972.

3. Source or special nuclear material transferred to the United States of America pursuant to this agreement and any source or special nuclear material used in or produced through the use of any material, equipment or components so transferred shall be subject to the agreement between the United States of America and the IAEA for the application of safeguards in the United States of America, done at Vienna November 18, 1977, entered into force on December 9, 1980.

4. If either party becomes aware of circumstances which demonstrate that the IAEA for any reason is not or will not be applying safeguards in accordance with the agreement as provided for in paragraph 2 or paragraph 3, to ensure effective continuity of safeguards the parties shall consult and immediately enter into arrangements with the IAEA or between themselves which conform with IAEA safeguards principles and procedures, which provide assurance equivalent to that intended to be secured by the system they replace, and which conform with the coverage required by paragraph 2 or 3.

5. Each party shall take such measures as are necessary to maintain and facilitate the application of safeguards provided for under this Article.

6. Each party shall establish and maintain a system of accounting for and control of source and special nuclear material transferred pursuant to this agreement and source and special nuclear material used in or produced through the use of any material, equipment or components so transferred. The procedures for this system shall be comparable to those set forth in IAEA document INFCIRC/153 (Corrected), or in any revision of that document agreed to by the parties.

7. Upon the request of either party, the other party shall report or permit the IAEA to report to the requesting party



on the status of all inventories of material subject to this agreement.

8. The provisions of this article shall be implemented in such a manner as to avoid hampering, delay or undue interference in the parties' nuclear activities and so as to be consistent with prudent management practices required for the economic and safe conduct of their nuclear programs.

#### ARTICLE 10 - MULTIPLE SUPPLIER CONTROLS

If any agreement between either party and another nation or group of nations provides such other nation or group of nations rights equivalent to any or all of those set forth under Article 5 or 6 with respect to material, equipment or components subject to this agreement, the parties may, upon request of either of them, agree that the implementation of any such rights will be accomplished by such other nation or group of nations.

#### ARTICLE 11 - CESSATION OF COOPERATION

1. If either party at any time following entry into force of this agreement:

(A) does not comply with the provisions of Article 5, 6, 7, 8, or 9; or

(B) terminates, abrogates or materially violates a safeguards agreement with the IAEA;

the other party shall have the rights to cease further cooperation under this agreement and to require the return of any material, equipment and components transferred under this agreement and any special nuclear material produced through their use.

2. If Romania at any time following entry into force of this agreement detonates a nuclear explosive device, the United States of America shall have the same rights as specified in paragraph 1.

3. If either party exercises its rights under this Article to require the return of any material, equipment or components, it shall, after removal from the territory of the other party, reimburse the other party for the fair market value of such material, equipment or components.

#### ARTICLE 12 - CONSULTATIONS AND ENVIRONMENTAL PROTECTION

1. The parties undertake to consult at the request of either party regarding the implementation of this agreement and the development of further cooperation in the field of peaceful uses of nuclear energy.

2. The parties shall consult, with regard to activities under this agreement, to identify the international environmental implications arising from such activities and shall cooperate in protecting the international environment from radioactive, chemical or thermal contamination arising from peaceful nuclear activities under this agreement and in related matters of health and safety.

#### ARTICLE 13 - SETTLEMENT OF DISPUTES

Any dispute concerning the interpretation or implementation of the provisions of this agreement shall be promptly negotiated by the parties with a view to resolving that dispute.

#### ARTICLE 14 - ENTRY INTO FORCE AND DURATION

1. This agreement shall enter into force on the date on which the parties exchange diplomatic notes informing each other that they have completed all applicable requirements for its entry into force.

2. This agreement shall remain in force for a period of 30 years. This term may be extended for such additional periods as may be agreed between the parties in accordance with their applicable requirements. The agreement may be terminated at any time by either party on one year's written notice to the other party.

3. Notwithstanding the termination or expiration of this agreement or any cessation of cooperation hereunder for any reason, Articles 5, 6, 7, 8, 9, and 11 shall continue in effect so long as any material, equipment or components subject to these articles remains in the territory of the party concerned or under its jurisdiction or control anywhere, or until such time as the parties agree that such material, equipment or components are no longer usable for any nuclear activity relevant from the point of view of safeguards.

IN WITNESS WHEREOF the undersigned, being duly authorized, have signed this Agreement.

DONE at Washington this 15 day of July, 1998,  
in duplicate, in the English and Romanian languages, both texts being equally authentic.

FOR THE GOVERNMENT OF THE  
UNITED STATES OF AMERICA:

*Eliged Amador*

FOR THE GOVERNMENT OF  
ROMANIA:

*Andron*

ANNEX

Pursuant to paragraph 2 of Article 7, the agreed levels of physical protection to be ensured by the competent national authorities in the use, storage and transportation of the materials listed in the attached table shall as a minimum include protection characteristics as below:

Category III

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

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

Category I

Material 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, unauthorized access or unauthorized removal of material.

Transportation under special precautions as identified above for transportation of categories 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<sup>a</sup>

Material	Form	I	Category	III
1. Plutonium <sup>239</sup> Pu	Unirradiated <sup>b</sup>	2 kg or more	Less than 2 kg but more than 500 g	500 g or less <sup>c</sup>
2. Uranium-235	Unirradiated <sup>b</sup>	5 kg or more	Less than 5 kg but more than 1 kg	1 kg or less <sup>c</sup>
	- uranium enriched to 20% <sup>235</sup> U or more			
	- uranium enriched to 10% <sup>235</sup> U but less than 20%	10 kg or more		Less than 10 kg <sup>c</sup>
	- uranium enriched above 10% <sup>235</sup> U			10 kg or more
3. Uranium-233	Unirradiated <sup>b</sup>	2 kg or more	Less than 2 kg but more than 500 g	500 g or less <sup>c</sup>

- <sup>a</sup> All plutonium except that with isotopic concentration exceeding 80% in plutonium-239.
- <sup>b</sup> 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.
- <sup>c</sup> Less than a radiologically significant quantity should be exempted.
- <sup>d</sup> 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.
- <sup>e</sup> 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.
- <sup>f</sup> The State's competent authority should determine if there is a credible threat to disperse plutonium involuntarily. 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.

## AGREED MINUTE

During the negotiation of the Agreement for Cooperation Between the Government of the United States of America and the Government of Romania Concerning Peaceful Uses of Nuclear Energy (the "Agreement") signed today, the following understandings, which shall be an integral part of the Agreement, were reached.

## Coverage of Agreement

Material, equipment and components transferred from the territory of one party to the territory of the other party, whether directly or through a third country, will be regarded as having been transferred pursuant to the Agreement only upon confirmation, by the appropriate government authority of the recipient party to the appropriate government authority of the supplier party, that such material, equipment or components will be subject to the Agreement.

For the purposes of implementing the rights specified in Articles 5 and 6 with respect to special nuclear material produced through the use of nuclear material transferred pursuant to the Agreement and not used in or produced through the use of equipment transferred pursuant to the Agreement, such rights shall in practice be applied to that proportion of special nuclear material produced which



represents the ratio of transferred material used in the production of the special nuclear material to the total amount of material so used, and similarly for subsequent generations.

#### Safeguards

If either party becomes aware of circumstances referred to in paragraph 4 of Article 9, either party shall have the rights listed below, which rights shall be suspended if both parties agree that the need to exercise such rights is being satisfied by the application of IAEA safeguards under arrangements pursuant to paragraph 4 of Article 9:

- (1) To review in a timely fashion the design of any equipment transferred pursuant to the Agreement, or of any facility which is to use, fabricate, process, or store any material so transferred or any special nuclear material used in or produced through the use of such material or equipment;
- (2) To require the maintenance and production of records and of relevant reports for the purpose of assisting in ensuring accountability for material transferred pursuant to the Agreement and any source material or special nuclear material used in or produced through the use of any material, equipment or components so transferred; and
- (3) To designate personnel, in consultation with the other party, who shall have access to all places and data

necessary to account for the material in paragraph 2, to inspect any equipment or facility referred to in paragraph 1, and to install any devices and make such independent measurements as may be deemed necessary to account for such material. Such personnel shall, if either party so requests, be accompanied by personnel designated by the other party.

FOR THE GOVERNMENT OF THE  
UNITED STATES OF AMERICA:

*Elizabeth Anne Molen*

FOR THE GOVERNMENT OF  
ROMANIA:

*Andrei*

THE WHITE HOUSE  
WASHINGTON

July 15, 1998

Presidential Determination  
No. 98-33

MEMORANDUM FOR THE SECRETARY OF STATE  
THE SECRETARY OF ENERGY

SUBJECT: Presidential Determination on the Proposed  
Agreement for Cooperation Between the  
Government of the United States of America  
and the Government of Romania Concerning  
Peaceful Uses of Nuclear Energy

I have considered the proposed Agreement for Cooperation  
Between the Government of the United States of America and  
the Government of Romania Concerning Peaceful Uses of Nuclear  
Energy, along with the views, recommendations, and statements  
of the interested agencies.

I have determined that the performance of the agreement will  
promote, and will not constitute an unreasonable risk to, the  
common defense and security. Pursuant to section 123 b. of the  
Atomic Energy Act of 1954, as amended (42 U.S.C. 2153(b)), I  
hereby approve the proposed agreement and authorize you to  
arrange for its execution.

The Secretary of State is authorized and directed to publish  
this determination in the Federal Register.

*William J. Clinton*

UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY  
Washington, D.C. 20451

JUN 25 1998

THE DIRECTOR

## MEMORANDUM FOR THE PRESIDENT

SUBJECT: Views and Recommendations on the Proposed Agreement for Cooperation Between the United States of America and Romania Concerning Peaceful Uses of Nuclear Energy

Since the 1989 revolution, the Romanian Government has expressed an interest in establishing a bilateral civil nuclear relationship with the United States. The proposed Agreement will provide the legal framework for such cooperation. The Arms Control and Disarmament Agency has reviewed a number of legal and policy factors relevant to this agreement and offers the following views and recommendations.

The proposed Agreement meets all statutory requirements of the Atomic Energy Act and of the 1978 Nuclear Non-Proliferation Act. By doing so, the agreement includes all the guarantees, assurances, and safeguards required by law to deter the misuse of nuclear equipment or material supplied thereunder. Romania's acceptance of these statutory requirements will facilitate the licensing of items under the agreement once it enters into force.

