

**REGULATORY COOPERATION  
NRC- NNSA  
PROTOCOL IN NUCLEAR SAFETY MATTERS**

**AGREEMENT:**

Protocol between the Nuclear Regulatory Commission of The United States of America and the State Scientific and Technological Commission of the People's Republic of China on Cooperation in Nuclear Safety Matters was originally signed in 1981 and renewed two times. With the implementation of the US-China Agreement for Cooperation on the Peaceful of Nuclear Energy on March 19, 1998, the NRC and its Chinese counterpart, the National Nuclear Safety Administration (NNSA) signed an expanded Protocol on Cooperation in Nuclear Safety Matters in September 1998. Due for renewal in 2003.

**BILATERAL OBJECTIVES:**

Within the limits and availability of resources, and consistent with U.S. Government policies and NRC priorities, the NRC will:

- Foster an understanding of the U.S. approach to nuclear safety
- Assist in the development of sound regulatory and safety practices in China's civil nuclear power reactor program, and areas including radiation protection and nuclear material safety
- Exchange publically available information on nuclear power reactor safety, radiation protection, nuclear material and waste handling and storage
- Share lessons learned from the U.S. nuclear power program
- Offer the regulator training opportunities

**ACTIVITIES COMPLETED:**

Between the years 1997 and 2001, safety exchanges have taken place under the terms of the Protocol at a minimal cost to NRC. The activities have included:

- NRC provided technical lectures on power reactor design review, construction and operation inspection, plant operation, radiation protection and nuclear materials safety
- NRC assisted in presenting an IAEA-sponsored training course
  1. Course of Probabilistic Safety Assessment Methodology; offered in Beijing, 2000
- NRC provided on-the-job assignments for nuclear safety engineer, power reactor operators, and regulators
  1. Longde Li, China National Information Center of Radiological Medicine and Protection, Laboratory of Industrial Hygiene, Beijing; 1997-1998
  2. Mr. Jun Wang, National Nuclear Safety Administration, Beijing; 1999-2000
- NRC provided copies of its regulatory guides and standards, training information and other publically available safety information
- Senior Chinese visits to the NRC:
  1. National Nuclear Safety Administration Director General Huang Qitau; September 1998
  2. State Environmental Protection Agency Vice Minister Ruixiang Song; August 2000
  3. State Environmental Protection Agency Vice Minister Ruixiang Song; July 2001
- Senior NRC Visits to China
  1. Chairman Shirley Jackson; April 1998
  2. Commissioner Jeffrey Merrifield; March 2001

**CONTINUED COOPERATION:**

The then next ten years, China's nuclear program will continue to expand and develop. Under the NRC-NNSA Protocol, NRC will continue to work with the regulator to build sound regulatory practices. This will involve the exchange of regulatory safety information, safety missions, temporary assignee placement at the NRC, and an exchange of senior visits.

**SCIENTIFIC / FOREIGN POLICY:**

The safety documents, lectures, and on-the-job training opportunities provided by the NRC have assisted the Chinese nuclear regulator develop a clearer understanding of nuclear safety (culture) as it is practiced in the U.S. The Protocol has facilitated close contact between the nuclear safety personnel in the U.S. and China, and provided a dialog with China at times when our two nations' relations were strained.

PROTOCOL BETWEEN  
THE NUCLEAR REGULATORY COMMISSION  
OF THE UNITED STATES OF AMERICA  
(USNRC)  
AND  
THE NATIONAL NUCLEAR SAFETY ADMINISTRATION  
OF THE PEOPLE'S REPUBLIC OF CHINA  
(NNSA)  
ON COOPERATION IN NUCLEAR SAFETY MATTERS

SEPTEMBER 24, 1998

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OF THE UNITED STATES OF AMERICA  
(USNRC)  
AND  
THE NATIONAL NUCLEAR SAFETY ADMINISTRATION  
OF THE PEOPLE'S REPUBLIC OF CHINA  
(NNSA)  
ON COOPERATION IN NUCLEAR SAFETY MATTERS**

