

AGREEMENT BETWEEN THE UNITED STATES AND CHINA FOR COOPERATION CONCERNING PEACEFUL USES OF NUCLEAR ENERGY

The Government of the United States of America and the Government of the People's Republic of China,

Desiring to establish extensive cooperation in the peaceful uses of nuclear energy on the basis of mutual respect for sovereignty, non-interference in each other's internal affairs, equality and mutual benefit,

Noting that such cooperation is one between two nuclear weapon states,

Affirming their support of the objectives of the statute of the International Atomic Energy Agency (IAEA),

Affirming their intention to carry out such cooperation on a stable, reliable and predictable basis,

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:

(1) "parties" means the Government of the United States of America and the Government of the People's Republic of China;

(2) "authorized person" means any individual or any entity under the jurisdiction of either party and authorized by that party to receive, possess, use, or transfer material, facilities or components;

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

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

(5) "material" means source material, special nuclear material or byproduct material, radioisotopes other than byproduct material, moderator material, or any other such substance so

designated by agreement of the parties;

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

(7) "special nuclear material" means (i) plutonium, uranium 233, or uranium enriched in the isotope 235, or (ii) any other material so designated by agreement of the parties;

(8) "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;

(9) "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;

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

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

(12) "facility" 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;

(13) "reactor" is defined in Annex I, which may be modified by mutual consent of the parties.

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

(15) "component" means a component part of a facility or other item, so designated by agreement of the parties;

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

(17) "sensitive nuclear technology" means any information (including information incorporated in a facility 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 such other information 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. Each party shall implement this agreement in accordance with its respective applicable treaties, national laws, regulations and license requirements concerning the use of nuclear energy for peaceful purposes. The parties recognize, with respect to the observance of this agreement, the principle of international law that provides that a party may not invoke the provisions of its internal law as justification for its failure to perform a treaty.
2. Transfers of information, technology, material, facilities and components under this agreement may be undertaken directly between the parties or through authorized persons. Such cooperation shall be subject to this agreement and to such additional terms and conditions as may be agreed by the parties.
3. Material, facilities and components will be regarded as having been transferred pursuant to this agreement only upon receipt of confirmation by the supplier party, from the appropriate Government authority of the recipient party, that such material, facilities or components will be subject to this agreement and that the proposed recipient of such material, facilities or components, if other than the recipient party, is an authorized person.
4. Any transfer of sensitive nuclear technology, sensitive nuclear facilities, or major critical components will, subject to the principles of this agreement, require additional provisions as an amendment to this agreement.

Article 3 - Transfer of Information and Technology

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

- (1) research, development, experiment, design, construction, operation, maintenance and use and retirement of reactors and nuclear, fuel fabrication technology;
- (2) the use of material in physical and biological research, medicine, agriculture and industry;
- (3) nuclear fuel cycle research, development and industrial application to meet civil nuclear needs, including multilateral approaches to guaranteeing nuclear fuel supply and appropriate techniques for management of nuclear wastes;
- (4) health, safety, environment, and research and development related to the foregoing;
- (5) assessing the role nuclear power may play in international energy plans;
- (6) codes, regulations and standards for the nuclear energy industry; and
- (7) such other fields as may be agreed by the parties.

Article 4 - Transfer of Material, Facilities and Components

1. Material, facilities and components may be transferred pursuant to this agreement for applications consistent with this agreement. Any special nuclear material to be transferred under this agreement shall be low enriched uranium except as provided in paragraph 4 of this article.
2. Low enriched uranium may be transferred for use as fuel in reactors and reactor experiments, 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 be the quantity which the parties agree is necessary for any of the following purposes: the loading of reactors or use in reactor experiments, the efficient and continuous operation of such reactors or conduct of such reactor experiments, and the accomplishment of such 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, radiation sources and for such other purposes as the parties may agree.

Article 5 - Retransfers, Storage, Reprocessing, Enrichment, Alteration, and No Use for Military Purpose

1. Material, facilities, components or special nuclear material transferred pursuant to this agreement and any special nuclear material produced through the use of such material or facilities may be retransferred by the recipient party, except that any such material, facility, components or special nuclear material shall not be retransferred to unauthorized persons or, unless the parties agree, beyond its territory.
2. Neither party has any plans to enrich to twenty percent or greater, reprocess, or alter in form or content material transferred pursuant to this agreement or material used in or produced through the use of any material or facility so transferred. Neither party has any plans to change locations for storage of plutonium, uranium 233 (except as contained in irradiated fuel elements), or high enriched uranium transferred pursuant to this agreement or used in or produced through the use of any material or facility so transferred. In the event that a party would like at some future time to undertake such activities, the parties will promptly hold consultations to agree on a mutually acceptable arrangement. The parties undertake the obligation to consider such activities favorably, and agree to provide pertinent information on the plans during the consultations. Inasmuch as any such activities will be solely for peaceful purposes and will be in accordance with the provisions of this agreement, the parties will consult immediately and will seek agreement within six months on long-term arrangements for such activities. In the spirit of cooperation the parties agree not to act within that period of time. If such an arrangement is not agreed upon within that period of time, the parties will promptly consult for the purpose of agreeing on measures which they consider to be consistent with the provisions of the agreement in order to undertake such activities on an interim basis. The parties agree to refrain from actions which either party believes would prejudice the long-term arrangements for undertaking such

activities or adversely affect cooperation under this agreement. The parties agree that the consultations referred to above will be carried out promptly and mutual agreement reached in a manner to avoid hampering, delay or undue interference in their respective nuclear programs. Neither party will seek to gain commercial advantage. Nothing in this article shall be used by either party to inhibit the legitimate development and exploitation of nuclear energy for peaceful purposes in accordance with this agreement.