Statements by former President Ceausescu raised serious questions about the commitment of the Communist regime to the NPT, which Romania joined in 1970. Certain actions by that government which came to light after the revolution reinforced that concern -- specifically a significant nuclear export to India without requiring IAEA safeguards and a 1985 processing of nuclear material in Romania that was not in compliance with its IAEA safeguards agreement. The new government took action quickly after the revolution to restore Romania's standing and improve its practices. In addition to issuing unambiguous statements of Romania's support for the NPT, steps were taken to expose and to prevent a recurrence of actions by the Ceausescu regime that were contrary to nuclear nonproliferation principles.

Romanian leaders since the revolution have amply demonstrated their full commitment to international cooperation in preventing the spread of nuclear weapons. Romania was a strong supporter of indefinite NPT extension in 1995 and was one of the first countries to sign the CTBT in 1996. Romania has endorsed recent efforts to strengthen IAEA safeguards and is cooperating fully with the IAEA in implementation of safeguards in Romania. It has taken steps to improve its nuclear export control system and is a member of the Nuclear Suppliers Group and the Zangger Committee, which set multilateral standards for nuclear exports.

In 1991-92, Romania experienced a problem with the theft of uranium pellets from one of its

civil nuclear installations. The pellets are natural uranium and have little strategic value. Romania has taken steps to prevent a recurrence, including adopting significant improvements in physical security at its nuclear sites with assistance from the United States and others. This is of particular importance to the United States, as almost 40 kilograms of U.S.-origin high enriched uranium (HEU) fuel is located at Romania's Institute for Nuclear Research. This site has been regularly inspected by experts from DOE and the physical security measures meet international standards. Romania is also cooperating with the U.S. program to eliminate the use of HEU in international commerce by converting the reactor at the Institute for Nuclear Research to the use of low enriched uranium fuel and eventually returning the spent HEU fuel to the United States.

Romania's policies and practices demonstrate a firm and credible undertaking not to acquire nuclear weapons. Given the current security environment in Europe and Romania's strong orientation toward the West including a desire for NATO membership, there are no circumstances readily foreseen that would cause Romania to reconsider its NPT obligation not to acquire nuclear weapons.

The proposed Agreement helps to fulfill the obligation of the United States under Article IV of the NPT to engage in civil nuclear cooperation with other NPT parties in a manner that furthers the objectives of the Treaty. Establishing this political and legal framework for bilateral nuclear cooperation with Romania is particularly appropriate given the new government's efforts to adopt exemplary nuclear nonproliferation policies and to expose the violation of norms in this area by the Ceausescu regime.

Bilateral consultations with Romania across a broad range of nuclear nonproliferation issues should be continued, with particular emphasis on nuclear export controls, physical protection of nuclear material, and adoption of the IAEA's strengthened safeguards system. Romania has adopted new laws and policies to address past problems. We are confident Romania is committed to their effective implementation.

In conclusion, entry into force of the proposed Agreement will serve important U.S. foreign policy and national security interests with particular emphasis on nuclear nonproliferation. I recommend that you approve the proposed Agreement, that you determine that the performance of the proposed Agreement will promote, and will not constitute an unreasonable risk to, the common defense and security, and that you authorize the signature of the proposed Agreement.



John D. Holum

UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY  
Washington, D.C. 20451

THE DIRECTOR

JUN 25 1998

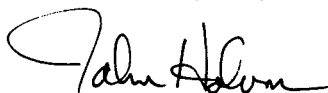
## MEMORANDUM FOR THE PRESIDENT

SUBJECT: Nuclear Proliferation Assessment Statement for the Proposed Agreement for Cooperation Between the United States of America and Romania Concerning Peaceful Uses of Nuclear Energy

As required by Section 123 a. of the Atomic Energy Act of 1954, I am submitting to you an unclassified Nuclear Proliferation Assessment Statement (attached) with respect to the proposed Agreement for Cooperation Between the United States of America and Romania Concerning Peaceful Uses of Nuclear Energy. After providing background information on the nuclear program and nuclear nonproliferation policies of Romania (Part I), this statement examines the applicable legal requirements (Part II), relevant policy issues (Part III), and arrives at certain conclusions (Part IV).

Since the 1989 revolution, Romanian leaders have demonstrated their full commitment to the NPT and to nuclear nonproliferation principles. They exposed actions by the former Communist regime which were contrary to these principles and took corrective action to prevent their recurrence. Romania supported indefinite extension of the NPT in 1995 and was one of the first signatories of the CTBT in 1996. Romania's policies are strongly supportive of the IAEA's ongoing program to improve safeguards. It has worked closely with the IAEA, the United States and other countries in upgrading its physical security measures to ensure adequate protection of nuclear material. Romania is a member of the Nuclear Suppliers Group and the Zangger Committee, and its nuclear export practices are fully consistent with international standards.

I have concluded that the proposed Agreement meets all statutory requirements. Further, I have reached a favorable assessment of the adequacy of the safeguards and other control mechanisms and the peaceful use assurances contained in the proposed Agreement to ensure that any assistance furnished thereunder will not be used to further any military or nuclear explosive purpose.



John D. Holum

Attachment:  
As stated

**NUCLEAR PROLIFERATION ASSESSMENT STATEMENT**

**Pursuant to Section 123 a. Of the  
Atomic Energy Act of 1954, as Amended,  
With Respect to the Proposed  
Agreement for Cooperation Between  
The United States of America and Romania  
Concerning Peaceful Uses of Nuclear Energy**

This Nuclear Proliferation Assessment Statement relates to the proposed Agreement for Cooperation between the United States of America and Romania concerning Peaceful Uses of Nuclear Energy. This agreement for cooperation (which is hereinafter called the "proposed Agreement") is concurrently being submitted to the President for his approval and authorization for signature.

Section 123 a. of the Atomic Energy Act of 1954, as amended ("Atomic Energy Act"), provides that a Nuclear Proliferation Assessment Statement shall "analyze the consistency of the text of the proposed agreement for cooperation with all the requirements of this Act, with specific attention to whether the proposed Agreement is consistent with each of the criteria set forth in this subsection" and address the "adequacy of the safeguards and other control mechanisms and the peaceful use assurances contained in the agreement for cooperation to ensure that any assistance furnished thereunder will not be used to further any military or nuclear explosive purpose." With this statutory mandate in mind, this assessment statement begins with background on the nuclear program and policies of Romania; and reviews past and present Romanian nuclear cooperation with the United States (Part I). The assessment statement then reviews the applicable requirements of the Nuclear Non-Proliferation Act (NNPA) and the Atomic Energy Act and how they are met by the proposed Agreement (Part II). Finally, the assessment statement discusses other nonproliferation policy issues pertinent to this case (Part III) and then sets forth the assessment, conclusions, views and recommendations of the United States Arms Control and Disarmament Agency (ACDA), as contemplated by Section 123 a. of the Atomic Energy Act (Part IV).

## **I. BACKGROUND**

### **A. Romanian Nuclear Program**

With a land area slightly smaller than Oregon and a population of approximately 23 million, Romania is continuing the transition from a highly centralized, communist state to a democratic regime based on a market economy. Beginning in December 1989 when a violent revolution overthrew the communist dictatorship of Nicolae Ceausescu, Romania has made steady progress on democratic reforms and has demonstrated its desire for integration with the West. The 1996 elections were a turning point for Romania. The people voted to replace the post-communist Iliescu regime with a coalition government led by the reformist candidate Emil Constantinescu. This government has embarked on an ambitious economic reform program and has taken other steps to address chronic domestic problems such as corruption and ethnic minority concerns.

There is broad support among all major Romanian political parties for integration into Western security, political and economic institutions. In that context, Romania has also demonstrated its support for nuclear nonproliferation and has gone to considerable lengths to reassure the international community of the peaceful nature of its nuclear program.

Romania has been engaged in the peaceful applications of nuclear energy since 1955, when it signed its first bilateral agreement for nuclear cooperation with the USSR. An Institute for Stable Isotopes was established at Cluj in 1956.

Overall responsibility for Romania's nuclear power program rests with the Ministry of Industry and Commerce. The program is managed by the Romanian Electricity Authority. The regulatory aspects are the responsibility of the National Commission for Nuclear Activities Control, which is located in the Ministry of Water, Forests, and Environmental Protection.

Romania has two research reactor facilities and recently brought on-line its first nuclear power plant. The USSR supplied Romania's first research reactor in 1955. Situated in the Bucharest suburb of Magurele, this tank-type VVER-reactor originally ran on 10% enriched uranium, but was subsequently converted to operate on 36% enriched uranium. The power level of this reactor is 2 MW. The Magurele facility includes several cyclotrons and small accelerators.

The country's principal research facility is located at the Institute for Nuclear Research located near Pitesti. The Institute houses a Triga Mark II dual-core reactor supplied by the American firm General Atomics. This water-cooled and moderated facility combines a 14 MW steady state reactor using highly enriched uranium (HEU) fuel and an annular core pulsing reactor using low enriched uranium (LEU) fuel. The 14 MW reactor was originally fueled entirely with 93%



enriched uranium and took approximately 30 kilograms (kg) of uranium for a full-core loading. It is in the process of being converted to use only LEU fuel. This core has been used for irradiation of experimental power reactor fuel assemblies, isotope production, and other scientific and technical applications. The principal purpose for the pulsing reactor is to test power reactor fuel rod behavior under various simulated accident conditions for reactor safety analyses. This dual-core reactor went critical in 1979. The Institute also houses a pilot-scale nuclear fuel fabrication plant and a small spent fuel-examination facility.

In 1978 Romania signed contracts with Canada to construct five power reactors for the Cernavoda Nuclear Power Station situated on the Danube River about 150 km east of Bucharest. These pressurized heavy water reactors use natural uranium fuel and produce 600 MW of power. Construction of this facility began in late 1980 and after many years of delay the first reactor went critical in 1996. The delays were caused by Romania's difficulties in financing the project and by a shortage of skilled Romanian labor. The Cernavoda I reactor provides about 10% of Romania's electrical generating requirements. A second reactor is reportedly about 40% complete; many of the main components have been acquired and it is scheduled to go critical in 2001. Civil engineering work has begun for units 3, 4, and 5; but there is considerable uncertainty about their future, and work has been suspended. Financing has been a challenge for Romania's nuclear power program since its inception.

Romania mines and concentrates uranium at Feldioara, in the center of the country. At this site, Romania has constructed a limited-scale plant to convert uranium into pellets which are then subsequently used in manufactured fuel assemblies. Romania has no uranium enrichment or spent fuel reprocessing facilities, but did engage in laboratory-scale reprocessing in 1985 according to a 1992 disclosure by the government (see later discussion).

