

AGREEMENT BETWEEN THE GOVERNMENT OF THE
UNITED STATES OF AMERICA AND THE GOVERN-
MENT OF THE REPUBLIC OF BULGARIA FOR CO-
OPERATION IN THE FIELD OF PEACEFUL USES
OF NUCLEAR ENERGY

MESSAGE

FROM

THE PRESIDENT OF THE UNITED STATES

TRANSMITTING

THE TEXT OF A PROPOSED AGREEMENT BETWEEN THE GOVERN-
MENT OF THE UNITED STATES AND THE GOVERNMENT OF THE
REPUBLIC OF BULGARIA FOR COOPERATION IN THE FIELD OF
PEACEFUL USES OF NUCLEAR ENERGY WITH ACCOMPANYING
ANNEX AND AGREED MINUTE, PURSUANT TO 42 U.S.C. 2153(b), (d)



AUGUST 4, 1995.—Message and accompanying papers referred to the
Committee on International Relations and ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE

To the Congress of the United States:

I am pleased to transmit to the Congress, pursuant to sections 123b. and 123d. of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2153 (b), (d)), the text of a proposed Agreement Between the Government of the United States of America and the Government of the Republic of Bulgaria for Cooperation in the Field of 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 the Republic of Bulgaria 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 non-proliferation and other foreign policy interests of the United States. It provides a comprehensive framework for peaceful nuclear cooperation between the United States and Bulgaria under appropriate conditions and controls reflecting our strong common commitment to nuclear non-proliferation goals.

Bulgaria has consistently supported international efforts to prevent the spread of nuclear weapons. It was an original signatory of the Non-Proliferation Treaty (NPT) and has strongly supported the Treaty. As a subscriber to the Nuclear Supplier Group (NSG) Guidelines, it is committed to implementing a responsible nuclear export policy. It played a constructive role in the NSG effort to develop additional guidelines for the export of nuclear-related dual-use commodities. In 1990 it initiated a policy of requiring full-scope International Atomic Energy Agency (IAEA) safeguards as a condition of significant new nuclear supply to other nonnuclear weapon states.

I believe that peaceful nuclear cooperation with Bulgaria under the proposed agreement will be fully consistent with, and supportive of, our policy of responding positively and constructively to the process of democratization and economic reform in Eastern Europe. Cooperation under the agreement will also 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 123a. of that Act. This transmission shall constitute a submittal for purposes of both sections 123b. and 123d. of the Atomic Energy Act. The Administration is prepared to begin immediately the consultations with the Senate Foreign Relations and House Foreign Affairs Committees as provided in section 123b. Upon completion of the 30-day continuous session period provided for in section 123b., the 60-day continuous session period provided for in section 123d. shall commence.

WILLIAM J. CLINTON.

THE WHITE HOUSE, *August 4, 1995.*

AGREEMENT BETWEEN THE GOVERNMENT OF
THE UNITED STATES OF AMERICA AND
THE GOVERNMENT OF THE REPUBLIC OF BULGARIA
FOR COOPERATION IN THE FIELD OF
PEACEFUL USES OF NUCLEAR ENERGY

The Government of the United States of America and the
Government of the Republic of Bulgaria;

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 the Republic
of Bulgaria 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, preceeding fuel fabrication and excluding enrichment, by which uranium is transformed from one chemical form to another -- for example, from UF₆ to UO₂ 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 the Republic of Bulgaria;

(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 development of scientific research on and practical use of atomic energy for peaceful purposes and in the fields of nuclear safety and radiation protection 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, including establishment of norms, regulations and standards for the design, construction, operation and decommissioning of nuclear power plants and for nuclear safety and radiation protection;

(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, including the safe operation of nuclear facilities and radiation protection; 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 the Republic of Bulgaria 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 the Republic of Bulgaria, 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 materials 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 2 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 covered by 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 the Republic of Bulgaria, 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 the Republic of Bulgaria 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 the Republic of Bulgaria and

the IAEA for the application of safeguards in connection with the NPT, signed in Vienna January 21, 1972, entered into force on February 29, 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 provision 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 the Republic of Bulgaria 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 - ENVIRONMENTAL PROTECTION

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 - CONSULTATIONS

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.