The Nuclear Regulatory Commission of the United States of America (USNRC) and the National Nuclear Safety Administration of the People's Republic of China (NNSA), the two together hereinafter referred to as the Parties;

In accordance with and subject to the "Agreement Between the Government of the United States of America and the Government of the People's Republic of China on Cooperation in Science and Technology," signed in Washington on January 31, 1979, as amended and extended (hereinafter referred to as the Agreement);

Considering also the "Protocol Between the Nuclear Regulatory Commission of the United States of America and the National Nuclear Safety Administration of the People's Republic of China on Cooperation in Nuclear Safety Matters," signed in Washington on October 17, 1981, as amended and extended in Vienna on October 17, 1986, and as amended and extended in Shanghai on January 11, 1993 (hereinafter referred to as the Protocol);

In view of the joint cooperative efforts and results achieved by the Parties, and the Parties' reaffirmation of the importance of continued close cooperation in nuclear safety matters;

Have agreed as follows:

## ARTICLE 1

The Parties will conduct exchanges and cooperation in the areas of nuclear safety science, technology, and regulation on the basis of equality, reciprocity, and mutual benefit.

A. The cooperation on nuclear safety regulation of civil nuclear installations may include the following areas:

1. The compilation of safety regulations;
2. Safety assessment of the construction, commissioning, operation, and decommissioning of nuclear power plants, fuel cycle facilities, and other civil nuclear installations;
3. Safety inspection of the construction, commissioning, operation, and decommissioning of nuclear power plants, fuel cycle facilities, and other civil nuclear installations;

4. Operational feedback experience of nuclear power plants, fuel cycle facilities, and other civil nuclear installations;
5. Emergency preparedness and response;
6. Radiation protection;
7. Research on and development of nuclear safety technology; and
8. Other areas as mutually agreed.

B. The cooperation may include the following forms:

1. Exchange of nuclear safety information of mutual interest;
2. Exchange of nuclear safety specialists, delegations, and scientific and technical personnel to lecture, study, or participate in the work of the other Party;
3. Collaborative research on subjects of mutual interest and joint research programs;
4. Joint organization of symposia and seminars;

5. Technical consultations on nuclear safety issues; and
6. Other forms of cooperation as mutually agreed.

## ARTICLE 2

A. To the extent that it is permitted to do so under its laws, regulations, and policy directives, the U.S. side will provide to the Chinese side the following types of information pertaining to the safe regulation of civil nuclear installations:

1. Code of Federal Regulations and examination and approval process and regulations for nuclear power plants;
2. Nuclear Safety Regulatory Guides;
3. Publications which describe the regulatory process, as they are available;
4. Technical reports of a generic nature;
5. Weekly compilation of news releases;

6. Power reactor current events and bulletins on construction, operation, and decommissioning experience, and analysis and evaluation reports on operational data; and

7. Other nuclear safety information as agreed.

B. To the extent that it is permitted to do so under its laws, regulations, and policy directives, the Chinese side will provide to the U.S. side the following types of information pertaining to the safe regulation of civil nuclear installations:

1. Nuclear safety regulations, codes, guides, and standards;
2. Nuclear safety regulatory reports;
3. Annual report;
4. Publications which describe construction and operating experience, safety research, and regulation of nuclear power plants; and
5. Other nuclear safety information as agreed.

### ARTICLE 3

A. Within the limits of available resources and legislative authority, the U.S. side will assist the Chinese side in providing certain training and experience for its nuclear safety personnel. The following are typical of the kinds of on-the-job training and experience that may be provided:

1. Chinese nuclear safety personnel accompaniment of U.S. inspectors on operating reactor and reactor construction (if available) inspections in the U.S.
2. Participation by Chinese nuclear safety personnel in USNRC staff training courses conducted at the USNRC's Technical Training Center in Chattanooga, Tennessee; and
3. Assignment of Chinese nuclear safety personnel to work within the USNRC staff to gain experience in the practices and procedures followed by the USNRC in its regulation of U.S. nuclear facilities.