Romania is also constructing a plant at Turnu-Severin that will produce heavy water for use as a moderator and coolant in its power reactors. While the four units of this plant have a design capacity of 360 tons annual production, that rate may not be achieved due to difficulties with financing and with finding adequate power supply. To date, two of the units are operational at 70% capacity or around 125 tons of production per year.

#### **B. Nuclear Cooperation with the United States**

In March 1973, the United States signed an agreement with Romania and the IAEA to supply Romania with a dual-core, Triga Mark III steady state research reactor, located at Pitesti, and with 34 kg (later increased to 38 kg) of 93% enriched uranium fuel. This supply agreement was arranged pursuant to the U.S.-IAEA agreement for cooperation. The agreement contained assurances against any military use of the reactor and fuel and required the application of IAEA safeguards. The United States obtained a number of bilateral assurances from Romania before the fuel was approved for export, e.g., on physical security, and backup safeguards. The reactor was transferred in the mid-1970s and the first tranche of fuel in 1978.

In 1975, the United States agreed to supply an additional 16.7 kg of 93% enriched uranium for the Pitesti reactor. Romania paid for this fuel and it was stored in the United States until needed in 1988, at which time the U.S. Nuclear Regulatory Commission licensed the export. However, difficulties in securing Romanian payment for shipping and meeting the stringent requirements to protect the uranium in transit delayed the movement of the material, which was still in the United States at the time of the December 1989 revolution that overthrew the communist government. Pending resolution of the political situation in Romania, the United States placed a hold on the shipment. This 16.7 kg of HEU fuel was never shipped.

In early 1990, the United States and Romania conducted talks on converting the Triga to the use of LEU fuel. That June, the United States agreed with Romania and the IAEA to supply 37.2 kg of LEU to help restart the Pitesti reactor, which had shut down in July 1989 for lack of fuel. The United States took this opportunity to amend the previous supply and project agreements (completed in 1973 and 1975) to include the more stringent conditions contained in the 1980 amendment to the United States-IAEA agreement for cooperation.

In mid-1991, the Romanian Government signed an agreement with the United States Department of Energy and the IAEA to convert the Pitesti reactor to use LEU, under the Department of Energy's Reduced Enrichment in Research and Test Reactors (RERTR) program. This led to the conclusion of a fourth supply agreement which called for the United States to send Romania approximately 102 kg of uranium enriched to 19.75%, which in effect was to substitute for the HEU never shipped under the 1975 supply agreement.

The decision to help restart the reactor was in part in recognition of the new Bucharest Government's strong commitment to the NPT and IAEA safeguards and of its decision to subscribe to the guidelines of the Zangger (NPT Exporters) Committee and of the Nuclear Suppliers Group (NSG). In February 1992, LEU fuel supplied by the United States' RERTR program was inserted into the reactor, which resumed operation with a mixed HEU-LEU core. Under the RERTR program, experts from Argonne National Laboratory are helping to convert the Triga reactor to use LEU and have provided on-site training, at U.S. expense, in fuel-loading and management.

Romania's willingness to agree to conversion of the Triga reactor enhances U.S. nonproliferation objectives by reducing the amount of HEU in civil commerce. The original supply of HEU fuel exported from the United States in 1978, which is still in Romania, has become significantly irradiated through use in the reactor. As LEU fuel becomes available, it will be substituted for HEU in the reactor at the rate of about 3-4 fuel clusters a year. The conversion will not be completed for several more years. Romania has also pledged to return to the United States all irradiated HEU fuel.

Since the 1970s, the United States has funded several projects for Romania through the IAEA with a total cost of over \$250,000; these projects involved nuclear safety and the use of

radioisotopes in agriculture and nuclear medicine. Since 1959, forty Romanians pursued fellowships involving nuclear education and training in the United States under the auspices and funding of the IAEA. Among the topics covered in such training were safety evaluation, radiation protection, research reactors, and radiopharmaceuticals. Since 1976, over 60 Romanians attended training courses at Argonne National Laboratory. Many Romanians have either visited or were assigned to Department of Energy (DOE) nuclear facilities over the years, including attendance at physical protection training courses in New Mexico co-sponsored by DOE and the IAEA.

### C. Romania's Nonproliferation Policy

Romania signed the NPT on July 1, 1968 -- the date it was opened for signature -- and ratified it less than two years later. All peaceful nuclear activities in Romania are covered by the safeguards agreement required pursuant to Article III of the NPT which was completed in 1972.

Former President Ceausescu publicly claimed in early 1989 that Romania had the technical ability to build a nuclear weapon. This statement raised questions about Romania's commitment to the NPT and in the aftermath of the 1989 revolution, the authorities of Romania's new government reassured the international community of Romania's strong commitment to nuclear nonproliferation. At the February 1990 meeting of the IAEA Board of Governors, the Romanian Ambassador affirmed the new Romanian Government's commitment to its NPT obligations.

In August 1990, Romania notified the IAEA Director General that its export policies were in accordance with the principles of the NSG Guidelines. Romania has been a constructive participant in NSG meetings and otherwise has supported the activities of this group. As an NSG member, Romania is committed to a full range of export controls on nuclear fuel cycle and nuclear-related dual-use items and to a policy of requiring full-scope IAEA safeguards as a condition for any significant, new nuclear supply to non-nuclear-weapon states.

Romania joined the Zangger Committee in May 1991, thereby pledging to follow the export guidelines established by that committee of NPT nuclear exporting countries. The principal obligation of members relates to Article III.2 of the NPT which requires the application of IAEA safeguards on nuclear exports to non-nuclear-weapon states.

In 1993, Romania became a party to the Convention on the Physical Protection of Nuclear Material, thereby agreeing to apply international standards on physical protection to the transport of nuclear material under its jurisdiction or control. Romania has also recognized the need for enhanced international cooperation on nuclear smuggling and has been very open with the problems it encountered in the 1991-92 time frame with the theft of natural uranium pellets from a Romanian nuclear facility (discussed more fully in Part III).

In the run up to the 1995 NPT Review and Extension Conference the United States consulted

frequently with Romanian authorities about the important decision at that Conference related to extension of the NPT. Romania provided strong support for U.S. efforts before and during that Conference to extend the NPT indefinitely and unconditionally. Romania was one of the first countries to sign the Comprehensive Test Ban Treaty in September 1996, another important element of U.S. nuclear nonproliferation policy.

The United States has occasionally approached Romanian authorities on nuclear export control or other key issues related to countries of nuclear proliferation concern. Romania has responded positively on these occasions and has demonstrated it shares U.S. views on a wide range of nuclear nonproliferation topics. Romania has taken several positive steps over the years to strengthen its nuclear export control system, the most recent being a comprehensive 1996 law regulating both the domestic use and export of nuclear material and equipment.

Further evidence of the new government's strong nuclear nonproliferation policies is its willingness to investigate and disclose actions by the previous regime that were serious breaches of nonproliferation norms and agreements. In 1990, Romania admitted that heavy water supplied by a Norwegian firm was shipped through Romania to India without requiring IAEA safeguards. This retransfer to India took place without the knowledge or approval of the Norwegian Government. And in April 1992, Romanian authorities disclosed an IAEA safeguards violation related to laboratory-scale reprocessing activities which took place in 1985. These actions are discussed more fully in Section III of the assessment statement. The legal implication of the safeguards violation is considered in Section II.

These actions and statements provide clear evidence that the current Romanian Government has broken with the policies of the Ceausescu era and that it intends through example and cooperation with other nations to support a strong nuclear nonproliferation regime.

Romania is a party to the international conventions which ban the possession of biological and chemical weapons, and has been admitted to the Australia Group of exporting countries which regulate trade in equipment, material and technology useful in the manufacture of chemical and biological weapons. Romania is a member of the Wassenaar Arrangement which is designed to control and make more transparent the export of conventional arms and related dual-use commodities. Romania has stated that its policies are consistent with the export principles of the Missile Technology Control Regime (MTCR). It has not yet been admitted as a partner to the MTCR in part because Romania is not a significant supplier of MTCR-controlled items.

## II. COMPLIANCE WITH STATUTORY REQUIREMENTS

As will be shown below, the proposed Agreement meets the applicable requirements of the Atomic Energy Act, as amended, (hereinafter the Act) and the Nuclear Non-Proliferation Act (hereinafter the NNPA). Section 123 a. of the Act requires new or amended agreements for cooperation to include the terms, conditions, duration, nature and scope of the cooperation.

The nature and scope of the cooperation authorized by the proposed Agreement is described in Section A below.

The most pertinent terms and conditions of the cooperation authorized by the proposed Agreement are discussed in Sections B, C, D, and E below.

The duration of the proposed Agreement is thirty years from the date of its entry into force, extendable by agreement of the parties and terminable at any time by either party on one year's written notice to the other party.

### A. Nature and Scope of Cooperation

#### (1) Permitted Cooperation

Article 2 of the proposed Agreement describes in general terms the kinds of cooperative activity envisaged: the use of nuclear energy for peaceful purposes and the transfer of information, material, equipment and components. Such cooperation is to be in accordance with the proposed Agreement and the applicable treaties, national laws, regulations and license requirements of the parties. Article 4, Paragraph 1, of the proposed Agreement provides that material, equipment and components may be transferred for applications consistent with the proposed Agreement. Article 4, Paragraph 5, sets forth the commitment of the United States to endeavor to ensure a reliable supply of nuclear fuel to the Republic of Romania.

Article 8 of the proposed Agreement requires that material, equipment and components transferred pursuant to the proposed Agreement, as well as material used in or produced through the use of any material, equipment or components so transferred, shall not be used for any nuclear explosive device, for research on or development of any nuclear explosive device, or for any military purpose. Article 9 of the proposed Agreement provides that cooperation under the proposed Agreement shall require the application of International Atomic Energy Agency (hereinafter IAEA) safeguards with respect to all nuclear activities within the territory of Romania, under its jurisdiction or carried out under its control anywhere, while stipulating that this requirement shall be deemed fulfilled by implementation of a Safeguards Agreement pursuant to Article III(4) of the Treaty on the Non-Proliferation of Nuclear Weapons (hereinafter NPT).

**(2) Types of Cooperation Not Authorized**

The proposed Agreement excludes certain types of cooperation from its scope and provides that amendment of the proposed Agreement would be required for certain other types of cooperation. Thus:

Article 3, Paragraph 3, of the proposed Agreement provides that restricted data, as defined in Article I(N) of the proposed Agreement, shall not be transferred under the proposed Agreement. In addition, Article 3, Paragraph 2, provides that neither party is required to transfer any information which it is not permitted to transfer.