ARTICLE 14 - 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 15 - 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.

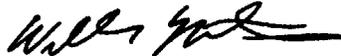
2. This agreement shall remain in force for a period of 30 years. This term may be extended for such additional periods as may be agreed between the parties in accordance with their applicable requirements. The agreement may be terminated at any time by either party on one year's written notice to the 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 materials, 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 Sofia, this 21 day of June, 1994, in duplicate, in the English and Bulgarian languages, both texts being equally authentic.

FOR THE GOVERNMENT OF
THE UNITED STATES OF AMERICA:



FOR THE GOVERNMENT OF
THE REPUBLIC OF BULGARIA:



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^e

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

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

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

^c Less than a radiologically significant quantity is exempted.

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

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

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

AGREED MINUTE

During the negotiation of the Agreement Between the Government of the United States of America and the Government of the Republic of Bulgaria for Cooperation in the Field of Peaceful Uses of Nuclear Energy ("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.

Consultations

With reference to Article 13 of the Agreement, the parties shall carry out consultations at agreed-upon intervals, or at the request of either party, to discuss the implementation of the Agreement and further development of cooperation in research on and the application of atomic energy for peaceful purposes and in ensuring its safe use.

FOR THE GOVERNMENT OF
THE UNITED STATES OF AMERICA:



FOR THE GOVERNMENT OF
THE REPUBLIC OF BULGARIA:



THE WHITE HOUSE
WASHINGTON

September 2, 1993

Presidential Determination
No. 93-37

MEMORANDUM FOR THE SECRETARY OF STATE
THE SECRETARY OF ENERGY

SUBJECT: Presidential Determination of the Proposed
Agreement Between the United States of America
and the Republic of Bulgaria for Cooperation in
the Field of Peaceful Uses of Nuclear Energy

I have considered the proposed Agreement Between the Government of the United States of America and the Government of the Republic of Bulgaria for Cooperation in the Field of 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

THE DIRECTOR

May 25, 1993

MEMORANDUM FOR THE PRESIDENT

SUBJECT: Views and Recommendations Regarding the Proposed Agreement Between the Government of the United States of America and the Republic of Bulgaria on Cooperation in Peaceful Uses of Nuclear Energy

Pursuant to Section 123 a. of the Atomic Energy Act of 1954, as amended, I am submitting to you my views and recommendations with respect to the proposed agreement for cooperation between the United States and the Republic of Bulgaria. The U.S. Arms Control and Disarmament Agency (ACDA) was consulted throughout the negotiation of this proposed Agreement. The Nuclear Proliferation Assessment Statement required by the Act is being transmitted to you separately. Part II of this statement examines the proposed Agreement in detail to ascertain that the applicable statutory requirements are met. I have concluded that the proposed Agreement does meet all the relevant requirements of the Atomic Energy Act and the Nuclear Non-Proliferation Act of 1978 (NNPA).

The Republic of Bulgaria has been and remains a consistent strong supporter of international efforts to prevent nuclear weapons proliferation. Bulgaria is an original signatory of the Treaty on the Non-Proliferation of Nuclear Weapons; a long-time member of the International Atomic Energy Agency and a strong supporter of its safeguards system; a member of the Nuclear Suppliers Group; a party to the Convention on the Physical Protection of Nuclear Material; and has been accepted for membership in the NPT Exporters (Zangger) Committee.

The proposed Agreement does not provide for transfers of any sensitive nuclear technology or facilities as defined by the NNPA. It limits transfers of fuel to natural uranium or low enriched uranium although it does provide for the transfer of small quantities of high enriched uranium and plutonium for use as samples, targets, standards, detectors, and for other

purposes as the parties may agree. In ACDA's view, Bulgaria's current nuclear plans and capabilities present no proliferation risk.