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

Article 6 - Physical Security

1. Each party shall maintain adequate physical security with respect to any material, facility or components transferred pursuant to this agreement and with respect to any special nuclear material used in or produced through the use of any material or facility so transferred.

2. The parties agree to the levels for the application of physical security set forth in Annex II, which levels may be modified by mutual consent of the parties. The parties shall maintain adequate physical security measures in accordance with such levels. These measures, as minimum protection measures, shall be comparable to the recommendations set forth in IAEA document INFCIRC/225/Revision 1 entitled "The Physical Protection of Nuclear Material", or in any revision of that document agreed to by the parties.

3. The parties shall consult at the request of either party regarding the adequacy of physical security measures maintained pursuant to this article.

4. Each party shall identify those agencies or authorities responsible for ensuring that levels of physical security 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. Each party shall also designate points of contact within its national authorities to cooperate on matters of out-of-country transportation and other physical security matters of mutual concern.

Article 7 - Cessation of Cooperation

1. Each party shall endeavor to avoid taking any actions that affect cooperation under this agreement. If either party at any time following entry into force of this agreement does not comply with the provisions of this agreement, the parties shall promptly hold consultations on the problem, it being understood that the other party shall have the rights to cease further cooperation under this agreement.

2. If either party decides to cease further cooperation under this agreement, the parties shall make

appropriate arrangements as may be required.

Article 8 - Consultations

1. The parties shall consult at the request of either party regarding the implementation of this agreement, the development of further cooperation in the field of peaceful uses of nuclear energy, and other matters of mutual concern.
2. The parties recognize that this cooperation in the peaceful uses of nuclear energy is between two nuclear-weapon states and that bilateral safeguards are not required. In order to exchange experience, strengthen technical cooperation between the parties, ensure that the provisions of this agreement are effectively carried out, and enhance a stable, reliable, and predictable nuclear cooperation relationship, in connection with transfers of material, facilities and components under this agreement the parties will use diplomatic channels to establish mutually acceptable arrangements for exchanges of information and visits to material, facilities and components subject to this agreement.
3. The parties shall exchange views and information on the establishment and operation of their respective national accounting and control systems for source and special nuclear material subject to this agreement.

Article 9 - 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 cooperation under this agreement and in related matters of health and safety.

Article 10 - Entry into Force and Duration

1. This agreement shall enter into force on the date of mutual notifications of the completion of legal procedures by the parties and shall remain in force for a period of thirty years. This term may be extended by agreement of the parties in accordance with their respective applicable procedures.
2. Notwithstanding the suspension, termination or expiration of this agreement or any cooperation hereunder for any reason, the provisions of articles 5, 6, 7, and 8 shall continue in effect so long as any material, facility or components subject to these articles remain in the territory of the party concerned or any material, facility or components subject to these articles remain subject to that party's right to exercise jurisdiction or to direct disposition elsewhere.

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

DONE at Washington this 23rd day of July, 1985 in English and Chinese, both equally authentic

FOR THE GOVERNMENT OF THE UNITED STATES OF AMERICA:

John S. Herrington

FOR THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF CHINA:

Annex I -- Definition of "Reactor"

"Reactor" means:

1. 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; or
2. any of the following major parts of an apparatus described in paragraph 1:
 - (1) a pressure vessel designed to contain the core;
 - (2) primary coolant pumps;
 - (3) fuel charging or discharging machines;
 - (4) control rods.

A "reactor" does not include the steam turbine generator portion of a nuclear power plant.

Annex II

Pursuant to paragraph 2 of article 6, the agreed levels of physical security 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 uses 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	Category		
	I	II	III
1. Plutonium:[a,f] Unirradiated [b].....	2 kg or more.....	Less than 2 kg but more than 500 g.	500 g or less [c]
2. Uranium-235[d]: Unirradiated: [b]			
- uranium enriched to 20 % U235 or more 5 kg or more.....	Less than 5 kg but more than 1 kg.	1 kg or less.[c]
- uranium enriched to 10 % U235 but less than 20 %	10 kg or more	Less than 10 kg [c]
- uranium enriched above natural, but less than 10 % U235. [d]			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 should be exempted.
- (d) Natural uranium, depleted uranium and thorium and quantities of uranium enriched to less than 10% not falling in Category III should be protected in accordance with prudent management practice.
- (e) Irradiated fuel should be protected as Category I, II or III nuclear material depending on the category of the fresh fuel. However, fuel which by virtue of its original fissile material content is included as Category I or II before irradiation should only be reduced one Category level, while the radiation level from the fuel exceeds 100 rads/h at one meter unshielded.
- (f) The State's competent authority should determine if there is a credible threat to disperse plutonium malevolently. The State should then apply physical protection requirements for category I, II or III of nuclear material, as it deems appropriate and without regard to the plutonium quantity specified under each category herein, to the plutonium isotopes in those quantities and forms determined by the State to fall within the scope of the credible dispersal threat.

Agreement for Cooperation between the United States of America and the People's Republic of China Concerning Peaceful Uses of Nuclear Energy

Agreed Minute

During the negotiation of the Agreement for Cooperation between the United States of America and the People's Republic of China Concerning Peaceful Uses of Nuclear Energy signed today, the following understanding, which shall be an integral part of the agreement, was reached.

The parties agree that the interpretation and implementation of article 5(3) shall not involve any nuclear activities and related research and development carried out by either party, as a nuclear weapon state, through the use of material, facilities, components and technology not subject to the agreement.