Article 3, Paragraph 4, of the proposed Agreement provides that sensitive nuclear technology, as defined in Article I(P) of the proposed Agreement, shall not be transferred under this agreement unless provided for by an amendment to this agreement.

Article 4, Paragraph 1, of the proposed Agreement provides that neither party shall transfer sensitive nuclear facilities, as defined in Article I(O) of the proposed Agreement, and major critical components thereof, as defined in Article I(G), unless the agreement is amended to permit such transfer.

Article 4, Paragraphs 1 and 4, of the proposed Agreement limit transfer of special nuclear material other than low enriched uranium defined in Article I(R) and (F) of the proposed Agreement, to small quantities (e.g. grams).

**B. Specific Requirements for Agreements for Cooperation**

Section 123 a. of the Atomic Energy Act sets forth nine specific requirements which must be met in an agreement for cooperation. These are set forth below, with a description and explanation of the provisions of the proposed Agreement which address each requirement.

**(1) Duration of Safeguards**

Subparagraph (1) of Section 123 a. of the Act requires:

a guaranty by the cooperating party that safeguards as set forth in the agreement for cooperation will be maintained with respect to all nuclear materials and equipment transferred pursuant thereto, and with respect to all special nuclear material used in or produced through the use of such nuclear materials and equipment, so long as the material or equipment remains under the jurisdiction or control of the cooperating party, irrespective of the duration of other provisions in the agreement or whether the agreement is terminated or suspended for any

reason.

This provision is designed to require the application of safeguards with respect to items subject to the proposed Agreement and to provide protection against any termination of such safeguards. Article 9 of the proposed Agreement and the Agreed Minute appended to the proposed Agreement satisfy this requirement.

Article 9, Paragraph 2 of the proposed Agreement provides that "source or special nuclear material transferred to Romania pursuant to this agreement and any source or special nuclear material used in or produced through the use of material, equipment or components so transferred shall be subject to safeguards in accordance with the agreement between Romania and the IAEA for the application of safeguards in connection with the NPT, done at Vienna March 8, 1972, entered into force October 11, 1972."

Article 9, Paragraph 4 of the proposed Agreement provides further assurance of the continued applicability of safeguards by requiring that "if either party becomes aware of circumstances which demonstrate that the IAEA for any reason is not or will not be applying safeguards in accordance with the agreement as provided for in paragraph 2 or paragraph 3, to ensure effective continuity of safeguards the parties shall consult and immediately enter into arrangements with the IAEA or between themselves which conform with IAEA safeguards principles and procedures, which provide assurance equivalent to that intended to be secured by the system they replace, and which conform with the coverage required by paragraph 2 or 3."

Also, the "Safeguards" paragraph of the Agreed Minute appended to the proposed Agreement provides that "if either party becomes aware of circumstances referred to in paragraph 4 of Article 9, either party shall have the rights listed below, which rights shall be suspended if both parties agree that the need to exercise such rights is being satisfied by the application of IAEA safeguards under arrangements pursuant to paragraph 4 of Article 9:

- (1) To review in a timely fashion the design of any equipment transferred pursuant to the Agreement, or of any facility which is to use, fabricate, process, or store any material so transferred or any special nuclear material used in or produced through the use of such material or equipment;
- (2) To require the maintenance and production of records and of relevant reports for the purpose of assisting in ensuring accountability for material transferred pursuant to the Agreement and any source material or special nuclear material used in or produced through the use of any material, equipment or components so transferred; and
- (3) To designate personnel, in consultation with the other party, who shall have access to all places and data necessary to account for the material in paragraph 2, to inspect any equipment or facility referred to in paragraph 1, and to install any devices and make such

independent measurements as may be deemed necessary to account for such material. Such personnel shall, if either party so requests, be accompanied by personnel designated by the other party.

Article 9, Paragraph 5 of the proposed Agreement reinforces all of this by providing that "each party shall take such measures as are necessary to maintain and facilitate the application of safeguards provided for under this Article."

With respect to continuation of safeguards, Article 14, Paragraph 3 of the proposed Agreement states that "notwithstanding the termination or expiration of this agreement or any cessation of cooperation hereunder for any reason, Articles 5, 6, 7, 8, 9 and 11 shall continue in effect so long as any material, equipment or components subject to these Articles remains in the territory of the party concerned or under its jurisdiction or control anywhere, or until such time as the parties agree that such material, equipment, or components are no longer usable for any nuclear activity relevant from the point of view of safeguards."

Article 9, Paragraphs 6 and 7, also require each Party to maintain an accounting and control system for nuclear material and to provide, or allow IAEA to provide upon request of the other Party, status reports on inventories of material subject to the proposed Agreement.

#### **(2) Full-Scope Safeguards**

Subparagraph (2) of Section 123 a. of the Act requires:

in the case of non-nuclear-weapon states, a requirement, as a condition of continued United States nuclear supply under the agreement for cooperation, that IAEA safeguards be maintained with respect to all nuclear materials in all peaceful nuclear activities within the territory of such state, under its jurisdiction, or carried out under its control anywhere.

Article 9, Paragraph 1 of the proposed Agreement meets this requirement by providing that cooperation under the proposed Agreement shall require the application of IAEA safeguards "with respect to all nuclear activities within the territory of Romania, under its jurisdiction or carried out under its control anywhere. Implementation of a safeguards agreement pursuant to Article III (4) of the NPT shall be considered to fulfill this requirement."

#### **(3) No Military or Explosive Use**

Subparagraph (3) of Section 123 a. of the Act requires:

...a guaranty by the cooperating party that no nuclear materials and equipment or sensitive nuclear technology to be transferred pursuant to such agreement, and no



special nuclear material produced through the use of any nuclear materials and equipment or sensitive nuclear technology transferred pursuant to such agreement, will be used for any nuclear explosive device, or for research on or development of any nuclear explosive device, or for any other military purpose.

Article 8 and Article 3, Paragraph 4 of the proposed Agreement, respectively, satisfy this requirement by requiring that:

Material, equipment and components transferred pursuant to this agreement and material used in or produced through the use of any material, equipment or components so transferred shall not be used for any nuclear explosive device, for research on or development of any nuclear explosive device, or for any military purpose.

Sensitive nuclear technology shall not be transferred under this agreement unless provided for by an amendment to this agreement.

**(4) Right of Return**

Subparagraph (4) of Section 123 a. of the Act requires:

...a stipulation that the United States shall have the right to require the return of any nuclear materials and equipment transferred pursuant thereto and any special nuclear material produced through the use thereof if the cooperating party detonates a nuclear explosive device or terminates or abrogates an agreement providing for IAEA safeguards.

Article 11 of the proposed Agreement meets this requirement by providing:

- 1. If either party at any time following entry into force of this agreement:

\* \* \* \* \*

(B) terminates, abrogates or materially violates a safeguards agreement with the IAEA;

the other party shall have the rights to cease further cooperation under this agreement and to require the return of any material, equipment and components transferred under this agreement and any special nuclear material produced through their use.

- 2. If Romania at any time following entry into force of this agreement detonates a nuclear explosive device, the United States of America shall have the same rights as specified in paragraph 1.

**(5) Retransfer**

Subparagraph (5) of Section 123 a. of the Act requires:

a guaranty by the cooperating party that any material or any Restricted Data transferred pursuant to the agreement for cooperation and ... any production or utilization facility transferred pursuant to the agreement for cooperation or any special nuclear material produced through the use of any such facility or through the use of any material transferred pursuant to the agreement, will not be transferred to unauthorized persons or beyond the jurisdiction or control of the cooperating party without the consent of the United States.

Section 109 of the Act, as amended by Section 309 of the NNPA, requires that recipient nations also agree to obtain United States approval before retransferring any components, items and substances exported from the United States which the Nuclear Regulatory Commission (NRC) has found to be "of significance for nuclear explosive purposes." The NRC has identified a series of such components, items and substances in regulations set forth in 10 CFR Part 110 which are subject to this retransfer requirement.

Article 5, Paragraph 2 and Article 3, Paragraph 3 of the proposed Agreement, respectively, satisfy the requirements of Sections 123 a. and 109 of the Act by providing that:

Material, equipment and components transferred pursuant to this agreement and any special nuclear material produced through the use of any such material or equipment shall not be transferred to unauthorized persons or, unless the parties agree, beyond the recipient party's territorial jurisdiction.

Restricted data shall not be transferred under this agreement.

The exercise of this particular United States control with respect to "special nuclear material produced through the use of nuclear material transferred pursuant to the proposed Agreement and not used in or produced through the use of equipment transferred pursuant to the proposed Agreement" is limited by the rule of proportionality set out under "Coverage of the Agreement" in the Agreed Minute appended to the proposed Agreement. That section confirms that the retransfer requirements of Article 5 shall be applied to "that proportion of special nuclear material produced which represents the ratio of transferred material used in the production of the special nuclear material to the total amount of material so used, and similarly for subsequent generations."

**(6) Physical Security**

Subparagraph (6) of Section 123 a. of the Act requires:

a guaranty by the cooperating party that adequate physical security will be maintained with respect to any nuclear material transferred pursuant to such agreement and with respect to any special nuclear material used in or produced through the use of any material, production facility, or utilization facility transferred pursuant to such agreement.

Article 7, Paragraph 1 of the proposed Agreement satisfies this requirement by requiring that:

Adequate physical protection shall be maintained with respect to source or special nuclear material and equipment transferred pursuant to this agreement and special nuclear material used in or produced through the use of material or equipment so transferred.

With respect to the meaning of "adequate," Section 127 (3) of the Act provides that physical security measures shall be deemed adequate if they provide a level of protection equivalent to that required by regulations promulgated by the NRC establishing levels of physical protection. (See NNPA Section 304 (d); 10 CFR 110.43.)

Article 7, Paragraph 2 of the proposed Agreement satisfies this test by providing that:

The parties agree to the levels for the application of physical protection set forth in the Annex to this agreement, which may be modified by mutual consent of the parties without amending this agreement. The parties shall maintain adequate physical protection measures in accordance with these levels. These measures shall as a minimum provide protection comparable to the recommendations set forth in IAEA Document INFCIRC/225/Revision 3 concerning the physical protection of nuclear material, or in any revision of that document agreed to by the parties.