It is my judgment that execution of the proposed Agreement would be compatible with the nonproliferation program, policy and objectives of the United States. Therefore, I recommend that you determine that its performance will promote, and will not constitute an unreasonable risk to, the common defense and security, and that you approve and authorize the execution of the Agreement.


Thomas Graham, Jr.
Acting

~~4203~~UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY
WASHINGTONOFFICE OF
THE DIRECTOR

JUL 1 1993

MEMORANDUM FOR WILLIAM H. ITOH
EXECUTIVE SECRETARY, NATIONAL SECURITY COUNCIL

SUBJECT: Memorandum for the President Conveying the
Nuclear Proliferation Assessment Statement for
the Proposed U.S.-Bulgaria Agreement for Cooperation

I would appreciate your forwarding the attached memorandum and accompanying document, dated May 25, 1993, to the President from Thomas Graham, Jr., Acting Director of the U.S. Arms Control and Disarmament Agency. This memorandum submits to the President an unclassified Nuclear Proliferation Assessment Statement regarding the proposed Agreement for Cooperation Between the Government of the United States and the Republic of Bulgaria, as required by Section 123 a. of the Atomic Energy Act of 1954, as amended. This memorandum conveys to the President the Acting Director's conclusion that the proposed Agreement meets the applicable statutory requirements of U.S. law, and that the safeguards and control mechanisms contained 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.

Transmittal of this memorandum and accompanying Nuclear Proliferation Assessment Statement was held pending completion of the joint memorandum to the President by the Secretaries of State and Energy on this same subject, which has recently been sent to the White House.

Barbara Starr
Barbara Starr
Executive Secretary

Attachment:
As stated

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

THE DIRECTOR

MAY 25 1993

MEMORANDUM FOR THE PRESIDENT

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

Pursuant to Section 123 a. of the Atomic Energy Act of 1954, as amended, I am submitting to you an unclassified Nuclear Proliferation Assessment Statement with respect to the proposed Agreement for Cooperation Between the Government of the United States and the Republic of Bulgaria.

After setting forth background on Bulgaria's nuclear program and policies (Part I), this statement describes how each of the applicable legal requirements are met (Part II). Part III of the statement discusses nonproliferation policy issues and Part IV presents my conclusions.

I have concluded that the proposed Agreement meets the applicable 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.


Thomas Graham, Jr.
Acting

Attachments:
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 the Republic of Bulgaria
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 the Republic of Bulgaria 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 authorization for execution.

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 Bulgaria (Part I); describes the nature and scope of cooperation contemplated in the proposed Agreement (Part II A), and reviews the applicable substantive requirements of the Nuclear Non-Proliferation Act (NNPA) and the Atomic Energy Act and how they are met by the proposed Agreement (Part II B); 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, as contemplated by Section 123 a. of the Atomic Energy Act (Part IV).

I. BACKGROUND

A. Nuclear Program of the Republic of Bulgaria

Bulgaria turned toward the peaceful application of nuclear energy somewhat later than the other countries of Eastern Europe. Bulgaria's interest in nuclear energy has been driven by the paucity of alternative energy resources. The country has virtually no oil deposits and little natural gas; its coal reserves consist primarily of highly-polluting, low-energy lignite and brown coal. Bulgaria does possess some 45,000 tonnes of proven and estimated uranium reserves, although the ore is of poor grade and difficult to extract. Consequently, Bulgaria has recently decided to suspend mining of uranium and rely on the world market for its nuclear fuel. Currently, Bulgaria depends on imports for 70% of its energy supplies.

While representing approximately 25% of installed generation capacity, nuclear power accounts for over 35% of all electricity produced in Bulgaria. Conventional coal-fired plants have been shut-down or had their operations reduced to avoid aggravating the already-critical air pollution crisis from burning lignite coal. Oil imports from the former Soviet Union, once heavily subsidized, have now all but ceased due to FSU production problems and demands for payment in hard currency. Consequently, Bulgaria has faced a severe energy shortage for the last several years; daily electricity outages and rotating "brownouts" are common in winter. For the foreseeable future, Bulgaria has little choice but to rely heavily on nuclear energy.