To the extent that the documents and other technical assistance provided by the USNRC are not adequate to meet the needs of the Chinese side for technical advice, the Parties will consult on the best means for meeting such needs.

B. Within the limits of available resources and legal authority, the Chinese side will receive nuclear safety personnel of the U.S. side under the following typical forms:

1. The Chinese side will welcome U.S. nuclear safety personnel in specific fields to visit China and hold joint discussions on nuclear safety regulatory matters; and
2. The Chinese side will invite U.S. nuclear safety experts to China to give lectures and hold joint discussions on nuclear safety regulatory matters.

To the extent possible, the Chinese side will make every effort to assist the U.S. side in meeting its requests for information on nuclear regulatory activities, or the Parties will consult on the best means for meeting such needs.

#### ARTICLE 4

The execution of joint programs and projects of safety research and development, or those programs and projects under which activities are divided between the Parties, including the use of test facilities and/or computer programs owned by either Party, will be agreed upon on a case-by-case basis and will, in general, be the subject of separate, specific letters of agreement which, while they are in effect, are to be appended to the Protocol. Each Party, based on its own research, will transmit immediately to the other Party information of which it becomes aware concerning research results known to have urgent safety implications for nuclear facilities operating in the country of the other Party.

Temporary assignments of qualified nuclear safety experts by one Party in the other Party's agency will also be considered on a case-by-case basis and will, in general, be the subject of separate letters of agreement.

#### **ARTICLE 5**

It is understood that exchanges of information and technology undertaken in connection with these cooperative efforts will be limited to those which are useful in the development of a nuclear safety regulatory program. Neither Party is required to take any action which would be inconsistent with its laws, regulations and policy directives. No nuclear information related to proliferation-sensitive technologies will be exchanged.

#### **ARTICLE 6**

This Protocol will be subject to the Agreement, including its Annex on the protection of intellectual property.

#### **ARTICLE 7**

This Protocol will also be subject to the availability of funds and personnel of each Party. The payment of costs will be decided by mutual written agreement on a case-by-case basis. In principle, the sharing of costs between the Parties will be decided according to the extent of benefit by each Party.

## **ARTICLE 8**

All stipulated activities under the Protocol will be conducted under the guidance of the US-PRC Joint Commission on Scientific and Technological Cooperation.

In order to coordinate the stipulated activities under this Protocol, each Party will designate a representative. The representatives designated by each Party may, by correspondence, decide upon the adoption, coordination, and implementation of cooperative activities and on other related matters. When necessary, the representatives, by mutual agreement, may call meetings on an irregular basis to consider matters related to the implementation of this Protocol.

## **ARTICLE 9**

Nuclear safety information derived from cooperative activities under this Protocol may be made available, unless otherwise agreed in writing between the two Parties, to the world nuclear regulatory community through customary channels and in accordance with the normal procedures and domestic laws of the Parties.

## **ARTICLE 10**

The application or use of any information exchanged or transferred between the Parties under this Protocol will be the responsibility of the receiving Party, and the transmitting Party does not warrant the suitability of such information for any particular use or application.

**ARTICLE 11**

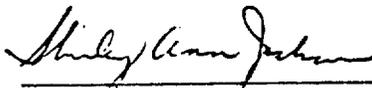
This Protocol will enter into force upon signature, and will remain in force for a five-year period or for the duration of the Agreement, whichever is shorter. It may be amended or extended by mutual written agreement.

This Protocol may be terminated at any time at the discretion of either Party upon at least six months' advance notification in writing by the Party seeking to terminate the Protocol.

The termination of this Protocol will not affect the validity or duration of specific activities being undertaken hereunder.

DONE at Vienna, this 24th day of September 1998, in duplicate, in the English and Chinese languages, both texts being equally authentic.

FOR THE NUCLEAR REGULATORY  
COMMISSION OF THE  
UNITED STATES OF AMERICA:



Shirley Ann Jackson  
Chairman

FOR THE NATIONAL NUCLEAR  
SAFETY ADMINISTRATION OF  
THE PEOPLE'S REPUBLIC OF CHINA:



Zhao Cheng Kun  
Director General