**(7) Reprocessing, Enrichment or other Alteration**

Subparagraph (7) of section 123 a. of the Act requires:

... a guaranty by the cooperating party that no material transferred pursuant to the agreement for cooperation and no material used in or produced through the use of any material, production facility, or utilization facility transferred pursuant to the agreement for cooperation will be reprocessed, enriched or (in the case of plutonium, uranium 233, or uranium enriched to greater than twenty percent in the isotope 235, or other nuclear materials which have been irradiated) otherwise altered in form or content without prior approval of the United States.

Article 6 of the proposed agreement satisfies these requirements by providing the following:

1. Material transferred pursuant to this agreement and material used in or produced through the use of material or equipment so transferred shall not be reprocessed unless the parties agree.
2. Plutonium, uranium 233, high enriched uranium and irradiated source or special nuclear material, transferred pursuant to this agreement or used in or produced through the use of material or equipment so transferred, shall not be altered in form or content, except by irradiation or further irradiation, unless the parties agree.
3. Uranium transferred pursuant to this Agreement or used in any equipment so transferred shall not be enriched after transfer unless the parties agree.

The controls in Article 6 of the proposed Agreement are subject to the proportionality provision in the Agreed Minute appended to the proposed Agreement.

**(8) Storage**

Subparagraph (8) of Section 123 a. of the Act requires:

... a guaranty by the cooperating party that no plutonium, no uranium 233, and no uranium enriched to greater than twenty percent in the isotope 235, transferred pursuant to the agreement for cooperation, or recovered from any source or special nuclear material so transferred or from any source or special nuclear material used in any production facility or utilization facility transferred pursuant to the agreement for cooperation, will be stored in any facility that has not been approved in advance by the United States.

Article 5, Paragraph 1 of the proposed Agreement fulfills this requirement by providing that:

Plutonium and uranium 233 (except as contained in irradiated fuel elements), and high enriched uranium, transferred pursuant to this agreement or used in or produced through the use of material or equipment so transferred shall only be stored in facilities to which the parties agree.

The storage control provided for in Article 5, Paragraph 1, of the proposed Agreement is subject to the proportionality provision in the Agreed Minute appended to the proposed Agreement.

**(9) Sensitive Nuclear Technology**

Subparagraph (9) of section 123 a. of the Act requires:

...a guaranty by the cooperating party that any special nuclear material, production

facility, or utilization facility produced or constructed under the jurisdiction of the cooperating party by or through the use of any sensitive nuclear technology transferred pursuant to such agreement for cooperation will be subject to all the requirements specified in this subsection.

The proposed Agreement contains no such guarantees as Article 3, Paragraph 4 precludes the transfer of sensitive nuclear technology under the agreement unless it is amended to allow such transfers.

**C. NNPA Section 402 – Additional Requirements**

Section 402(a) of the NNPA requires that:

Except as specifically provided in any agreement for cooperation, no source or special nuclear material hereinafter exported from the United States may be enriched after export without the prior approval of the United States for such enrichment.

As discussed earlier, Article 6, Paragraph 3 of the proposed Agreement satisfies this restriction by providing the “uranium transferred pursuant to this Agreement or used in any equipment so transferred shall not be enriched after transfer unless the parties agree.”

Section 402(b) of the NNPA requires that:

In addition to other requirements of law, no major critical component of any uranium enrichment, nuclear fuel reprocessing, or heavy water production facility shall be exported under any agreement for cooperation ... unless such agreement for cooperation specifically designates such components as items to be exported pursuant to the agreement for cooperation.

Article 4, Paragraph 1 of the proposed Agreement prohibits the transfer of sensitive nuclear facilities and major critical components under the agreement unless it is amended to allow such transfers. The definition of “sensitive nuclear facility” in Article 1(O) of the proposed Agreement encompass the facilities described in Section 402(b) of the NNPA.

**D. Section 129 of the Atomic Energy Act -- Conduct Resulting in Termination of Nuclear Exports**

Section 129 of the Atomic Energy Act prohibits exports of nuclear materials and equipment or sensitive nuclear technology to countries which engage in proscribed activities. These activities include inter alia nuclear weapons development activities, violation or termination of a

safeguards agreement, violation of an agreement for cooperation with the United States, or assistance to a non-nuclear weapon state relevant to acquisition of nuclear weapons.

As discussed more fully in Part III, in 1992 Romania publicly disclosed an activity by the previous regime which took place in 1985 that appeared to be a violation of its safeguards agreement with the IAEA. Romania invited the IAEA to investigate the incident and in June 1992 the IAEA Director General reported to the Board of Governors that this agreement did represent non-compliance with the safeguards agreement between Romania and the IAEA.

This incident represents a material violation of an IAEA safeguards agreement within the meaning of Section 129 of the Atomic Energy Act and thus exports under the proposed Agreement would not be possible in the absence of a Presidential waiver. Given the willingness of the new Romanian government to disclose this activity, its invitation to the IAEA to investigate the matter, its adoption of measures to prevent a recurrence, and its consistent support for nuclear nonproliferation policies and principles, President Clinton determined on August 30, 1993, that to deny nuclear cooperation to Romania under these circumstances would "be seriously prejudicial to the achievement of United States nonproliferation objectives" and exercised a Presidential waiver. This waiver became effective on November 23, 1993, following Congressional review.

Based on all information available to ACDA, there is no basis for a finding that Romania has engaged in the other types of activities set forth in Section 129.

#### **E. Section 109 of the Atomic Energy Act -- Components, Items, and Substances**

Section 109 of the Act empowers the Nuclear Regulatory Commission (NRC) to designate certain component parts, items and substances which, because of their significance for nuclear explosive purposes, should be subject to its licensing authority. The following criteria must be met for such exports: (a) IAEA safeguards will be applied to such component, substance or item, (b) the component, substance or item(s) will not be used for any nuclear explosive device or for research on or development of any nuclear explosive device, and (c) that no such component, substances or items will be transferred without U.S. consent.

NRC regulations (10 CFR Part 110) have identified certain reactor components and two substances -- heavy water and nuclear grade graphite -- as subject to these criteria. In the case of Romania, the three criteria noted above are met by the safeguards, no-explosive, and retransfer provisions in Article 9, Paragraph 2, Article 8, and Article 5, Paragraph 2, respectively. The Atomic Energy Act does not require that such exports be transferred under an agreement for cooperation. In that case, the first two criteria would be met by Romania's status as an NPT party; and the retransfer requirement could be met by the provision of a generic assurance -- which in fact Romania did in 1991 via a diplomatic note.

### III. OTHER NUCLEAR NON-PROLIFERATION POLICY ISSUES

Any decision by the United States to engage in nuclear cooperation with a given state involves a number of nonproliferation policy considerations in addition to the legal rights, guarantees, and safeguards contained in the applicable agreement for cooperation. These considerations could relate in a given case to such matters as the scope of cooperation envisaged under the agreement, the precedential implications raised by the agreement, the degree to which extending nuclear cooperation may foster other nuclear nonproliferation interests, the general role of the state concerned in nonproliferation efforts, and a number of other issues. These issues will vary from case to case. This part of the assessment statement addresses policy issues of this kind that relate to the proposed Agreement.

#### A. Scope of Cooperation/Weapons-Usable Material

The scope of cooperation permitted by the proposed Agreement extends to the transfer of natural and low enriched uranium (LEU), equipment (including reactors), and components for both nuclear research and nuclear power production. Obviously, the extent and nature of U.S. involvement in a Romanian nuclear power program will depend on Romania's future decisions regarding such a program.

The proposed Agreement does not provide for transfers of any sensitive nuclear technology or facilities, such as for enrichment or reprocessing. For the foreseeable future, neither Romania's indigenous capabilities nor its actual requirements for a peaceful nuclear energy program are likely to result in the development or acquisition of enrichment or reprocessing facilities. The proposed Agreement provides for the transfer of any quantity of LEU if the parties agree that such a transfer is necessary for the purposes set forth in the agreement. However, only small quantities (i.e., grams) of plutonium or high enriched uranium (HEU) may be transferred for use as samples, standards, detectors, targets, and for other purposes as the parties may agree. While the United States has supplied significant quantities of HEU fuel to Romania in the past, such exports will not be possible under the new agreement. As noted in Part I, Romania is converting its U.S.-supplied HEU-fueled research reactor to the use of LEU fuel.

The limited scope of this agreement serves U.S. nuclear nonproliferation objectives and is compatible with the requirements of Romania's nuclear program.

#### B. NPT Considerations

Preventing the further spread of nuclear weapons continues to be a major U.S. national security and foreign policy goal, and the NPT continues to play a unique and essential role in international efforts to erect legal and political barriers to such nuclear weapons proliferation. Romania's support for the NPT is reflected in its commitment to the norms and institutions that

underpin the international nonproliferation regime. In this regard, it is worth noting the following excerpt from an April 1992 statement issued by the Romanian Government:

In accordance with the new policy of the Romanian Government promoted after the December 1989 revolution, Romania strictly complies with its undertakings assumed under the Treaty on the Non-Proliferation of Nuclear Weapons, the safeguards agreement concluded with the IAEA and the cooperation agreements concluded with other countries in the use of nuclear energy exclusively for peaceful purposes. In this spirit, Romania subscribed to the Nuclear Suppliers Group Guidelines as a partner country and joined the "Zangger Committee"; Romania also accepted the full-scope safeguards and, as stated on different occasions, including the February 1992 IAEA Board of Governors session, supports the strengthening of the IAEA safeguards system.

On May 11, 1995, a Conference of NPT parties in New York made what President Clinton called an historic decision when it extended the NPT permanently and unconditionally. Romania provided strong support for that outcome. Indicative of Romania's position are the following statements made at the Conference by the principal Romanian delegate during the plenary debate:

Given the important and irreplaceable role the NPT plays in facilitating and enhancing global and regional security, Romania appeals to all countries that have not done so to accede to this Treaty and, at the same time, reiterates its strong belief that the Treaty should be extended indefinitely and unconditionally. To do otherwise would be to undermine the fundamental underpinning of the successful worldwide efforts to halt the spread of nuclear weapons while making the benefits of nuclear energy available for all mankind of peaceful purposes. It could endanger the basic environment of trust among Treaty Parties and thus weaken their security and their prospects for enhanced nuclear cooperation.

The NPT is an indispensable part of the superstructure that undergirds our international security framework. It is an essential condition for any further reduction of nuclear armaments, both as a security factor enabling nuclear-weapon States to make such reductions and as a conduit for non-nuclear-weapon States to convey their demands in that regard to the nuclear-weapon States. It is therefore crucial that all parties should make every effort to extend the NPT indefinitely.