Bulgaria currently has a research reactor at the Institute on Nuclear Research and Nuclear Power Supply in Sofia, and a six-unit power complex at Kozloduy (pronounced "Koz-low-doy"), all Soviet-designed and constructed. The 2 MW(th) pool-type IRT research reactor began operations in 1961, is water-moderated and fueled by 10% enriched fuel supplied by Russia. Used for training, basic and applied science, and the production of medical radioisotopes, the IRT reactor has been inactive since July 1989. The IRT's future is uncertain, facing either dismantlement or extensive safety reconstruction.

The Kozloduy power complex is located 200 km northwest of Sofia on the Danube River across from Romania. The facility includes six "VVER" (water-cooled, water-moderated, low-enriched fueled) nuclear power reactors provided under a nuclear cooperation agreement with the former Soviet Union. Units 1-4 have a power rating of 440 MW each; units 1 and 2 are of the earliest design, lack essential safety features, and are the oldest power reactors in Eastern Europe, beginning operations in 1974 and 1975, respectively. Units 5 and 6 are of the VVER 1000 type, rated at 1000 MW and are considered of safer design, having emergency core cooling systems and containment buildings. At the Belene site, construction on two 1,000 MW VVER reactors was officially halted last year; the reactors were originally expected to begin operations in 1995 and 1997.

In June 1991 an IAEA inspection of Units 1-4 concluded that they were "in very poor condition with a number of safety relevant deficiencies," and recommended immediate shut-down. Among the deficiencies the IAEA found were unterminated wires, steam, oil, and water leaks, accumulations of flammable debris, and boric acid leaking from pipes and tanks. Bulgaria shut down Units 1 and 2 temporarily, and agreed to an extensive safety upgrade program with significant outside assistance. Unit 6 came on-line only last year; all reactors suffer frequent outages for maintenance, breakdowns, or safety upgrades.

Following the IAEA's inspection of the Kozloduy facility, the European Commission (EC) offered to help Bulgaria with its safety problems. The EC, in consultation with the IAEA, is arranging to contract with the World Association of Nuclear Operators (WANO) and other entities to undertake three projects:

- a six-month program dealing with housekeeping (exposed wires, flammable debris, etc.);
- establishment of a nuclear safety office and the writing of safety rules; and
- examination of ways to import electricity into Bulgaria and extraction of more electricity from Bulgaria's power plants, particularly during reactor shut-downs.

Traditionally, Bulgaria sent uranium to the Soviet Union and received back fabricated fuel elements. Spent fuel from Kozloduy was held in storage pools on-site for five years, after which it was sent back to the USSR. Concerns over taking back spent fuel, coupled with the insistence on payment for such services in hard currency, have effectively halted this arrangement. Bulgaria is faced with storing spent fuel until a long-term solution can be worked out.

Bulgaria does not have nor plans to construct uranium enrichment or spent fuel reprocessing facilities.

Bulgaria produces and could export biological shielding, containers for transport of spent fuel, remote control valves for work in a radioactive environment, and separator drums.

B. Nuclear Cooperation with the United States

The Republic of Bulgaria has relied largely on Soviet technology and cooperation with other members of the Council for Mutual Economic Assistance for the development of its nuclear research program. As noted above, the former Soviet Union has supplied all of Bulgaria's reactors. Nuclear cooperation with the United States has been limited principally to assistance under IAEA auspices. Between 1981-1989, for example, 18 Bulgarians attended training courses at Argonne National Laboratory; from 1965-1989, 15 Bulgarians attended interregional training courses in the United States. The American Board of Nuclear Medicine has certified five Bulgarians to practice nuclear medicine. In 1987, a delegation from the U.S. Nuclear Regulatory Commission journeyed to Sofia to discuss possible bilateral cooperation in promoting nuclear safety. In January 1992, the U.S. Department of Energy held discussions with Bulgarian officials concerning assistance in the modernization of the Kozloduy nuclear power complex. Such assistance could include the provision of equipment and training.