There is ample evidence that Romania is firmly committed to the NPT regime and intends to honor its obligations under that Treaty. The United States has long believed that states which have adhered to the NPT and accepted full-scope IAEA safeguards, and are in full compliance with these undertakings, should receive a preference in peaceful nuclear cooperation. The proposed agreement for cooperation is fully supportive of this NPT preference policy.



### C. Safeguards Considerations

All peaceful nuclear activities in Romania are subject to IAEA safeguards pursuant to its obligations under the NPT and its NPT safeguards agreement with the IAEA, which entered into force in October 1972. In 1985 the previous Romanian Government engaged in activities involving nuclear material which constituted non-compliance with this safeguards agreement. This action was not disclosed, however, until discovered by the post-communist Romanian government.

In April 1992, Romania informed the IAEA that it had found a vessel containing less than a gram of plutonium, resulting from reprocessing research performed in 1985, which had not been declared to the IAEA. The research consisted mainly in the dissolution of approximately 120 grams of material from a nuclear fuel rod manufactured by Romania, irradiated in the United States-supplied Triga reactor, followed by plutonium separation with solvent extraction. Romania told the IAEA that the research ended in 1985, and that it violated both Romania's internal laws and its international obligations. It had been discovered in March 1992 in the course of an inventory verification by Romanian officials. The new government requested the IAEA to perform a special inspection and pledged its full cooperation.

The IAEA conducted this inspection and reported to the Board of Governors in June 1992 that it had verified the material and placed it under safeguards. The IAEA reported that milligram quantities of plutonium had been separated and not previously reported to the IAEA, and that this action represented non-compliance with Romania's safeguards agreement. The Board of Governors took note of this report, indicated that it was satisfied that corrective action had been taken, and decided to report the incident to the members of the U.N. Security Council for their information. There was no recommendation for action against Romania since its new leaders had acted promptly in notifying the IAEA of the violation once it was discovered and had cooperated with the IAEA in ensuring the material was placed under safeguards. In fact, the IAEA Board of Governors commended Romania for these actions.

Romanian officials have also stated that the laboratory-scale equipment involved in this event was dismantled, that the officials responsible are either retired or no longer involved in activities related to safeguarded facilities and material, and that controls are in place to protect against future incidents of this type.

On the basis of its close familiarity with the IAEA safeguards system, ACDA is confident that the IAEA safeguards applied to the nuclear material subject to the proposed Agreement can provide reasonable assurance regarding its continued peaceful, non-explosive use. This judgment is based on the recognition that IAEA safeguards are not designed to detect a diversion involving the small quantities at issue in the incident described above. The IAEA has a well-designed system for applying safeguards to reactors which provides a high level of confidence against the diversion of significant quantities of spent fuel (e.g., containing several

kilograms of plutonium in contrast to the small fraction of a gram involved in the 1985 diversion). Romania also has a significant quantity of U.S.-origin HEU fuel. The safeguards procedures and measures applicable to such material are well-known to U.S. officials and provide adequate protection against diversion to non-peaceful uses.

Based on all information of which it is aware, ACDA has no reason to question the present Romanian Government's attitude toward safeguards or its compliance with all of its safeguards obligations. Its cooperation with the IAEA in applying safeguards and investigating this incident was exemplary. It reversed the policy of the Ceausescu government which had frequently made it difficult for the IAEA by withholding approval for inspectors. Romania has supported ongoing efforts at the IAEA since 1991 to strengthen IAEA safeguards, including the adoption by the Board of Governors in May 1997 of a Model Safeguards Protocol for NPT parties which incorporates a strengthened safeguards system. Romania continues to cooperate fully with the IAEA in the application of safeguards.

Moreover, management and organizational changes have been made in the Romanian Government since the revolution, with the goal of improving Romania's internal nuclear material accounting and control. The former State Committee for Nuclear Energy was abolished and the promotional and regulatory aspects of nuclear energy were separated, with the latter being assigned to a new organization entitled the National Commission for Nuclear Activities Control.

#### **D. Romanian Nuclear Export Policy**

The government that replaced the Ceausescu regime adhered to the export guidelines of the Nuclear Suppliers Group (NSG), and in April 1992 Romania joined other NSG members in adopting full-scope IAEA safeguards as a condition of nuclear supply and in expanding the NSG regime to cover the transfer of nuclear-related dual-use equipment, materials and related technology. Romania also joined the Zangger Committee of NPT nuclear exporting nations. These steps provided concrete evidence of Romania's intention to adopt a responsible nuclear export policy.

The new Romanian Government also promptly took steps to ensure that its domestic nuclear export control system was consistent with the multilateral nuclear supplier guidelines which it had adopted. New regulations came into force in mid-1991, and further changes were made following the NSG April 1992 decision to expand controls to include dual-use items. Romania has also improved enforcement of its nuclear export control regulations by adopting specific sanctions against firms, as well as mandating fines and imprisonment for persons involved in illegal export activity. In 1994, a comprehensive law went into effect to control a broad range of WMD and missile-related exports including items controlled by the NSG. In 1996 another law was enacted which focuses solely on the regulation of nuclear-related items including exports. Each of these actions is part of an ongoing effort by Romania to implement the strongest possible nonproliferation export controls.

Of particular note is the fact that Romania's system includes "catch-all" controls which allow licensing authorities to regulate the export of items not on control lists if the transfer might, in the case of nuclear-related commodities, contribute to the acquisition of nuclear explosives. While not required by the NSG Guidelines, such controls have been advocated by the United States for many years as a useful supplementary tool in nuclear interdiction.

In support of its nuclear power program, Romania has an indigenous heavy water production capability and is capable of exporting such production equipment or technology -- which by law and policy the United States considers "sensitive" from a proliferation perspective. (While heavy water is not used in nuclear explosives, it is a vital moderator material for use in natural-uranium fueled reactors which can be good producers of weapons-grade plutonium). Romania has asserted that it strictly adheres to the NSG controls on heavy water production equipment and technology, and that it has no plans to export such items. The United States has no reason to believe that Romania has engaged in any questionable foreign cooperation in this area.

Romania is to be commended for its rapid progress toward establishing a comprehensive export control regime for nuclear and nuclear-related items and technology. Romanian officials report there has been good cooperation among the relevant ministries in implementing the new regulations. The new system undoubtedly will be challenged by entities acting on behalf of nuclear proliferant states, and it is important that the United States continue to consult closely with Romanian export officials and offer assistance where appropriate. Romanian authorities have demonstrated their willingness to seek U.S. advice on suspicious nuclear export cases and such cooperation should be encouraged. Romania has also agreed to participate in the U.S. Department of Defense's counterproliferation program which includes the supply of equipment and services, including by the FBI and the U.S. Customs Service, to help Romanian officials enforce export controls on commodities related to nuclear weapons and other weapons of mass destruction. The U.S. Department of State is also negotiating a Memorandum of Understanding with Romania that would cover the supply of a system for automating Romania's export control and licensing process. This system should help improve communication among Romanian agencies regarding sensitive and dual-use exports.

As with the safeguards violation noted above, the post-communist regime also investigated a report from the mid-1980s which alleged Romanian complicity in the transfer of heavy water by a Norwegian firm to NPT non-party India. The investigation revealed that 12.5 tons of heavy water from Norway had in fact been secretly transshipped through Romania to India in March 1986. This shipment occurred without Norway's knowledge or consent and provides further evidence of the unreliability of the Ceausescu regime's commitment to nuclear nonproliferation principles. Contrary to its NPT obligations, Romania did not require that India place this heavy water under IAEA safeguards. Following an investigation, the new Government acknowledged that this action "contravenes the spirit" of the NPT.

Romanian officials have stated that officials from the previous Ministry of Trade who may have

been involved in this transaction are no longer in office and do not hold positions where they could become involved in nuclear transactions. Moreover, the new laws, policies, and procedures now in place make it extremely unlikely that such clandestine export practices would reoccur. The willingness of the Romanian Government to investigate and publish the details of this incident reinforce that conclusion.

#### **E. Physical Security of Nuclear Material**

The question of physical protection of nuclear material is particularly relevant due to the presence of a significant quantity of U.S.-origin HEU in Romania and to past problems in Romania with the theft of nuclear material.

In 1991-92, scrap uranium pellets which had been manufactured at the uranium conversion facility at Feldiora were stolen. Some of these pellets were smuggled into Hungary. Hungarian and Romanian authorities cooperated on this matter and arrests were made. Romania informed the IAEA of the problem and has attempted to take measures to stop the thefts. The pellets are natural uranium and as non-weapons grade material they have little strategic value. Romanian authorities claim to have recovered most of this material (over 200 kilograms) and have stated that most of it had been hidden in a storehouse at Feldiora. Smaller quantities have been recovered from arrested individuals. Romanian authorities appear to have taken steps to halt these thefts, but it is possible that not all the material has been recovered. As recently as December 1997 additional arrests were made and 20 more pellets recovered.

The United States regularly reviews the physical security measures on U.S.-origin nuclear material in other countries, particularly HEU, to ensure that such measures meet international standards which are published and updated periodically by the IAEA. Reviews were conducted in Romania in 1989 and 1993 by teams of specialists from the Department of Energy (DOE) and the Nuclear Regulatory Commission. These reviews focussed principally on the Triga reactor located at Pitesti where the U.S.-origin HEU is located. In each case, the teams concluded that the physical protection measures at the reactor met international standards and observed that a number of upgrades were being implemented. Moreover, Romanian officials exhibited a full understanding of the importance of taking strong measures to protect nuclear material anywhere in Romania. Romania reinforced these efforts through adherence to the Convention on the Physical Protection of Nuclear Material in 1993 which obligates the establishment of minimum standards for the protection of nuclear material in international transport. Experts in physical security from DOE and the U.S. national laboratories continue to visit Romanian nuclear sites periodically and to evaluate positively the adequacy of Romania's actions in this area. The most recent trip was to the Institute for Nuclear Research in early June.

Experts under the auspices of the IAEA also conducted a review of Romania's physical protection system at Romania's request in 1997. This exercise included consultations with regulators and nuclear facility operators. This IAEA-sponsored review concluded that

Romanian authorities are aware of and are responsibly implementing international standards in this area. Romania is continuing its effort to improve its national physical protection system through cooperation with the United Kingdom and the United States which includes the provision of equipment and other assistance. This bilateral assistance is being coordinated through the IAEA.

U.S.-Romanian cooperation in this area continues to be excellent. Additional work to upgrade physical security at the Institute for Nuclear Research at Pitesti was completed this spring with funding and other assistance from the DOE. U.S. experts participated in a demonstration of the new measures in early June along with members of Romania's National Commission for Nuclear Activities Control.

The United States is satisfied that Romanian authorities are committed to ensuring adequate levels of physical protection for nuclear material. These measures are stricter for weapons-usable nuclear material such as HEU and plutonium. It should be noted that while there is a significant quantity of U.S.-origin HEU located at the Triga reactor, this material is either in the reactor or stored as spent fuel outside the reactor. In either case, it is irradiated and thus is afforded an additional level of protection against theft or diversion. It should also be noted that Romania is cooperating fully with the U.S. program designed to eliminate international commerce in HEU used as fuel in research and test reactors. In the case of Romania, that means converting the Triga reactor to the use of LEU fuel (conversion is about 1/3 complete) and returning the spent HEU fuel to the United States (which will not occur until after 2000).

#### **F. Other Considerations**

When assessing nonproliferation factors in connection with a civil nuclear cooperation agreement, it is appropriate to go beyond the specific terms of such an agreement to consider a country's general nuclear nonproliferation credentials. Foremost among these is whether a state has undertaken a binding obligation not to acquire nuclear weapons. Romania has been an NPT party since 1970 and as such undertook an obligation not to manufacture or acquire nuclear explosives.

As noted earlier, former President Ceausescu claimed in 1989 that Romania had the technical ability to build a nuclear weapon. In 1993, there were published reports from Romania (in one case the source was identified as the former head of Romanian intelligence) of a nuclear weapons program under Ceausescu as far back as the late 1960s. When queried about these reports in April of this year, the head of Romania's National Commission for Nuclear Activities stated that it had no evidence of a nuclear weapon program under Ceausescu. While acknowledging the non-compliance with Romania's safeguards agreement in 1985, this official also stated that this activity was not linked directly or indirectly to a nuclear weapon program. Any assertions in the past about a Romanian nuclear weapon program were irresponsible, according to this official, who noted that in the Communist era there was a general tendency to lie and exaggerate to

preserve one's personal position with the regime. While suspicions linger about what may have occurred under Ceausescu, ACDA is not aware of any credible evidence that points to a nuclear weapon program during that era. And, as noted throughout this assessment statement, there is no question since the revolution of Romania's commitment to the NPT and to exemplary nuclear nonproliferation policies.

Central Europe has experienced considerable instability in recent years. However, there appear to be no credible external threats to Romania's security. Romania has taken an activist approach in promoting peace and security in southeastern Europe. It has concluded bilateral treaties with Hungary and Ukraine resolving prior border disputes, and it has normal relations with Moldova and Bulgaria. It supported sanctions against Serbia and has fully endorsed the Dayton peace plan. Romania contributed troops to the forces implementing the Dayton peace plan for Bosnia and is currently participating in the follow-on stabilization force. Romanian troops played a key role in promoting stability and free elections in Albania.

Romania is strongly oriented toward the West and has pushed for membership in the relevant economic and security structures. Romania has strongly supported U.S. foreign policy initiatives in the United Nations and elsewhere and was the first country to join NATO's Partnership for Peace when that program was launched in 1994. It clearly views this situation as a transition step to full membership in NATO, which it sought unsuccessfully at the 1997 Madrid NATO Summit and continues to pursue as its primary foreign policy objective.

While disappointed that the United States did not support its bid for NATO membership in 1997, there continues to be strong support in Romania for good relations with the United States. President Clinton's July 1997 visit to Romania did much to ease Romanian fear of abandonment. The United States has established a bilateral Strategic Partnership with Romania that is designed *inter alia* to help make Romania as strong a candidate as possible for future NATO membership and to strengthen Romania's contribution to security in southeastern Europe.

Given the current security environment in Europe, Romania's strong orientation toward the West, its good relations with the United States and other key NATO states, and Romania's unwavering commitment to the NPT, there are no circumstances that can be readily foreseen which would result in Romania deciding to acquire nuclear weapons as a means of furthering its security interests.

#### IV. CONCLUSION

ACDA supports the proposed Agreement for the following reasons:

First, the proposed Agreement meets all the requirements of the Atomic Energy Act and thus includes effective guarantees, assurances, and safeguards against the misuse of nuclear equipment or material supplied under the agreement.

Second, Romania's policies and practices demonstrate a firm and credible undertaking not to acquire nuclear weapons and a clear commitment to the peace and security of southeastern Europe. Moreover, given the current security environment in Europe and Romania's strong orientation toward the West including a desire for NATO membership, there are no circumstances readily foreseen that would cause Romania to reconsider its NPT obligation not to acquire nuclear weapons.

Third, Romania has taken steps to expose and to prevent a recurrence of the questionable activities of the Ceausescu regime in the area of IAEA safeguards and nuclear exports. Romania has cooperated fully with the IAEA in the implementation of safeguards and has progressively moved to strengthen its nuclear export controls.

Fourth, Romania has confronted the problem of ensuring adequate physical protection for nuclear material under its jurisdiction and has taken a number of steps to strengthen security over this material. It is also cooperating with the United States in converting its U.S.-supplied HEU-fueled research reactor to the use of LEU fuel.

Fifth, the proposed Agreement underlines U.S. readiness to carry out its obligation under Article IV of the NPT to engage in civil nuclear cooperation with other NPT parties in a manner that furthers the objectives of the Treaty. Establishing this political and legal framework for bilateral nuclear cooperation with Romania is particularly appropriate given the efforts of the new Romanian government to adopt exemplary policies in order to remove any doubts created by some practices of the Ceausescu regime.

It will be important to continue bilateral consultations with Romania across a broad range of nuclear nonproliferation issues with particular emphasis on nuclear export controls and physical protection of nuclear material. Romania has adopted new laws and policies to address these areas, including the 1991-92 thefts of nuclear material, and we are confident that Romania is committed to their effective implementation. The United States has expressed its readiness to provide assistance wherever it can do the most good.

On the basis of the analysis in this assessment statement and all pertinent information of which it is aware, the United States Arms Control and Disarmament Agency has arrived at the following

**assessment, conclusions, views, and recommendations:**

- 1. The safeguards and other control mechanisms and the peaceful use assurances in the proposed Agreement are adequate to ensure that any assistance furnished thereunder will not be used to further any military or nuclear explosive purpose.**
- 2. The proposed Agreement meets all the legal requirements of the Atomic Energy Act and the NNPA.**
- 3. Execution of the proposed Agreement would be compatible with the nonproliferation program, policy, and objectives of the United States.**
- 4. It is recommended that the President determine that the performance of the proposed Agreement will promote, and will not constitute an unreasonable risk to, the common defense and security; and that the President approve and authorize the execution of the proposed Agreement.**



THE SECRETARY OF STATE  
WASHINGTON

9811996

July 13, 1998

MEMORANDUM FOR: THE PRESIDENT

FROM: Madeleine K. Albright *MKA*  
Secretary of State  
*Elizabeth A. Moler*  
Elizabeth A. Moler  
Acting Secretary of Energy

SUBJECT: Proposed Agreement for Cooperation Between  
the Government of the United States of  
America and the Government of Romania  
Concerning Peaceful Uses of Nuclear Energy

The United States has negotiated a proposed agreement for peaceful nuclear cooperation with Romania. This memorandum recommends that you sign the determination, approval and authorization at Attachment 1, which, pursuant to section 123 b. of the Atomic Energy Act of 1954, as amended, sets forth: (1) your approval of the proposed agreement; (2) your determination that performance of the proposed agreement will promote, and will not constitute an unreasonable risk to, the common defense and security; and (3) your authorization for execution of the agreement.

If you authorize execution of the agreement, it will be signed by representatives of the United States and Romania. Afterward, in accordance with section 123 b. and d. of the Act, it will be submitted to both Houses of Congress. A draft letter of transmittal to the Congress is at Attachment 2 for your signature. (This letter will be held until after the agreement is signed.) The agreement must lie before Congress for 90 days of continuous session. Unless a joint resolution of disapproval is enacted, the agreement may thereafter be brought into force.

The text of the proposed agreement is at Attachment 3. It includes an agreed minute, which is an integral part of the agreement. A summary of basic provisions is at Attachment 4. The proposed agreement provides a comprehensive framework for peaceful nuclear cooperation between the United States and Romania under appropriate conditions and controls reflecting a strong common commitment to nuclear non-proliferation.

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Previous US cooperation with Romania has taken place under a series of supply agreements pursuant to the agreement for peaceful nuclear cooperation between the United States and the International Atomic Energy Agency (IAEA). These trilateral supply agreements date back to 1966, with the most recent signed in 1993. The proposed new bilateral agreement has an initial term of 30 years and may be extended thereafter by agreement of the parties in accordance with their applicable requirements. It may also be terminated at any time by either party on one year's written notice.

The proposed agreement permits the transfer of technology, material (including low enriched uranium), equipment (including reactors), and components for both nuclear research and nuclear power purposes. It does not permit transfers of any sensitive nuclear technology or facilities. In our judgment the proposed agreement meets all requirements for new agreements for peaceful nuclear cooperation set forth in section 123 a. of the Atomic Energy Act of 1954, as amended by the Nuclear Non-Proliferation Act (NNPA) of 1978.

The agreed minute contains certain important understandings relating to implementation of the agreement, including provisions regarding the implementation of safeguards and US fallback safeguards rights.

Section 407 of the NNPA directs that the United States seek to include in agreements for peaceful nuclear cooperation provisions for identifying environmental implications and protection of the international environment. Article 12 (2) of the proposed agreement satisfies these provisions.

In accordance with the provisions of section 123 of the Atomic Energy Act, the proposed agreement was negotiated by the Department of State, with the technical assistance and concurrence of the Department of Energy and in consultation with the Arms Control and Disarmament Agency (ACDA). The views and recommendations of the Director of ACDA are at Attachment 5. A Nuclear Proliferation Assessment Statement concerning the proposed agreement is being submitted to you separately by the Director of ACDA. The proposed agreement has also been reviewed by the members of the Nuclear Regulatory Commission. Their views are at Attachment 6.

The Government of Romania firmly supports international efforts to prevent the spread of nuclear weapons to additional countries. It is a party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and has an agreement with the IAEA for the application of full-scope safeguards to its nuclear program. Romania also subscribes to the Nuclear Supplier Group (NSG) Guidelines, which set

forth standards for the responsible export of nuclear commodities for peaceful use, and to the Zangger (NPT Exporters) Committee Guidelines, which oblige members to require the application of IAEA safeguards on nuclear exports to non-nuclear weapon states. In addition, Romania is a party to the Convention on the Physical Protection of Nuclear Material, whereby it agrees to apply international standards of physical protection to the storage and transport of nuclear material under its jurisdiction or control. Finally, Romania was one of the first countries to sign the Comprehensive Test Ban Treaty.