The IAEA has provided over \$5 million in technical support to Bulgaria. Projects have included fellowships and training as well as visits by nuclear experts to Bulgaria. Most of this assistance has been in the fields of nuclear engineering, agriculture, industry and hydrology, and safety. The former Soviet Union has funded nearly \$1 million of the above total for safeguards training.

The democratization of Bulgaria, its tradition of pursuing the peaceful benefits of nuclear energy, its interest in cooperation with the United States in the nuclear area, and its proliferation credentials led the United States to propose the negotiation of a bilateral agreement for peaceful nuclear cooperation. The Bulgarians responded positively, and the United States provided a draft text of such an agreement to Bulgarian officials. Under U.S. law, any significant peaceful nuclear cooperation (including supply of reactors and reactor fuel) must take place pursuant to an agreement for cooperation. Bilateral negotiations culminated in the initialling of an agreed text in June 1992.

C. Bulgaria's Nonproliferation Policy

Bulgaria has been a consistent and long-time supporter of international efforts to prevent the further spread of nuclear weapons. Bulgaria signed the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) on July 1, 1968 -- the date it was opened for signature -- and ratified it little more than a year later. It has lent its support to NPT-related activities, including the NPT Review Conferences, and has been supportive of USG initiatives in nonproliferation fora.

The Republic of Bulgaria understands the necessity for exercising restraint in exports of nuclear technology to countries of proliferation concern. It is committed to implementing a responsible nuclear export policy.

Bulgaria is a member of the Nuclear Suppliers Group and has stated that it is about to initiate the process for seeking membership in the Nuclear Exporters (Zangger) Committee. Bulgaria is also a party to the Convention on the Physical Protection of Nuclear Material.

On November 2, 1992, the Government of Bulgaria approved a comprehensive dual-use export control regime, effective December 1, covering nuclear, chemical, missile, and biological dual-use technologies, incorporating the trigger lists of the Nuclear Suppliers Group, Cocom, the Missile Technology Control Regime, and Australia groups.

In summary, the Republic of Bulgaria has been a reliable and active supporter of international efforts to strengthen the barriers to nuclear weapons proliferation.

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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 IAEA safeguards with respect to all nuclear activities within the territory of the Republic of Bulgaria, 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 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 1(M) 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 1(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 1(O) of the proposed Agreement, and major critical components thereof, as defined in Article 1(G), unless the agreement is amended to permit such transfer.

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) Safeguards and their Duration

Subparagraph (1) of Section 123a. 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 the Republic of Bulgaria 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 the Republic of Bulgaria and the IAEA for the application of safeguards in connection with the NPT, signed in Vienna January 21, 1972, entered into force on February 29, 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...[set forth above], 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 15, 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 useable 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 the 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 123a. 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 Republic of Bulgaria, 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 123a. 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 the Republic of Bulgaria 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.

(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 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 123a. 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 IMFCIRC/225/Revision 2 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 123a. 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 the 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 123a. 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 a facility 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 123a. 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.

Article 3, Paragraph 4, of the proposed Agreement precludes transfers of sensitive nuclear technology unless provided for by an amendment to the proposed Agreement, thereby rendering the above subparagraph inapplicable unless the proposed Agreement 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 hereafter 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 that "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 requires that "...Sensitive nuclear facilities and major critical components thereof shall not be transferred under this

agreement, unless provided for by an amendment to this agreement." Therefore, Section 402(b) would not apply to the proposed Agreement unless the latter was amended to allow the export of sensitive nuclear facilities and major critical components. The definition of "sensitive nuclear facility" in Article 1(O) of the proposed Agreement encompasses the facilities described in Section 402 (b) of the NNPA.