There was one earlier problem, which has since been resolved. In 1985, under the communist Ceausescu regime, Romania carried out laboratory-scale reprocessing on a single fuel rod outside IAEA safeguards, thereby violating its safeguards agreement with the IAEA. The reprocessing resulted in the separation and subsequent unsafeguarded storage of two milligrams of plutonium. The successor government of Romania discovered the violation in 1992 and voluntarily disclosed it to the IAEA and the United States. It invited the IAEA to perform a special inspection (which confirmed the results of the government investigation) and announced steps to prevent any recurrence.

On August 27, 1992, the Acting Secretary of State determined, based on this information, that Romania had materially violated an IAEA safeguards agreement within the meaning of section 2(b)(4) of the Export-Import Bank Act and was not eligible for Eximbank support. On September 4, 1992, President Bush waived Romania's ineligibility in view of the successor government's strong support for nuclear non-proliferation and its forthright disclosure of the violation, which had occurred under a previous and very different regime (P.D. 92-46).

Similarly, on August 30, 1993, you determined, pursuant to section 129 of the Atomic Energy Act, that as a result of the same incident Romania had materially violated both the Romania-IAEA safeguards agreement and the US-IAEA-Romania nuclear supply agreement. You further determined, based on the exemplary non-proliferation record of the successor government, that cessation of US nuclear exports to Romania as provided for by section 129 of the Act would be seriously prejudicial to the achievement of United States non-proliferation objectives and otherwise jeopardize the common defense and security (P.D. 93-36), thereby waiving the section 129 prohibitions.

In each case the determination and waiver, together with a justification for the waiver, were reported to Congress in accordance with the applicable statutory requirements.

A more detailed discussion of Romania's nuclear non-proliferation record is provided in ACDA's Nuclear Proliferation Assessment Statement.

We believe that peaceful nuclear cooperation with Romania under the proposed agreement will be fully consistent with, and supportive of, your policy of responding positively and constructively to the process of democratization and economic reform in Central Europe. Cooperation under the agreement will also provide opportunities for US business on terms that fully protect vital US national security interests. We recommend, therefore, that you determine, pursuant to section 123 b. of the Atomic Energy Act of 1954, as amended, that performance of the agreement will promote, and will not constitute an unreasonable risk to, the common defense and security; and that you approve the agreement and authorize its execution.

#### RECOMMENDATION

That you sign the determination, approval and authorization at Attachment 1 and the transmittal to Congress at Attachment 2. (The transmittal will be held until the agreement itself is signed.)

#### ATTACHMENTS

1. Draft Determination, Approval and Authorization
2. Draft Transmittal to the Congress (To be held until after the agreement is signed)
3. Proposed Agreement for Cooperation Between the Government of the United States of America and the Government of Romania Concerning Peaceful Uses of Nuclear Energy
4. Summary of Basic Provisions of the Agreement
5. Views and Recommendations of the Director of the Arms Control and Disarmament Agency
6. Views of the Members of the Nuclear Regulatory Commission

SUMMARY OF BASIC PROVISIONS OF THE  
AGREEMENT BETWEEN THE GOVERNMENT OF THE  
UNITED STATES OF AMERICA  
AND THE GOVERNMENT OF ROMANIA CONCERNING  
PEACEFUL USES OF NUCLEAR ENERGY

Article 1 contains definitions.

Article 2 sets forth the scope of cooperation in the use of nuclear energy for peaceful purposes. It provides that transfers of information, material, equipment and components may be undertaken subject to the agreement and to such additional terms and conditions as may be agreed by the parties. An agreed minute provides that material, equipment or components transferred between the parties for peaceful purposes will be regarded as having been transferred pursuant to the agreement only upon confirmation by the recipient party that such item or items are to be subject to the terms of the agreement.

Article 3 provides for the transfer of information in a variety of fields involving the peaceful uses of nuclear energy. Restricted data and sensitive nuclear technology may not be transferred under the agreement.

Article 4 provides the basic enabling framework for the transfer of material, equipment and components. Except for small quantities for use as samples, standards, detectors, targets and such other purposes as may be agreed, transfers

of special nuclear material to Romania will be limited to low enriched uranium, which may be transferred for use as fuel in reactors or reactor experiments, for conversion or fabrication or for such other purposes as may be agreed. No sensitive nuclear facilities or major critical components of such facilities may be transferred. This article further provides that the quantity of special nuclear material transferred shall not at any time be in excess of quantities that the parties agree are necessary for specified purposes. Transfers of small quantities of special nuclear material are not subject to this limitation. This article also provides that the United States shall endeavor to take such actions as are necessary and feasible to ensure a reliable supply of nuclear fuel to Romania, including the export of nuclear material on a timely basis.

Article 5 requires the parties' agreement (1) on facilities for the storage of plutonium and uranium 233 (except in irradiated fuel elements) or high enriched uranium transferred pursuant to the agreement or used in or produced through the use of material or equipment so transferred; and (2) for the retransfer of any material, equipment or components so transferred and special nuclear material produced through the use of material or equipment so transferred. An agreed minute states that the consent rights specified in article 5 with respect to special nuclear material produced through the use of nuclear material

transferred pursuant to the agreement, and not used in or produced through the use of equipment so transferred, shall in practice be applied to that proportion of produced special nuclear material which represents the ratio of transferred material used in its production to the total amount of material so used.

Article 6 requires the parties' agreement (1) for the reprocessing of material transferred pursuant to the agreement and material used in or produced through the use of any material or equipment so transferred; (2) for the alteration in form or content, except by irradiation or further irradiation, of plutonium, uranium 233, high enriched uranium or irradiated source or special nuclear material so transferred or produced; and (3) for the enrichment of uranium so transferred or used in any equipment so transferred. An agreed minute states that the consent rights specified in article 6 with respect to special nuclear material produced through the use of nuclear material transferred pursuant to the agreement, and not used in or produced through the use of equipment so transferred, shall in practice be applied to that proportion of produced special nuclear material which represents the ratio of transferred material used in its production to the total amount of material so used.

Article 7 requires each party to maintain adequate physical protection measures, in accordance with levels of protection set forth in the Annex to the agreement, with respect to all material and equipment subject to the agreement. The measures applied shall, as a minimum, provide protection comparable to that set forth in IAEA document INFCIRC/225/Rev.3 concerning the physical protection of nuclear material, or in any revision of that document agreed to by the parties. The Annex describes physical security levels applicable with respect to the use, storage and transport of nuclear materials classified as categories I (requiring the most stringent levels of protection), II and III. The parties agree to consult concerning the adequacy of these physical security measures and to identify agencies or authorities responsible for physical security. The provisions of this article shall be implemented in such a way as to avoid undue interference in the parties' nuclear activities and to be consistent with prudent management.

Article 8 contains a guarantee by each party that no material, equipment or components subject to the agreement will be used for any nuclear explosive device, for research on or development of any nuclear explosive device, or for any military purpose.

Article 9 requires application of IAEA safeguards with respect to all nuclear activities within the territory of



Romania, under its jurisdiction or carried out under its control anywhere. This article further requires source or special nuclear material transferred pursuant to the Agreement and source or special nuclear material used in or produced through the use of material, equipment or components so transferred to be subject to the two parties' respective safeguards agreements with the IAEA. This article also contains provisions for fall-back safeguards. An agreed minute sets forth certain rights each party will have in the event IAEA safeguards are not being applied. Article 9 also requires each party to take measures to maintain and facilitate the application of safeguards. This article requires each party to establish and maintain a material accounting and control system, the details of which shall be comparable to those set forth in IAEA document INFCIRC/153 (Corrected). Upon the request of either party, the other party shall report or permit the IAEA to report on the status of all inventories of material subject to the agreement. The article's provisions, finally, are to be implemented so as to avoid undue interference in the parties' nuclear activities and consistent with prudent management.

Article 10 provides that if an agreement between either party and another nation or group of nations provides such other nation or group of nations rights equivalent to any or all those set forth under articles 5 or 6 with respect to material, equipment or components subject to the agreement,

the parties may, upon the request of either, agree that implementation of such rights will be accomplished by the other nation or group of nations.

Article 11 accords each party the right to cease cooperation and to require the return of any material, equipment or components transferred under the agreement and any special nuclear material produced through their use if the other party does not comply with article 5, 6, 7, 8, or 9, or terminates, abrogates or materially violates a safeguards agreement with the IAEA. The United States shall have the same right if Romania detonates a nuclear explosive device. In the event a return is required by one party, the other party shall be reimbursed for fair market value.

Article 12 provides for consultations at the request of either party regarding the implementation of the agreement and the development of further cooperation in the peaceful uses of nuclear energy. This article also states that the parties shall consult on the environmental implications arising out of activities under the agreement, and cooperate in protecting the international environment from radioactive, chemical or thermal contamination arising from such activities and in related matters of health and safety.

Article 13 provides that any dispute concerning interpretation or implementation of the agreement shall be

promptly negotiated by the parties with a view to resolving the dispute.

Article 14 establishes a 30 year term for the agreement, which may be extended by agreement of the parties in accordance with their applicable requirements. The agreement may be terminated at any time by either party on one year's written notice. In the event of termination or expiration of the agreement, articles 5, 6, 7, 8, 9 and 11 shall continue in effect so long as items subject to the agreement remain in the territory, under the jurisdiction or under the control of the party concerned, or until the parties agree that such items are no longer useable for any nuclear activity relevant from the point of view of safeguards.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20585-0801

February 26, 1998

The President  
The White House  
Washington, D.C. 20500

Dear Mr. President:

In accordance with the provisions of Section 123 of the Atomic Energy Act, as amended, the Nuclear Regulatory Commission has reviewed the proposed Agreement for Cooperation with Romania and supporting draft documents, forwarded by the Department of State on December 3, 1997. It is the view of the Commission that the proposed Agreement includes all the provisions required by Section 123 of the Atomic Energy Act, as amended. The Commission therefore recommends that you make the requisite statutory determination, approve the Agreement, and authorize its execution.

Respectfully,

A handwritten signature in cursive script, which appears to read "Shirley Ann Jackson".

Shirley Ann Jackson

A small, stylized handwritten mark or signature, possibly initials, located below the typed name.