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

Section 129 (added by Section 307 of the NNPA) prohibits exports of nuclear materials and equipment or sensitive nuclear technology to countries which engage in proscribed activities. The activities in Section 129 include weapons-development activities, violation or termination of safeguards or an agreement for cooperation with the United States, and certain assistance to a non-nuclear weapon state relevant to acquisition of nuclear weapons. Based on all information of which ACDA is aware, there is no evidence that the Republic of Bulgaria has engaged in any of the types of activities specified in Section 129.

E. Section 109 of the Act -- Components, Items, and Substances

Section 109 of the Act (as amended by Section 309 of the NNPA) empowers the 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. Such licenses would be granted only upon a finding that (a) IAEA safeguards will be applied to such component, substance or item, (b) the component, substance or item 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, substance or item will be retransferred without prior U.S. consent.

The NRC in its regulations (10 CFR Part 110) has identified certain reactor components and two substances -- heavy water and nuclear-grade graphite -- as subject to these criteria. In the case of the Republic of Bulgaria, the first two criteria are both met by reason of its status as an NPT party and because of the language in Articles 8 and 9 of the proposed Agreement. The third criterion (retransfer) can be met by having components and moderator material identified as being exported under the proposed Agreement, in which case Article 5, Paragraph 2, of the proposed Agreement would apply. Alternatively, the United States could seek separate assurances from the Republic of Bulgaria.

The Atomic Energy Act does not require that such exports be transferred under an agreement for cooperation. However, they may be so transferred and thus be subject to all the relevant provisions of the agreement.

III. OTHER NONPROLIFERATION POLICY ISSUES

Any decision by the United States to engage in nuclear cooperation with a given nation 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 and terms of the cooperation envisaged under such an agreement, the precedential implications of particular provisions of such an agreement, the degree to which extending nuclear cooperation may foster other nonproliferation efforts, 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 section 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 nuclear material, equipment (including reactors), and components for both nuclear research and nuclear power production. Obviously, the extent and nature of U.S. involvement in a Bulgarian nuclear power program will depend on the Republic of Bulgaria's future decisions regarding such a program.

The proposed Agreement does not provide for transfers of any sensitive nuclear technology or facilities, such as enrichment or reprocessing. It provides for the transfer of potentially large quantities (e.g., tonnes) of low enriched uranium (LEU) if the parties agree it is necessary for the purposes set forth in the agreement. However, only small quantities (i.e., grams) of plutonium or high enriched uranium may be transferred for use as samples, standards, detectors, targets, and for other purposes as the parties may agree. For the foreseeable future, neither Bulgaria's indigenous capabilities nor its actual requirements for a peaceful nuclear energy program are likely to result in the development or acquisition of facilities capable of producing weapons-usable material. Bulgaria's current plans and capabilities present no proliferation risk. ACDA is satisfied with the scope of the proposed Agreement.

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 irreplaceable role in international efforts to erect legal and political barriers to such nuclear weapons proliferation. Bulgaria's support for the NPT is reflected in its commitment to the norms and institutions

that underpin the international nonproliferation regime. The United States has long believed that states that have adhered to the NPT and accepted full-scope IAEA safeguards should receive a preference in peaceful nuclear cooperation. The proposed agreement for cooperation is fully supportive of the U.S. NPT preference policy.

C. Safeguards Considerations

All peaceful nuclear activities in Bulgaria are subject to IAEA safeguards pursuant to its obligations under the NPT and its NPT safeguards agreement with the IAEA, which entered into force on February 29, 1972. On the basis of ACDA's close familiarity with the IAEA safeguards system and the implementation of this 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. Bulgaria has consistently been a strong supporter of IAEA safeguards. Based on all information of which it is aware, ACDA has no reason to question Bulgaria's attitude toward safeguards, its cooperation with the IAEA in applying safeguards, or its compliance with all of its past and present safeguards obligations.

D. 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 nonproliferation credentials. As noted in Section I.C above, ACDA believes Bulgaria's nonproliferation credentials are sound. As in other countries seeking to replace command economies with market-driven economies, Bulgaria may face challenges in developing and enforcing export controls. However, Bulgaria is seeking guidance from the West on export controls and its commitment to implement a comprehensive dual-use regime, referred to in Section I.C, is impressive. The proposed Agreement will facilitate bilateral consultations that should help to reinforce commonality of views between the United States and Bulgaria.

Bulgaria's commitment to the NPT is genuine and longstanding, and ACDA foresees no circumstances that would alter Bulgaria's perception of its security requirements so dramatically as to cause it to reconsider its pledge not to acquire nuclear weapons. European states are clearly committed to developing a security structure which, anchored by the NPT, should help to protect against the emergence of any new nuclear weapon states in that region.

This nuclear cooperation agreement has been made possible by the dramatic political and economic changes underway in the Republic of Bulgaria and is a measure fully consistent with the overall U.S. response to the process of democratization being

embraced by the new Bulgarian Government. Furthermore, it is a concrete reflection of the United States' policy of engaging in nuclear cooperation with states that have forsworn nuclear explosives, opened all their nuclear activities to international inspection by the IAEA, and otherwise provided strong support to nuclear nonproliferation objectives.

IV. Conclusion

On the basis of the analysis in this assessment statement and all pertinent information of which the Agency 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 contained 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 substantive requirements of the Atomic Energy Act and the NEPA.
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.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

September 22, 1992

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 Bulgaria as forwarded to it by the Department of State on July 30, 1992. 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,

Kenneth C. Rogers
Kenneth C. Rogers,
Acting Chairman

THE SECRETARY OF STATE
WASHINGTON

9312723/1

June 8, 1993

MEMORANDUM FOR: THE PRESIDENT

FROM: Warren Christopher ^{WC}
Hazel R. O'Leary *Hazel R. O'Leary*

SUBJECT: Proposed Agreement Between the United States of America and the Republic of Bulgaria for Cooperation in the Field of Peaceful Uses of Nuclear Energy

The United States and Bulgaria have completed negotiation of a proposed agreement for peaceful nuclear cooperation. 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 decide to take this action, the agreement will be signed by representatives of the United States and Bulgaria. 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 its basic provisions is at Attachment 4. In essence, the proposed agreement provides a comprehensive framework for peaceful nuclear cooperation between the United States and Bulgaria under appropriate conditions and controls reflecting our strong common commitment to nuclear non-proliferation. The 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 U.S. fallback safeguards rights.

Section 407 of the NNPA directs that the United States seek to include in agreements for peaceful nuclear cooperation provisions for cooperation between the parties in protecting the international environment from radioactive, chemical or thermal contamination arising from peaceful nuclear activities. In our view, Article 12 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.

Bulgaria has consistently supported international efforts to prevent the spread of nuclear weapons. It was an original signatory of the Non-Proliferation Treaty (NPT) and has strongly supported the Treaty. As a subscriber to the Nuclear Supplier Group (NSG) Guidelines, it is committed to implementing a responsible nuclear export policy. It played a constructive role in the NSG effort to develop additional guidelines for the export of nuclear-related dual use commodities. In 1990 it initiated a policy of requiring full-scope IAEA safeguards as a condition of significant new nuclear supply to other non-nuclear weapon states. A more detailed discussion is provided in ACDA's Nuclear Proliferation Assessment Statement.

We believe that peaceful nuclear cooperation with Bulgaria 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 Eastern Europe. Cooperation under the agreement will also provide opportunities for U.S. business on terms that fully protect vital U.S. national security interests.

In our opinion, the proposed agreement meets all statutory requirements and will also serve U.S. non-proliferation and other foreign policy interests. We recommend, therefore, that pursuant to section 123 b. of the Atomic Energy Act of 1954, as amended, you (1) determine that performance of the agreement will promote, and will not constitute an unreasonable risk to, the common defense and security and (2) 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 Between the United States and the Republic of Bulgaria for Cooperation in the Field of 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

